

The ASEAN Patent System: The Adoption of Regional Patent Office in ASEAN

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**Abstract**

The ASEAN Patent System: The Adoption of Regional Patent Office in ASEAN

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With the goal of establishing itself as a single market and competitive economic region, the Association of Southeast Asian Nations (ASEAN) recognizes the patent system as a mechanism to promote a pro-business environment and to attract technological investment to the region. However, despite efforts to improve patent services, the limited institutional capacity and the flaws in patent registration system in ASEAN countries are still important obstacles for development. This study argues that ASEAN should consider adopting another regional model, namely the regional Patent Office, to remove such difficulties and promote the patent registration system in ASEAN. The core of this study, therefore, is the ASEAN regional Patent Office. The aim of this study seeks to examine the concept and potential impacts, both positive and negative, that the establishment of the regional Patent Office has on ASEAN and to determine whether the regional Patent Office can be a mechanism that helps ASEAN remove the flaws and serve ASEAN's interests.

Based on a qualitative research, the study examines ASEAN regional framework, current situation, and constraints of patent registration system in ASEAN. It then analyzes the policy and legal framework, operation, advantages, and challenges of the regional Patent Office, through experiences of two regional Patent Offices: the European Patent Office (EPO) and the African Regional Intellectual Property Organization (ARIPO) in order to determine the applicability of

regional Patent Office to ASEAN. The finding of this study suggests that the regional Patent Office would benefit ASEAN in improving its capacities in administering the patent registration and promoting the policy and goal of ASEAN to accelerate technological growth in the region. The study also pinpoints key considerations which ASEAN Member States must take into account and take actions in order to maximize the benefits and overcome the challenges that ASEAN might have in establishing the regional Patent Office.

**Keywords:** ASEAN, patent, patent registration, patent procedure, patent prosecution, patent office, regional patent office, regional patent system, patent cooperation, intellectual property

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## **Abbreviations**

AEC	ASEAN Economic Community
ARIPO	African Regional Intellectual Property Organization
ASEAN	Association of Southeast Asian Nations
ASPEC	ASEAN Patent Examination Co-operation
AWGIPC	ASEAN Working Group on Intellectual Property Cooperation
DPMA	German Patent and Trade Mark Office
EPC	European Patent Convention
EPO	European Patent Office
FDI	Foreign Direct Investment
IP	Intellectual Property Office
IPRs	Intellectual Property Rights
ISA	International Search Authority
PCT	Patent Cooperation Treaty
PPH	Patent Prosecution Highway
R&D	Research and Development
S&E	Search and Examination
SMEs	Small and Medium Enterprises
TRIPs	Agreement on Trade-Related Aspects of Intellectual Property Rights
UNECA	United Nations Economic Commission for Africa
USSFTA	The United States-Singapore Free Trade Agreement
WIPO	World Intellectual Property Organization

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## **Dedication**

To my parents and brother

## **Chapter 1**

### **Introduction**

Patent law has been recognized as a legal mechanism for national government to incentivize innovations, which align with each country's economic goals and technological development. At the implementation level, the patent law is adopted in variety of ways, presenting itself as different patent systems, depending on the existing supporting legal framework and the level of infrastructure development in each country. Due to its' territorial nature, the enforceability of the patent law is restricted to national boundaries. Nevertheless, as technology has increasingly dispersed beyond national borders and securing patent protection has become a subject of international concern, the disharmony of patent systems has created a global challenge. Not only has it been more difficult, time consuming, and expensive for the applicants to obtain patents in several countries for the same invention, but also for national patent offices to overcome the difficulties in dealing with a large increase in backlogs of international patent applications. These considerable obstacles in cost and process efficiency led to cooperative efforts to harmonize patent systems, especially the patent registration process. During these recent years, the patent process has become more consolidative and integrative. It has adopted various strategies, which remove the aforementioned barriers and has largely increased patent search and examination (S&E) efficiencies without placing a greater burden upon the applicants. Beside the international procedural co-operations among patent offices<sup>1</sup>, several regional communities have also established their own uniform patent registration system to promote economic and industrial development through broader geographic protection such as the establishments of regional Patent Offices, e.g. the European Patent Offices (EPO) and the African Regional Intellectual Property Organization (ARIPO).

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<sup>1</sup>For instance, Patent Cooperation Treaty (PCT) and Patent Prosecution Highway (PPH)

Similar to Europe and Africa, the Association of Southeast Asian Nations (ASEAN) has recognized the significance of patent collaboration. ASEAN, as a regional community, also aims to adopt a regional patent system and explore the feasibility of establishing its own regional Patent Office as a mechanism to promote the goal of becoming a competitive economic and innovative region.<sup>2</sup> However, due to the diversities and specific natures of different ASEAN Member States which present great challenges for regional cooperation, ASEAN, in its failed attempts, has not yet achieved that goal. Most evident is the fact that the Member States, in their attempts to tackle the regional differences, prefers to revert back to adopting the cooperative programs that preserve the power of national patent offices.

To this date, various attempts to create a regional cooperation have been made but the progress remains unclear. In 2009, ASEAN operated its first ASEAN regional cooperation, namely ASEAN Patent Examination Co-operation (ASPEC). Nevertheless, the success of this regional cooperation is still questionable as ongoing flaws in the region persist. From 2009 until now, the record of the overall number of patent applications filed and granted in some Member States is relatively small and some Member States still have difficulties in the administration of the patent processes. In addition, delays in the patent S&E process and unintegrated differences in the levels of capabilities and standards among Member States' national patent offices continue to be problematic, despite the ongoing supports from capacity-building programs.

This situation reflects the existing reality that past regional cooperation in ASEAN has been inadequate and could not function as an effective mechanism to promote ASEAN economic and innovative development. Since ASEAN became a single market under the ASEAN Economic Community (AEC) in 2015, there is no more suitable time than now for ASEAN to

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<sup>2</sup> ASS'N OF SOUTHEAST ASIAN NATIONS (ASEAN), *ASEAN Framework Agreement on Intellectual Property Cooperation*, art. 4 (Dec. 15, 1995), available at [http://www.wipo.int/edocs/trtdocs/en/asean-ip/trt\\_asean\\_ip.pdf](http://www.wipo.int/edocs/trtdocs/en/asean-ip/trt_asean_ip.pdf). [hereinafter *ASEAN IP Framework Agreement*].

remove the obstacles for development, including the unintegrated differences among different national patent offices, and move to explore other regional model of patent registration systems which can better bring about integration. In this context, this dissertation seeks to review and revisit the ASEAN regional framework and determine whether the regional Patent Office can mitigate the existing flaws in the ASEAN cooperation and how the regional Patent Office should be modeled to better benefit ASEAN patent system. At the core of this dissertation, therefore, is the ASEAN regional Patent Office. The aim of this dissertation is not only to examine the potential impacts that the establishment of the regional Patent Office has on ASEAN, but also to propose policies that ASEAN Member States should take into considerations when adopting and implementing regional model for patent registration to promote its economic and innovative goals.

The structure of this study is divided into six chapters.

Chapter 1 provides the overview of the study. It introduces background of ASEAN and ASEAN patent system, and discusses problems of the patent registration system in ASEAN, which serve as background information and lead to further analysis surrounding the objective of this study in the later chapters.

Chapter 2 describes the general concept of regional Patent Office. The historical background and legal framework are provided in this chapter in order to generate a clear picture of the emergence, function, and evolution of the regional Patent Office in the patent system. This chapter also examines the general strengths of and challenges faced by the regional Patent Office as well as perspectives and critiques surrounding its function after the establishment of the regional Patent Office. In this regard, the models and experiences of EPO and APIRO are primarily used to illustrate and evaluate the impacts of regional Patent Office model.

Chapter 3 discusses the positive impacts and the benefits that the establishment of the regional Patent Offices has on ASEAN. Not only does this chapter discuss the advantages of having the ASEAN regional Patent Office, it also analyzes improvements in respect of the administrative, policy and legal aspects that ASEAN as well as stakeholders can potentially obtain from the establishment of this regional Office.

Chapter 4 aims to provide the other side of considerations that ASEAN needs to take into account in adopting the regional Patent Office model. It examines the challenges of establishing the regional Patent Offices in ASEAN. The analysis explores key constraints, limits, and challenges of the establishment which can potentially result in the negative impacts upon the ASEAN community, ASEAN Member States, and stakeholders.

Chapter 5 reevaluates the challenges pertaining to the establishment of the regional Patent Office in ASEAN and determines whether and to what extent ASEAN can overcome these challenges. This chapter also discusses key considerations that ASEAN should take into account in establishing the regional Patent Office in order to maximize ASEAN's benefits and interests.

Chapter 6 concludes the findings of the study and proposes for the needed political attention and institutional design surrounding the establishment of the regional Patent Office for the benefit of ASEAN community as a whole.

## **1. Background of ASEAN**

### **1.1 History and Objectives of ASEAN**

ASEAN was established by ASEAN Declaration of 1967<sup>3</sup> signed by the Foreign Ministers of Indonesia, Philippines, Singapore, and Thailand and the Deputy Prime Minister of Malaysia on 8 August 1967 in Bangkok, Thailand. The original goal of ASEAN was to promote active regional cooperation on matters of common interest in the economic, social, cultural, and

<sup>3</sup> The other name of ASEAN Declaration is Bangkok Declaration 1967.

in other arenas to strengthen the foundation for a prosperous, stable and peaceful community of Southeast Asian nations.<sup>4</sup> Today, ASEAN consists of ten Member States: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam,<sup>5</sup> with the total area of 4.5 million square kilometer and combined population of approximately 625 million people.<sup>6</sup>

After having cooperated for decades, on the 30<sup>th</sup> Anniversary of ASEAN in 1997, ASEAN leaders agreed to adopt the ASEAN Vision to ensure maximum achievement of ASEAN by 2020. The ASEAN Vision clarified a shared vision of ASEAN as a concert of Southeast Asian nations, having the characteristics of outward looking, peace, stability and prosperity, and bonded together in the partnership of dynamic development and as a community of caring societies<sup>7</sup> under the ASEAN Motto: “One Vision, One Identity, One Community”.<sup>8</sup>

## **1.2 Fundamental Principle of ASEAN Cooperation**

### **A. The ASEAN Way**

As mentioned above, a significant agenda of ASEAN is to promote regional peace and stability. Since ASEAN has a considerable diversity among Member States in terms of politics, economy, culture, history, ethnicity, language, religion, and etc., through its’ evolution, ASEAN has established a secured cooperation dialogue among Member Countries which was encapsulated in the term ‘the ASEAN Way’.

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<sup>4</sup> ASEAN, ASEAN Declaration of 1967, (Aug. 8, 1967), available at <http://asean.org/the-asean-declaration-bangkok-declaration-bangkok-8-august-1967/> [hereinafter *ASEAN Declaration*].

<sup>5</sup> Observers and potential newcomers are Papua New Guinea and Timor Leste.

<sup>6</sup> ASEAN Secretariat, *Selected Basic ASEAN Indicators* (2015), available at [http://asean.org/storage/2015/09/selected\\_key\\_indicators/table1\\_as\\_of\\_Aug\\_2015.pdf](http://asean.org/storage/2015/09/selected_key_indicators/table1_as_of_Aug_2015.pdf) [hereinafter ASEAN Secretariat, *Selected Basic ASEAN Indicators*].

<sup>7</sup> ASEAN Secretariat, *ASEAN Vision 2020* (Dec. 9, 1997), available at [http://asean.org/?static\\_post=asean-vision-2020](http://asean.org/?static_post=asean-vision-2020) [hereinafter ASEAN Secretariat, *ASEAN Vision 2020*].

<sup>8</sup> *ASEAN Motto*, ASEAN, <http://asean.org/asean/about-asean/asean-motto/> (last visited Oct. 30, 2016).

The ASEAN Way is a process of regional interactions and cooperation. It incorporates the non-interference principle which is the core foundation of the ASEAN regional relations.<sup>9</sup> This principle was firstly enshrined in the ASEAN Declaration 1967 which expressed that Member States are determined to prevent external interference in order to ensure domestic and regional stabilities.<sup>10</sup> It also emphasizes the mutual respect for the sovereignty, independence, territorial integrity and national identity of Member States. In this respect, Member States shall have the right to lead their national existences without external intervention but, at the same time, shall not interfere in the internal affairs of one another.<sup>11</sup>

To maintain the regional stability amongst disparate states, the ASEAN Way also promotes the non-confrontational bargaining approach. ASEAN has developed a conflict management mechanism and process for the settlement of disputes by peaceful means including the renunciation of the threat or use of force and the compliance with international law and ASEAN Agreements.<sup>12</sup>

The last important principle under the ASEAN Way is the consensus engagement.<sup>13</sup> ASEAN has facilitated trust among Member States by promoting consensus decision making that neither diminishes sovereignty nor interferes in the domestic affairs of ASEAN members. In addition, ASEAN has survived the conflicting interests and perceptions of

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<sup>9</sup> See generally, JOHN FUNSTON, ASEAN AND THE PRINCIPLE OF NON-INTERVENTION: PRACTICE AND PROSPECTS (2000); Mohamad Faisal Keling et al., *The Development of ASEAN from Historical Approach*, 7 ASIAN SOC. SCI. 169 (2011); Nguyen Duc Tuyen, Diplomatic Acad. of Viet, The Future Evolvement of the Principle of Non-Interference, Speech at the 8<sup>th</sup> Asia Economic Forum: ASEAN in the Evolving Regional Architecture: Opportunities, Challenges and Future Direction (Mar. 18, 2012), available at <http://aef.org.kh/th8aef/speakers/S4-Nguyen%20Duc%20Tuyen.doc>.

<sup>10</sup> ASEAN Declaration, *supra* note 4; see also Richard Stubbs, *The ASEAN Alternative? Ideas, Institutions and the Challenge to 'Global' Governance*, 21 PAC. REV. 451 (2008).

<sup>11</sup> NARONG PHOPHUEKSANAND, ASEAN SUEK-SA [ASEAN STUDIES] 7-8, (2d ed. 2015).

<sup>12</sup> *Id.* See generally Beverly Loke, *The 'ASEAN Way': Towards Regional Order and Security Cooperation?* 30 MELB. J. POL 8 (2005).

<sup>13</sup> PHOPHUEKSANAND, *supra* note 11.

its members by focusing on non-contentious interest areas so that no member would feel that its national interests are threatened by collective decision.<sup>14</sup>

The ASEAN Way principles are enshrined in the Treaty of Amity and Cooperation in Southeast Asia (TAC) of 1976<sup>15</sup> and are reiterated in Article 2 of ASEAN Charter.<sup>16</sup> The practice of ASEAN Way becomes one of the most successful regional experiments in conflict management and cooperation in the developing world.<sup>17</sup>

#### B. The ASEAN Charter

Since ASEAN was founded in 1967, ASEAN has adopted treaties and statements that lack formal binding commitments and mechanism to monitor implementation.<sup>18</sup> Until the 13<sup>th</sup> ASEAN Summit in 2007, ASEAN Member States endorsed the ‘ASEAN Charter’ which serves as a firm foundation in achieving the ASEAN community by providing ASEAN with a legal personality and institutional framework.<sup>19</sup>

Entered into force in December 2008, the ASEAN Charter codifies ASEAN norms, rules, and values including the commitment to sovereignty, non-interference, and consultative consensus.<sup>20</sup> It significantly determines ASEAN’s legal commitment to human rights, democratic ideas, and the building of an economic community. In effect, the ASEAN Charter is recognized

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<sup>14</sup> Thanee Sucharikul, *AEC Legal Evolution and ASEAN Economic Instruments*, course materials for ASEAN Law, Assumption University and Chulalongkorn University Faculty of Law (2013); *see also* Loke, *supra* note 12.

<sup>15</sup> The ASEAN Way can be described as six behavioral principles set forth in Treaty of Amity and Cooperation 1976: 1) respect for State sovereignty; 2) freedom from external interference; 3) non-interference in internal affairs; 4) peaceful dispute settlement; 5) renunciation of the use of force; and 6) cooperation. *See* Treaty of Amity and Cooperation in Southeast Asia, art.2, Feb. 24, 1976, 1025 U.N.T.S. 15063 [hereinafter *Treaty of Amity and Cooperation in Southeast Asia*].

<sup>16</sup> ASEAN, Charter of the Association of Southeast Asian Nations, art. 2 (Nov. 20, 2007), *available at* <http://asean.org/wp-content/uploads/images/archive/publications/ASEAN-Charter.pdf> [hereinafter *ASEAN Charter*].

<sup>17</sup> *See* Loke, *supra* note 12, at 8.

<sup>18</sup> Sheldon W. Simon, *Southeast Asian International Relations: Is there Institutional Traction, in* INTERNATIONAL RELATIONS IN SOUTHEAST ASIA: BETWEEN BILATERALISM AND MULTILATERALISM 37, 49 (N. Ganesan & Rames Amer eds., 2010).

<sup>19</sup> ASEAN Secretariat, *ASEAN Charter*, (Jan. 2008), *available at* <http://asean.org/asean/asean-charter/> [hereinafter ASEAN Secretariat, *ASEAN Charter*].

<sup>20</sup> *ASEAN Charter*, *supra* note 16; *see also* Simon, *supra* note 18.

as a legally binding agreement among ten Member States. A number of new ASEAN organs have been established to boost the community building process under the Charter's legal framework.

### **1.3 ASEAN Economic Community (AEC)**

For decades, ASEAN Member States have welcomed free trade and foreign investment. As a result, the ASEAN Member States have exhibited a pro-business environment. In fact, they are engaged in multilateral efforts to strengthen ASEAN economic power and promote the expansion of trade and commerce, such as adopting the ASEAN Free Trade Area (AFTA) in the Southeast Asian regional level and being a member of the Asia-Pacific Economic Cooperation (APEC) in the Pacific region and the World Trade Organization (WTO) at the global level. With a market of around 625 million people<sup>21</sup> and an estimated gross domestic product (GDP) of US\$ 2.57 trillion<sup>22</sup>, ASEAN has attracted interests from the rest of the world as one of the fastest growing regions which has emerged as a deserving competitor to its neighbors, i.e. China and India.<sup>23</sup>

The role of ASEAN became increasingly deserving of attention when leaders of ASEAN countries, at the 9<sup>th</sup> ASEAN Summit in 2003, signed the Declaration of ASEAN Concord II to strengthen its cooperative strategy by the goal of regional economic integration: namely, the establishment of the ASEAN Economic Community (AEC) by the year 2020.<sup>24</sup> The idea of the

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<sup>21</sup> ASEAN Secretariat, *Selected Basic ASEAN Indicators*, *supra* note 6.

<sup>22</sup> Press Release, ASEAN Secretariat, ASEAN GDP Grows by 4.6% (Aug. 19, 2015) *available at* <http://asean.org/asean-gdp-grows-by-46/>.

<sup>23</sup> Tommy Koh, *Forward to ASEAN MATTERS! REFLECTING ON THE ASSOCIATION OF SOUTHEAST ASIAN NATIONS* 11-12 (Lee Yoong Yoong ed., 2011); DAVID LLEWELLYN, *INVISIBLE GOLD IN ASIA: CREATING WEALTH THROUGH INTELLECTUAL PROPERTY* XIV-XV (2010) (noting what Lee Kuan Yew, Singapore's founding leader, observed in 2004: "[W]hat will pull (ASEAN) together is the need to be sufficiently competitive against two huge countries now in the World Trade Organization and wanting to industrialize and join the export markets: India and China").

<sup>24</sup> Member States signed the Declaration of ASEAN Concord (Bali Concord II) with the goal to create "a dynamic, cohesive, resilient and integrated ASEAN Community" by the year 2020. The AEC is a pillar of ASEAN

AEC, firstly led by Singapore Prime Minister Goh Chok Tong, was developed from the AFTA. The AEC aims to transform ASEAN into a community having four key characteristics; (1) a single market and production base through the free movement of goods, services, investment, skilled labor, and capital, (2) a highly competitive economic region, (3) a region of equitable economic development, and (4) a region fully integrated into the global economy.<sup>25</sup> The foundation of AEC then is a challenging task for ASEAN since it requires a higher level of integration and cooperation that has been absent in ASEAN's past.

Due to the growth of global economic competition, at the 12<sup>th</sup> ASEAN Summit in 2007, ASEAN leaders signed the Cebu Declaration on the Acceleration of the Establishment of an ASEAN Community by 2015 to accelerate the establishment of the AEC by 2015.<sup>26</sup> ASEAN also adopted and implemented a number of instruments to facilitate and ensure its timely building of the AEC, such as the ASEAN Charter which strengthened the rule of law in ASEAN and brought about higher accountability and predictability<sup>27</sup>, the AEC Blueprint which served as a master plan guiding the establishment of the AEC<sup>28</sup>, and a number of existing trade and

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Community which comprises of three pillars, namely the ASEAN Economic Community, ASEAN Political-Security Community, and ASEAN Socio-Cultural Community. *See generally* ASEAN, *Declaration of ASEAN Concord II (Bali Concord II)* (Oct. 7, 2003), available at [http://asean.org/?static\\_post=declaration-of-asean-concord-ii-bali-concord-ii](http://asean.org/?static_post=declaration-of-asean-concord-ii-bali-concord-ii); *ASEAN Economic Community*, ASEAN, <http://asean.org/asean-economic-community/> (last visited Dec. 5, 2016).

<sup>25</sup> ASEAN Secretariat, *ASEAN Economic Community Blueprint*, (2008), available at <http://asean.org/wp-content/uploads/archive/5187-10.pdf> [hereinafter *ASEAN Economic Community Blueprint*]; *see also* ASEAN *Economic Community*, *supra* note 24.

<sup>26</sup> ASEAN, *Cebu Declaration on the Acceleration of the Establishment of an ASEAN Community by 2015*, (Jan. 13, 2007), available at <http://asean.org/cebu-declaration-on-th-acceleration-of-the-establishment-of-an-asean-community-by-2015/>.

<sup>27</sup> ASEAN Secretariat, *ASEAN Charter*, *supra* note 19.

<sup>28</sup> ASEAN Secretariat, *ASEAN Economic Community Blueprint 2025*, (Nov. 2015), available at [http://www.asean.org/storage/2016/03/AECBP\\_2025r\\_FINAL.pdf](http://www.asean.org/storage/2016/03/AECBP_2025r_FINAL.pdf) [hereinafter *ASEAN Economic Community Blueprint 2025*]. *See also* ASEAN *Economic Community*, *supra* note 24.

investment agreements.<sup>29</sup> In the end, ASEAN managed to officially become the AEC, as planned, on 31 December 2015.

## 2. ASEAN Patent Registration System

### 2.1 General Background

With the goals of establishing itself as a single market and competitive economic region, ASEAN recognizes intellectual property rights (IPRs) as a core element which can serve as a major driving factor for the regional economic performance and technological development and ensure the business advantage of its enterprises in the global market.<sup>30</sup> In this regard, ASEAN adopted the ASEAN Framework Agreement on Intellectual Property Cooperation 1995 (AFAIPC or ASEAN IP Framework Agreement) to promote closer cooperation and understanding among ASEAN countries in the field of IPRs and related fields.<sup>31</sup> The ASEAN Working Group on Intellectual Property Cooperation (AWGIPC), established in 1996, also works as a consultative body responsible for intellectual property (IP) issues in the region.<sup>32</sup> The work of AWGIPC is based on its ASEAN Intellectual Property Action Plans (ASEAN IPR Action Plans) which fundamentally emphasize the development, the cooperation, and the

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<sup>29</sup> For instance, ASEAN Trade in Goods Agreement 2009 (ATIGA), ASEAN Framework Agreement on Services 1995 (AFAS), ASEAN Comprehensive Investment Agreement 2007 (ACIA), ASEAN Framework Agreement on Intellectual Property Cooperation 1995 (AFAIPC), and etc.

<sup>30</sup> *ASEAN IP Framework Agreement*, *supra* note 2, Preamble. A number of scholars conclude that there is a positive correlation between the strength of IPRs protections and the increase of technology transfer, Foreign Direct Investment (FDI) and innovation rates. *See, e.g.,* Lei Yang & Keith E. Maskus, *Intellectual Property Rights, Technology Transfer and Exports in Developing Countries*, 90 J. DEV. ECON. 231 (2009), ASHISH ARORA, THE ECONOMICS OF INTELLECTUAL PROPERTY: INTELLECTUAL PROPERTY RIGHTS AND THE INTERNATIONAL TRANSFER OF TECHNOLOGY: SETTING OUT AN AGENDA FOR EMPIRICAL RESEARCH IN DEVELOPING COUNTRIES (World Intellectual Property Organization, 2009); Lee Branstetter et al., *Intellectual Property Rights, Imitation and Foreign Direct Investment Theory and Evidence* (Nat'l Bureau of Econ. Research, Working Paper No. 13033, 2007). A study also suggests that IPRs protection is the most important concern for foreign companies. *See Reforming Intellectual Property Systems for Promoting Foreign Direct Investment in ASEAN* (unpublished study), discussed in Roy Kamphausen, *Innovate in India: Global Perspectives on the Continuing Evolution of India's IP Policy* (Nat'l Bureau of Asian Research, Special Report, 2015).

<sup>31</sup> *ASEAN IP Framework Agreement*, *supra* note 2, Preamble.

<sup>32</sup> *About ASEAN Working Group on Intellectual Property Cooperation*, ASEAN, <http://www.aseanip.org/About-Us/About-AWGIPC> (last visited Oct. 1, 2015).

implementation of all IPRs-related regional programs and activities including the harmonization of IPRs registration system in ASEAN.<sup>33</sup>

The regional patent cooperation is one key facet of the implementation. The aim to adopt ASEAN patent system and ASEAN Patent Office was included in ASEAN IP Framework Agreement as well as the ASEAN IPR action plans.<sup>34</sup> To mitigate the diversity standard and practice, the very first effort of ASEAN Member States is to amend their laws to enable them to meet their obligations as members of international conventions such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), and the Patent Cooperation Treaty (PCT).<sup>35</sup> A number of strategies, capacity-building programs, workshops and seminars have been initiated and actively operated in order to prepare for transforming ASEAN into an innovative and competitive region.<sup>36</sup>

Then, during the 30th Meeting of the AWGIPC in Hoi An, Vietnam in 2008, the first regional patent cooperation, i.e. ASPEC, was initially proposed by Singapore. The program was commenced in 2009 and was revised in 2012.<sup>37</sup> ASPEC is a work-sharing initiative among patent

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<sup>33</sup> As of September 2016, AWGIPC adopted and implemented four Intellectual Property Right Action Plans (IPR Action Plans), i.e. ASEAN Hanoi Plan of Action (Hanoi Action Plan) 1999-2004, ASEAN IPR Action Plan 2004-2010, ASEAN IPR Action Plan 2011-2015, and ASEAN IPR Action Plan 2016-2025.

<sup>34</sup> *ASEAN IP Framework Agreement*, *supra* note 2, art. 4; ASEAN Secretariat, *ASEAN Intellectual Property Right Action Plan 2004 – 2010*, available at [http://asean.org/?static\\_post=asean-intellectual-property-right-action-plan-2004-2010](http://asean.org/?static_post=asean-intellectual-property-right-action-plan-2004-2010) [hereinafter *ASEAN IPR Action Plan 2004-2010*]; ASEAN Secretariat, *ASEAN Intellectual Property Rights Action Plan 2011 – 2015*, available at <https://www.aseanip.org/Portals/0/PDF/ASEAN%20IPR%20Action%20Plan%202011-2015.pdf> [hereinafter *ASEAN IPR Action Plan 2011-2015*].

<sup>35</sup> *Cooperation in Intellectual Property*, ASEAN, [http://asean.org/?static\\_post=cooperation-in-intellectual-property](http://asean.org/?static_post=cooperation-in-intellectual-property) (last updated Oct. 3, 2012).

<sup>36</sup> For instance, the development of ASEAN IP Portal, capacity building for patent examiners, and infrastructure modernization of ASEAN IP Offices. See *ASEAN IPR Action Plan 2004-2010*, *supra* note 34; *ASEAN IPR Action Plan 2011-2015*, *supra* note 34.

<sup>37</sup> The ASPEC Request Form and procedure were revised and the ASPEC operation has been officially conducted in the English language in all participating ASEAN IP Offices. See *ASEAN Patent Examination Co-operation (ASPEC)*, INTELL. PROP. OFF. OF SINGAPORE, <https://www.ipos.gov.sg/AboutIP/TypesofIPWhatisIntellectualProperty/Whatisapatent/Applyingforapatent/ASEANPatentExaminationCo-operationASPEC.aspx> (last updated Oct. 20, 2016) [hereinafter *ASEAN ASPEC*].

offices in the participating ASEAN Member States<sup>38</sup> with the aim to reduce the duplication of search and examination (S&E), one of the important patent granting processes.<sup>39</sup> The S&E results of one participating patent office may be considered by the other participating offices without the obligation to accept the findings or results reached by the other offices. Although there is no binding effect, they serve as useful references and persuasive results for the other patent office to proceed its own examination and grant a patent under its national laws.<sup>40</sup> ASEAN hopes that this consolidation of resources will not only save time and cost, but also enable ASEAN countries to administer patent rights in an efficient and resourceful manner.

In conclusion, for almost 20 years, despite the ASEAN IP Framework Agreement and AWGIPC's task, the plan to centralize ASEAN patent system has never been launched. Even though ASPEC is acknowledged as an important step of the ASEAN regional cooperation, it merely focuses on sharing S&E results among national patent offices, which is only a part of the registration process. National patent offices, therefore, still have full independent authority in patent process. Patent applicants are required to file patent applications and to comply with substantive and procedural regulations of each ASEAN country separately. While the goal of ASEAN economic integration will be achieved, the efficiency of current patent registration system in ASEAN must be determined in terms of whether or not it is sufficient for ASEAN and whether the system should become more integrative in order to promote both national and ASEAN interests.

## **2.2 Patent Situation in ASEAN**

As mentioned above, ASEAN was established with an aim to be a competitive economic

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<sup>38</sup> As of February 2017, there are nine participating countries: Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand and Viet Nam. Myanmar has not participated in this program yet.

<sup>39</sup> *ASEAN ASPEC*, *supra* note 37.

<sup>40</sup> *Id.*

and innovative region comparable to its significant competitors; China and India.<sup>41</sup> In this context, ASEAN Member States have recognized the patent protection as a tool to promote a pro-business environment and to attract technological investment and transfer to the region. However, according to Table 1, the number of utility patent applications, as an indicator of new innovations, filed in ASEAN countries during 2008 to 2015<sup>42</sup> is still smaller than that of India and significantly far behind the number in China

Year	China	India	ASEAN <sup>43</sup>
2008	289,383	36,812	33,420
2009	314,604	34,287	30,763
2010	391,177	39,762	30,772
2011	526,412	42,291	32,935
2012	652,777	43,955	37,441
2013	825,136	43,031	38,960
2014	928,177	42,854	42,105
2015	1,101,864	45,658	44,823

**Table 1** Patent applications for inventions filed in China, India, and ASEAN Member States between 2008 and 2015

Source: World Intellectual Property Organization (<http://ipstats.wipo.int>)

It is worth noting that when the ASPEC, the first regional cooperation, operated in 2009, the number of patent applications in ASEAN countries did not noticeably increase. Even though the increase of patent applications after 2011 signaled a good opportunity for ASEAN, no evidence shows that the increase was caused by the ASPEC since the number of patent

<sup>41</sup> Koh, *supra* note 23 at xi.

<sup>42</sup> This period is delimited by the fact that there is no comprehensive data before 2008 and after 2015.

<sup>43</sup> Total patent applications of eight ASEAN Member States: Brunei, Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam. The data of Lao and Myanmar does not exist.

applications filed through the ASPEC program was relatively small.<sup>44</sup> This observation then reflects the questionable effectiveness of the ASPEC program as well as other ASEAN collaborative strategies.

Despite the gradual growth of patent applications, after a close examining of the statistics of each ASEAN Member State, it becomes evident that the increasing number of patent applications in ASEAN does not reflect the regional growth but rather the national growth of only few Member States.

Year	Singapore				Indonesia			
	Resident	Foreign	Total	PCT	Resident	Foreign	Total	PCT
2008	793	8,899	9,692	7,322	386	4,747	5,133	4,289
2009	750	7,986	8,736	6,255	415	4,103	4,518	3,736
2010	895	8,878	9,773	6,926	508	5,122	5,630	4,732
2011	1,056	8,738	9,794	6,726	533	5,297	5,838	4,839
2012	1,081	8,604	9,685	6,670	.	.	7,032	.
2013	1,143	8,579	9,722	6,557	663	6,787	7,450	6,129
2014	1,303	9,009	10,312	7,123	702	7,321	8,023	4,765
2015	1,469	9,345	10,814	7,264	1,058	8,095	9,153	.

Year	Thailand				Malaysia			
	Resident	Foreign	Total	PCT	Resident	Foreign	Total	PCT
2008	902	5,839	6,741	.	818	4,485	5,303	3,529
2009	1,025	4,832	5,857	.	1,234	4,503	5,737	.
2010	1,214	723	1,937	12	1,231	5,152	6,383	4,444
2011	927	2,997	3,924	2,150	1,076	5,376	6,452	4,687
2012	1,020	5,726	6,746	4,793	1,114	5,826	6,940	5,014
2013	929	6,478	7,404	5,604	1,199	6,006	7,205	5,284
2014	983	6,947	7,930	6,113	1,353	6,267	7,620	5,544
2015	1,029	7,138	8,167	.	1,272	6,455	7,727	5,598

<sup>44</sup> As of February 2016, there are only 154 ASPEC requests submitted. See *ASEAN ASPEC*, *supra* note 37.

Year	Vietnam				Philippines			
	Resident	Foreign	Total	PCT	Resident	Foreign	Total	PCT
2008	204	2,995	3,199	.	216	3,097	3,313	.
2009	258	2,632	2,890	.	172	2,825	2,997	.
2010	306	3,276	3,582	2,980	167	3,224	3,391	.
2011	301	3,387	3,688	2,945	186	2,975	3,196	.
2012	382	3,577	3,959	2,950	162	2,832	2,994	.
2013	443	3,552	3,995	3,063	193	2,881	3,074	2,747
2014	487	3,960	4,447	3,503	334	3,255	3,589	3,063
2015	582	4,451	5,033	3,935	375	3,359	3,734	3,158

Year	Cambodia				Brunei				Lao	Myanmar
	Resident	Foreign	Total	PCT	Resident	Foreign	Total	PCT		
2008	0	39	39	.	.	.	.	.	.	.
2009	0	28	28	.	.	.	.	.	.	.
2010	0	26	26	.	.	.	.	.	.	.
2011	0	43	43	.	.	.	.	.	.	.
2012	0	53	53	.	20	11	32	3	.	.
2013	1	74	75	.	20	15	35	.	.	.
2014	2	65	67	.	14	97	113	.	.	.
2015	0	65	65	.	9	121	130	.	.	.

**Table 2** Patent applications for inventions filed in ASEAN Member States  
Source: World Intellectual Property Organization (<http://ipstats.wipo.int>)  
National Patent Office Annual Reports  
ASEAN IP Portal (<http://www.aseanip.org>)

According to Table 2, the number of patent applications in ASEAN Members States is difficultly comparable. The highest volume of patent applications goes to Singapore, Indonesia and Malaysia respectively whereas the lowest volume falls into Cambodia and Brunei. Table 2 also illustrates the significance of foreign patent applications, an indication of the future strength of transferred foreign technology, in ASEAN.<sup>45</sup> It indicates significant gaps among ASEAN

<sup>45</sup> Since most of ASEAN Member States, except Singapore, are developing countries, the foreign technology is necessary and influences the development of ASEAN.

Member States. While some ASEAN countries can significantly and constantly attract foreign patent applicants, other countries, i.e. Brunei and Cambodia, cannot successfully do so, and the volume of patent applications in these countries therefore is still considerably lagging behind numbers of other Member States. Two countries, more specifically, Lao and Myanmar, still lack comprehensive information and systematic patent process for record. In addition, while the number of patent applications constantly increases in some countries, e.g. Malaysia, the number of applications in many ASEAN countries still fluctuates, e.g. Singapore, Philippines, and Thailand.

So long as these discrepancies in numbers continues, it remains difficult to foresee how technological knowledge can be introduced and transferred in a sustainable and effective manner within ASEAN. This whole situation, as a result, is detrimental to the ASEAN Member States' interests and its regional goal to mutually promote the economic and technological development through ASEAN single market.

### **2.3 Flaws in ASEAN Patent Registration System**

The above problem of discrepancies in numbers is difficult to be mitigated as long as ASEAN still lacks uniform mechanism and collective strategies to promote patent protection in the region. At the present time, ASEAN nations maintain independent authorities to grant patents and, therefore, separately operate national Patent Offices. Since a patent office is the place where the life of a patent begins and the patent office examination is in charge of ensuring that the patent complies with the law, the national governments inevitably makes significant investments in terms of finance, human resources, and facilities to operate national Patent Offices. In this regard, ASEAN Member States, most of which are developing countries, have to spend huge costs and amount of time in developing their patent systems. These put greater burdens for

developing countries at the lower end of the rankings, especially countries with newborn-national patent system aiming to build their own administrative capacities such as Brunei, Lao, and Myanmar. The accessibility of information from these countries, therefore, remains insufficient and the administration taskforce to promote and guarantee patent protections remains ineffective.<sup>46</sup> Adding to challenge in terms of technological stability and growth due to the existing natures of Member States' markets, the difficulties discussed above, to the same extent if not more, affect the confidence of both inventors and investors as they face barriers when attempting to obtain, transfer, and commercialize their patented technology.

Not only Member States with the low level of patent applications, Member States with the higher level of patent applications also have difficulties in their administration processes. Recurring problems which are commonly found in national Patent Offices, i.e. patent application backlogs and delays in the patent process, keep occurring in ASEAN Member States. These problems result from lack of resources, especially skilled patent examiners and database.<sup>47</sup> Thailand, for example, is one of such countries which is scrutinized for the ineffectiveness of its patent registration system for a very long time. The number of patents granted was not proportionate to the growth of patent applications. Over the eight-years period from 2008-2015, except years 2009-2011, the number of patent applications submitted to the Office slightly increased. However, Thai Patent Office granted approximately 900 to 1000 patents each of these years, which accounted for less than 15% of the number of patent applications for inventions.<sup>48</sup> This information on large backlogs and delays in patent registration process led to questions

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<sup>46</sup> See KENAN INST. ASIA ET AL., COMPARATIVE ASSESSMENT STUDY OF PATENT OFFICES IN SOUTHEAST ASIA (2011).

<sup>47</sup> *Id.* ALEXANDER DEGELSEGGER ET AL., ASEAN ECONOMIC COMMUNITY AND INTELLECTUAL PROPERTY RIGHTS: AN ASSESSMENT OF FRAMEWORK CONDITIONS FOR INNOVATION 44-54 (2016).

<sup>48</sup> *Number of Patent Applications and Granted Patents*, DEP'T OF INTELL. PROP. OF THAILAND, <https://www.ipthailand.go.th/th/patent-012.html> (last updated July 28, 2016).

regarding the deficiency of the Thai Patent Office which has been caused by the lack of skilled person and facilities of the Patent Office.<sup>49</sup> Other examples are Indonesia and Vietnam where their Patent Offices also experience similar situation as Thai Patent Office in terms of pending application backlog and lack of facilities for the registration process.<sup>50</sup>

Despite the fact that a number of workshops and certain regional capacity - building programs have been provided to patent examiners and staffs of the national Patent Offices, these problems remain difficult to mitigate and this brings about the concern on whether such international collaborations can effectively function in ASEAN countries. As a starting point, the PCT, which is an international procedural cooperation that ASEAN requires Member States to accede, has been widely acknowledged. The number of PCT applications, according to Table 2, has been increasingly filed in ASEAN countries. Nevertheless, the PCT neither relieves the difficulties nor regulates the process of national Patent Offices because it merely facilitates the filing and processing a single patent application internationally.<sup>51</sup> Although the PCT system provides the result of the international search and preliminary examination report that can facilitate the examination in national Patent Offices, the report only provides the initial opinion about the claimed invention and at times it cannot be timely delivered.<sup>52</sup> Therefore, in practice, many designated Patent Offices do not consider the S&E conducted by the International Search Authority (ISA) under the PCT system and prefer to conduct their own S&E when applications

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<sup>49</sup> See KENAN INST. ASIA ET AL., *supra* note 46, at 12, 14; DEGELSEGGER ET AL., *supra* note 47, at 47-48; Jakkrit Kuanpoth, *Patents and the emerging markets of Asia: ASEAN and Thailand*, in EMERGING MARKETS AND THE WORLD PATENT ORDER 305, 316-317 (Frederick M Abbott et al. eds., 2013).

<sup>50</sup> *Substantive Examination Timeline Re-Affirmed In A Recent D.G.'S Circular*, AMR P'SHIP, <http://amr.co.id/articles.php?id=4> (last updated Mar. 2011); see also KENAN INST. ASIA ET AL., *supra* note 46; DEGELSEGGER ET AL., *supra* note 47, at 47-48.

<sup>51</sup> Patent Cooperation Treaty, June 19, 1970, 28 U.S.T. 7645, 1160 U.N.T.S. 231[hereinafter *PCT*].

<sup>52</sup> Dongwook Chun, *Patent Law Harmonization in the Age of Globalization: The Necessity and Strategy for a Pragmatic Outcome*, 93 J.PAT. & TRADEMARK OFF. SOC'Y. 127, 138 (2011); see also Intellectual Property Office of U.K., *Information Consultation on Reform of the Patent Cooperation Treaty (PCT) 7*, (2009), available at <http://webarchive.nationalarchives.gov.uk/20140603093549/http://www.ipo.gov.uk/consult-pct.pdf>.

enter the national phase.<sup>53</sup> If a high number of PCT applications are filed with ASEAN national Patent Offices as the designated Patent Offices, it may adversely increase the workload and backlog that eventually become severe hindrance to the patent process due to the resulting difficulties of the national Patent Offices.<sup>54</sup> In reality, the PCT system cannot, therefore, eliminate the difficulties of ASEAN national Patent Offices in the patent process.

With regard to ASPEC – the work sharing system, the greatest concern is the quality of the S&E report, as well as the database and search strategy, used by patent examiners in other Patent Offices. The differences in practices and limited capabilities of the national Patent Offices, mostly in developing countries, have led to the question on the standard of the S&E results which include the correctness of the translation and technical evaluation that challenge both applicants and patent examiners in the first and subsequent Patent Offices. In this regard, the effectiveness of ASPEC, similar to the PCT system, remains highly doubtful and its existence remains unrecognized.

So long as the above flaws exist, no matter what cooperative programs ASEAN countries participate in, it is difficult for ASEAN to effectively perform. Even though capacity- building programs benefit ASEAN national Patent Offices, they will be a waste of time and money if Member States cannot afford sufficient and effective facilities and cannot implement long-term sustainable strategies in recruiting technical, legal and language skilled persons and also standardize their patent procedures.

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<sup>53</sup>Markus Nolf, *TRIPs, PCT and Global Patent Procurement*, 83 J.PAT. & TRADEMARK OFF. SOC'Y 479, 482 (2001); Gerald J. Mossinghoff & Vivian s. Ku, *World Patent System Circa 20xx, A.D.*, 38 IDEA 529, 531-541 (1998).

<sup>54</sup>Patrick Smith, *Harmonisation , Regional Collaboration and Small Patent Offices*, in INTELLECTUAL PROPERTY HARMONIZATION WITHIN ASEAN AND APEC 227, 228 (Antons, Christoph et al. eds., 2004).

## 2.4 Impacts of Flaws and the Disharmony of ASEAN Patent Registration System

The above ongoing flaws and the disharmony of ASEAN patent registration process also cause several undesirable impacts. While patent application filings internationally have largely increased, designated national Patent Offices, however, still have to conduct their own S&E of the same patent application at the same time with the same prior art. Such duplicated work incurs more costs and delays not only to national Patent Offices but also to patent applicants who wish to obtain a patent for the same invention in many countries. This is especially evident when patent offices are understaffed. The period of pending examination may be significantly longer. In such situation, applicants will then have less time to use his patent once it gets issued. Moreover, lack of sufficient qualified examiners and resources can highly affect the examination quality. The poor quality of patents can potentially result in the lower the confidence in terms of enforceability of patents and potentially increase patent litigation.<sup>55</sup>

In addition to the above impacts, higher expenses in filing process including attorney and translation fees, and uncertainties stemming from inconsistent practices, standards of examination and regulations create significant concerns. These problems diminish patent applicants' incentive and ability to secure and commercialize their inventions in ASEAN and in turn reduce research and development (R&D) investment and technology transfer efforts.<sup>56</sup> The consequence, therefore, not only harms technological development or long-run economic growth of ASEAN countries but also directly affects the aim of ASEAN in using IP as a mechanism to promote regional capacity and competitiveness.

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<sup>55</sup> KENAN INST. ASIA ET AL., *supra* note 46, at 7.

<sup>56</sup> *Id.* See also Randy Berholtz et al., *Where to File: A Framework for Pharmaceutical and Biotechnology Companies to Develop an International Patent Filing Strategies*, 37 T. JEFFERSON L. REV. 225, 244, 298 (2015) (explaining how cost and time in patent process are key factors to most filing strategies in pharmaceutical industry and noting that there are no incentives for applicants to file patent application in developing countries because these countries lack the patent system infrastructure, expertise, or resources to conduct proper examination).

### **3. Objectives of the Study**

Since ten ASEAN countries chose to become a single market under the AEC and have mutual interests in free movement of goods and services, no Member State should be left to face the aforementioned difficulties and to resolve the existing discrepancies in the patent system alone. To promote market integration, ASEAN must remove the divergences and distinctions which cause burdens for inventors, more specifically, to negotiate with ten different Patent Offices in order to obtain patent protection throughout ASEAN market. ASEAN then is required to take a greater collective action and adopt a regional model, which not only facilitates potential patent applicants, but also enables ASEAN to alleviate the disharmony and flaws in the existing patent registration system, and handle future incoming flow of patent applications in the region in a more sustainable manner.

As a regional community, ASEAN should take into account the regional Patent Office as the proposed model. Despite being included as an aim in ASEAN IP Framework Agreement, the establishment of the regional Patent Office is subject to the feasibility condition, i.e. “if feasible”, and therefore is not yet a strong commitment and still far from materializing the overarching ASEAN plan. However, the success of other regional communities in establishing regional Patent Offices, especially the EPO in Europe, now requires ASEAN to seriously review its strategy to harmonize the patent registration system and determine whether the model of regional Patent Office can be an effective mechanism to promote patent protection and accelerate the economic and innovative growth in ASEAN.

The aim of this dissertation, therefore, is to study the establishment of regional Patent Office in ASEAN and proposes the model which can better serve the interests of ASEAN community. As mentioned, this study seeks to first examine the impacts, both positive and

negative, that ASEAN can potentially receive from its implementation of the concept of regional Patent Office, and proceed to pinpoint policy considerations which ASEAN Member States should take into account for the adoption of regional patent registration model.

#### **4. Research Questions and Hypothesis**

The primary question of this study is: *Does the establishment of the regional Patent Office serve ASEAN's interest?* To answer this key question, the following relevant questions shall be addressed:

- What kind of benefit would the regional Patent Office generate for ASEAN?
- What are the challenges for ASEAN in establishing the regional Patent Office?
- What policy considerations must ASEAN take into account in its institutional design of regional Patent Office in order to maximize the benefits and overcome the challenges?

The tentative hypothesis of this study, which is subject to further analysis, is that the regional Patent Office benefits ASEAN in improving its capacities in administering the patent registration and accelerating technological growth in the region.

#### **5. Methodology**

The methodologies used in this study are documentary research and qualitative method. The study provides a literature review of relevant policies, laws, regulations and documents relating to the patent registration system in ASEAN and selected regional Patent Offices. The documentary resources and database used for the research are from the University of Washington Marian G. Gallagher Law Library, the Suzzalo and Allen Library, Chulalongkorn University Library in Thailand, Westlaw, Lexis-Nexis, World Intellectual Property Organization (WIPO), ASEAN, EPO, ARIPO archives and reports, and other official websites of relevant patent organizations.

To support the research investigation, the in-depth interview was conducted by sampling the government officials, experts, and practitioners, from academic institutions, the Patent Offices, and private sector that potentially commercialized and transfer innovations in ASEAN. The interview was also conducted with personnel who specialize and involve in the establishment and operation of the European Patent Office (EPO), one of selected regional Patent Offices of this study, national Patent Offices, as well as European patent practitioners.

## **6. The Scope of the Study**

This study focuses on the patent registration system and the model of regional Patent Office. First, it surveys ASEAN IP policies, current situation and constraints of patent registration system in ASEAN.

Second, the study explores the concept and policy framework of the regional Patent Offices and examine its benefits and challenges of the establishment and operation. The regional Patent Offices, the European Patent Office (EPO) and the African Regional Intellectual Property Organization (ARIPO), are selected for the study. Since both Offices have long been established and acknowledged in international patent community, they enable this study to examine the impacts of the regional Patent Office. In addition, the EPO is a key model of this study since it has been acknowledged as the leading regional patent organization in the world. The EPO has gained high-level experience not only in terms of administrating and regulating patent registration, but also in terms of managing the difficulties and the diversity among Contracting States, which are similar to ASEAN's situation, since the idea of organization was first framed. The ARIPO is additionally selected to study since it provides another model and perspectives of the regional patent procedural system that can contribute to the research analysis.

Finally, the study evaluates and analyzes the findings in part two to determine the applicability of regional Patent Office to ASEAN. It also points out experiences and lessons from the selected regional Patent Office that ASEAN can learn and take into account in adopting the ASEAN regional Patent Office and policies.

It is important to note that, firstly, for the purpose of this study, it will be assumed that patent system is, at the minimum, a contributing factor to the country's economic and technological condition. Secondly, this study does not attend to all issues relating to the ASEAN regional patent system. The study focuses on the patent procedural aspect which might be necessarily relevant to the analysis and development of some substantive rules. It does not address issues of the harmonization of substantive law or the community patent which require further intensive study. Lastly, this study does not intend to be a study in comparative law. While there is reference to existing regional Patent Offices, i.e. the EPO and the ARIPO, there is no attempt to compare and contrast the different systems. Rather, it intends to study the more important elements: how and to what extent the regional Patent Office would benefit and challenge Member States.

## **7. Significance and Contribution**

The significance and originality of this research lies in integrating the normative and empirical scholarship in relation to the concept of regional Patent Office. The study will be a valuable and influential source for policy makers and stakeholders in ASEAN Member States in understanding and evaluating benefits and potential challenges surrounding the appropriate model for adopting the regional Patent Office in order to achieve intended communities' interests. The study also provides policy considerations and recommendation for ASEAN to achieve the higher quality and effective patent registration system, and to support the ASEAN's

goals and interests. Lastly, this study will serve as an alternative academic source for ASEAN patent system, specifically in the light of patent procedural system, the topic of which a small number of scholars writing have been found in the Western studies.

## Chapter 2

### The Regional Patent Office

#### 1. Introduction: The Territoriality Principle and Patent Procedure Cooperation

The territoriality has been generally recognized as a key principle of the industrial property rights regime. Since the exclusive patent rights, in exchange with the full disclosure of their inventions, can be incentives for inventors to develop innovations, each country has normally designed its own patent system in accordance with its economic policies to promote technological development. Therefore, the scope of patent rights and the enforcement mechanism are fundamentally defined by national governing authorities and limited to the territory of the country.<sup>57</sup>

Due to the territorial nature of patent rights, which begin and end at the national border<sup>58</sup>, the patent applicant must submit a patent application and comply with the substantive and procedural requirements of the appropriate government authority, usually called a patent office, of a country where the patent applicant desires to obtain a patent protection. The national patent office then has an independent authority to set or modify the operation of the patent system<sup>59</sup>, and has duties to examine patent applications and notify the applicant and the public about the criteria and boundaries for what is covered by the patent in the jurisdiction. The patent office is, therefore, a key actor of a patent system in every country. It is a place where the birth and the cessation of patent life take place. In effect, the government bears the costs and burdens not only in the establishment of but also in ensuring that the patent office has the capacity to carry on the

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<sup>57</sup> Smith, *supra* note 54, at 227; ALEXANDER STACK, INTERNATIONAL PATENT LAW: COOPERATION, HARMONIZATION AND AN INSTITUTION ANALYSIS OF WIPO AND THE WTO 13-14 (2011).

<sup>58</sup> NIKOLAUS THUMM, INTELLECTUAL PROPERTY RIGHTS: NATIONAL SYSTEMS AND HARMONISATION IN EUROPE, NEW YORK 66 (2000).

<sup>59</sup> PETER DRAHOS, THE GLOBAL GOVERNANCE OF KNOWLEDGE: PATENT OFFICES AND THEIR CLIENTS 16 (2010) [hereinafter DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*].

patent registration system with an emphasis on costs effectiveness, speed, and quality of the patent examination process.<sup>60</sup>

A significant effect of the territoriality principle is the fact that the patent system did not provide mechanism for procuring the international protection. As a result, if inventors wish to obtain patent protection in several countries, they have to file patent applications simultaneously in all countries where they desire to receive such protection. Nevertheless, as globalization has spurred the dispersion of technology beyond national borders and the technical nature of inventions can no longer be tied to a specific territory, the security of patent protection has increasingly become a subject of international concern. The absence of mechanism to facilitate international filings entails expenses and burdens upon patent applicants who wish to obtain patents for the same invention in other countries. Patent applicants not only have to initiate many procedures and comply with national regulations, which vary in various ways, but also have to unavoidably confront uncertainties resulting from inconsistent procedural standards across different national boundaries.<sup>61</sup> In addition, the disharmony of patent systems creates more administrative burdens, costs, and time for national patent offices to handle the large growth of international patent applications, which ultimately leads to problems of increased workloads and backlogs in the patent process.<sup>62</sup>

To reduce international differences and difficulties, cooperative efforts to integrate the patent procedure are being developed and implemented. Two major multinational agreements administered by the World Intellectual Property Organization (WIPO) are the Paris Convention for the Protection of Industrial Property (Paris Convention) and the PCT. However, despite the fact that these agreements, especially the PCT, provide a fundamental framework and organize

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<sup>60</sup> STACK, *supra* note 57, at 17.

<sup>61</sup> *Id.* at 65.

<sup>62</sup> Smith, *supra* note 54, at 229.

the procedure for multinational patent filings, they are unlikely to relieve patent offices' burdens. This is due to the fact that each national patent office still bears the responsibility for administering and granting patents.<sup>63</sup> As a result, these attempts for cooperation have actually increased the workload problems.<sup>64</sup> In fact, the unmanageable backlogs and deficient performance of patent offices remain a serious concern, which is likely to grow in magnitude, especially for the small patent offices that have limited resources.<sup>65</sup>

Provided that solution was not found in their cooperation attempts, the patent offices then sought alternative solutions. One of the alternative attempts is evident by the growing trend towards patent cooperation among countries, which aims to move the patent prosecution process toward a more user-friendly and effective approach. In this regard, various integrative strategies have been continuously adopted in order to remove barriers for users and increase S&E efficiencies without placing a greater burden upon the applicant.<sup>66</sup>

## **2. The Concept and Policy framework of Regional Patent Office**

Beside the international cooperation among patent offices, such as the PCT and the Patent Prosecution Highway (PPH)<sup>67</sup> systems, several regional communities also established their own

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<sup>63</sup> Nolff, *supra* note 53, at 482; Mossinghof & Ku, *supra* note 53.

<sup>64</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 181; Smith, *supra* note 54.

<sup>65</sup> Smith, *supra* note 54.

<sup>66</sup> An example strategy is work sharing which can be classified as (a) search sharing: the mutual exploitation of the information of searching prior arts, (b) action sharing: the sharing of the examination information including office action in the process of examination, and (c) decision sharing. Other strategies include examiner exchanges, document and database exchange systems, information technology integration, and the harmonization of patent procedure and laws. *See generally* Chun, *supra* note 52; DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 40; STACK, *supra* note 57, at 3.

<sup>67</sup> The Patent Prosecution Highway (PPH) was founded by the United States Patent and Trademark Office (USPTO) and the Japan Patent Office (JPO) in 2006. The main objective of the PPH is to reduce the duplication of processes and speed up patent prosecution while improving patent quality by sharing and relying upon the S&E information and results with other IP Offices. The work already carried out by the other office will accelerate the examination procedure that hence enables the patent applicant to obtain corresponding patent in a cheaper, faster and more efficient way. Nowadays, the PPH framework is widely adopted between two (bilateral PPH), three (trilateral PPH), or more (multilateral PPH) of those Patent Offices. For full details on the PPH program including its procedure, see *Patent Prosecution Highway (PPH) – Fast Track Examination of Applications*, U.S. PAT. & TRADEMARK OFF., [http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/pph\\_pp.pdf](http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/pph_pp.pdf) (last updated Oct. 1, 2016).

patent registration systems in order to address the difficulties that Member States face and allow for more efficient and economical patent procedures. Some regions not only created the regional cooperation among national patent offices, but also established a single authority, commonly called the regional Patent Office.

The regional Patent Office is not a new concept. Regional communities have entered into the regional agreements which established the regional Patent Office as a mechanism to centralize the patent procurement in the region with the aim to encourage the economic and industrial development through broader geographical protection.<sup>68</sup> In 2015, there are five regional Patent Offices in the world.<sup>69</sup> The pattern and services of the regional Patent Offices were designed differently from one region to another. For example, in certain regions, the regional Office undertakes the receipt of applications and adopts S&E procedural standard agreed by Member States which consequently unifies the grant of national patent rights in Member States.<sup>70</sup> An example of this regional form is the EPO in Europe. Some other regions adopt a fully unified system which empowers the regional Patent Office to handle the patent-granting process as well as the post-grant opposition or patent litigations. At the extreme, it almost replaces the laws and functions of national Patent Offices.<sup>71</sup> The Organisation Africaine

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<sup>68</sup> *Mission and Vision*, EUR. PAT. OFF. (EPO), <http://www.epo.org/about-us/office/mission.html> (last visited Sept. 25, 2016); *About ARIPO*, AFR. REGIONAL INTELL. PROP. ORG. (ARIPO), <http://www.aripo.org/about-aripo> (last visited Sept. 25, 2016).

<sup>69</sup> (1) The European Patent Office in Europe (1976); (2) The African Regional Intellectual Property Organization in Africa (English-Speaking African countries) (1976); (3) The Organisation Africaine de la Propriété Intellectuelle (The African Organization for Intellectual Property) in Africa (French-Speaking African countries) (1982); (4) The Gulf Cooperation Council Patent Office in Middle East (1992); and (5) The Eurasian Patent Organization in Eurasia (1994).

<sup>70</sup> Smith, *supra* note 54, at 233.

<sup>71</sup> This model is difficult to set up because it mostly deprives States of rights to control over the patent system. *See id.* at 233-234; Stephen R. Adams, *Regional Patent Systems*, 22 SCI. & TECH. LIBR. 89, 90 (2001).

de la Propriété Intellectuelle (OAPI or The African Organization for Intellectual Property) can exemplify this model.<sup>72</sup>

Despite the different structures and functions, it is worth noting that the common role of the regional Patent Offices is to handle some or all of the functions of a patent office on behalf of each Member State and to facilitate patent applicants who wish to obtain patent protection in many Member Countries. The successful emergence and long established operation of these regional organizations has created an interest in other regions, including ASEAN, for the establishment of their own regional Patent Offices.<sup>73</sup> Nonetheless, before creating a regional organization, it is necessary to closely examine its background, policy framework and operation, and determine whether and to what extent the regional Patent Office potentially generates advantages and disadvantages to Member States. It is then necessary to learn from existing regional Patent Offices.

For the purpose of this study, two well-known regional Patent Offices: the EPO and the ARIPO, are selected as sample models for the study. The EPO is the oldest regional institution and has been recognized as one of the most influential patent offices in the world.<sup>74</sup> It not only has high-level experience in terms of administrating and processing patent applications but its Member States also have a rich diversity and variety of needs which are similar to ASEAN's nature. In this context, the EPO can therefore be a good model for ASEAN to examine potential

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<sup>72</sup> The OAPI was firstly operated in 1982 by former French-speaking colonies of sub-Saharan Africa under the Libreville Agreement of 1962 which was subsequently revised by the Bangui Agreement. The OAPI, located in Yaounde (Cameroon), provides common formalities for the grant of rights for each of Member States. The Bangui Agreement empowers the OAPI to both grant and litigate in the patent system. Although Member States of the OAPI still retain their national Patent Office presence, a patent granted by OAPI is effective in all Member States and the national Patent Offices cannot grant title themselves. *See Adams, supra* note 71, at 96.

<sup>73</sup> For instance, South Asia (India, Nepal, and Sri Lanka) and Pacific Island countries *See generally* DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 181; Susan Farquhar, *A Regional International Property Rights Office for the South Pacific: Cost-Benefit Analysis*, (ASIAN DEV. BANK – COMMONWEALTH SECRETARIAT, Working Paper No. 16, 2005).

<sup>74</sup> Adams, *supra* note 71, at 91.

legal and administrative framework and impacts, and how to overcome difficulties since the idea of regional patent organization was first framed. The ARIPO is selected, in addition, to this study since it is another regional patent organization that has long been established and acknowledged in international patent community. Although the ARIPO is a small office and functions in a similar way to the EPO, its structure and operation can serve as another role model and provide another regional perspectives on the regional patent procedure.

### **A. The European Patent Office (EPO)**

Europe is a region that realized the cost and difficulties in obtaining patent protection due to its divergence of procedural requirements.<sup>75</sup> As a result, the EPO was created as a mechanism to relieve this problem and, at the same time, to promote the emergence of European economic integration.<sup>76</sup>

The EPO is a body of the European Patent Organization which was established in 1977 by the European Patent Convention (EPC) signed in 1973.<sup>77</sup> The EPC, as the first and foremost Convention that contains some substantive and procedural patent law, created a uniform procedure for patent filing and grants of European patent that manage to coexist with the national patent systems. In this regard, inventors who desire to acquire patents in Member States can basically file either national patent application in each individual country (national route) or a European patent application through the EPO (EPO route).<sup>78</sup>

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<sup>75</sup> Tomoko Miyamoto, *International Treaties and Patent Law Harmonization: Today and Beyond*, in PATENT LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH 154, 160-163 (Toshiko Takenaka ed., 2008).

<sup>76</sup> PASCAL GRISET, THE EUROPEAN PATENT: A EUROPEAN SUCCESS STORY FOR INNOVATION 35 (2013); DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 117.

<sup>77</sup> The European Patent Convention is also known as the Convention on the Grant of European patents. The European Organization has two bodies, the European Patent Office and the Administrative Council, which supervises the Office's activities. See European Patent Convention art. 4, Oct. 5, 1973, 1065 U.N.T.S. 199 [hereinafter *EPC*]; *European Patent Organization*, EPO, <http://www.epo.org/about-us/organisation.html> (last updated Oct. 30, 2015).

<sup>78</sup> *EPC*, *supra* note 77, art. 75. Patent applicants can also use the PCT route to obtain patent protection. There are two options: (1) The PCT-National route: filing a single PCT-application and entering into the national phase in the

The European patent process under the EPO is independent and might be different from the process in each Member State.<sup>79</sup> To obtain a European patent in multiple Contracting Countries, an applicant in any nationality can file a single European patent application before the EPO in one of the three official languages - English, French and German.<sup>80</sup> The applicant may file a patent application via the PCT, generally referred to as “Euro/ PCT applications” to obtain a European patent.<sup>81</sup> After examining the formality of the application by the Receiving Section and paying a small fee, the application is forwarded to a two-stage publication and examination process, referred to as “deferred examination.”<sup>82</sup>

The process begins at the Search Divisions where its responsibility is to conduct a novelty search and provide European search reports.<sup>83</sup> The European patent application is then published eighteen months from its filing or priority date.<sup>84</sup> During this period, the applicant can determine whether he should request the examination of his patent filing or withdraw filing the application from further processes in the case that the patent is unlikely to be granted.<sup>85</sup> If the applicant wishes to proceed, he must request for the substantive examination and pay the examination fee.<sup>86</sup> At this stage, the Examining Division is responsible for the examination in accordance with the substantive requirements of patentability: namely, novelty, inventive step,

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European States where the protection is sought; (2) The PCT-EPO route: filing a single PCT application and entering into the European phase followed by separate validation in each designated Member State. See Marco T. Connor & Lin Yasong, *How to Get Patent Protection in Europe?*, 90 J. PAT. & TRADEMARK OFF. SOC'Y 169, 172 (2008).

<sup>79</sup> For example, while some countries, i.e. France and Italy, do not conduct the substantive examination, the EPO does. See Christopher Heath, *Methods of Industrial Property Harmonization – th supra note 225e Example of Europe*, in INTELLECTUAL PROPERTY HARMONIZATION WITHIN ASEAN AND APEC, *supra* note 54, at 39, 47.

<sup>80</sup> EPC, *supra* note 77, art. 14(2).

<sup>81</sup> Smith, *supra* note 54, at 237.

<sup>82</sup> EPC, *supra* note 77, art. 16, 90; Adams, *supra* note 71, at 92.

<sup>83</sup> EPC, *supra* note 77, art. 17, 92.

<sup>84</sup> EPC, *supra* note 77, art. 93.

<sup>85</sup> Adams, *supra* note 71, at 92.

<sup>86</sup> EPC, *supra* note 77, art. 94.

and industrial applicability.<sup>87</sup> The length of the process depends upon the complexity of the case which probably takes more than two years.<sup>88</sup> Once the patent is finally granted, the grant of the European patent will be published.<sup>89</sup> The opposition of the patent can be given to the EPO within nine months of the publication.<sup>90</sup> And any party adversely affected by a decision has a right to appeal to the EPO.<sup>91</sup>

The European patent is not a single community patent since it will be transformed into a bundle of national patents once the patentee validates and fulfills translation requirements within at least three months in designated EPO Member States.<sup>92</sup> The EPO's function, therefore, is to pool the filing and examination procedures whereas Contracting States still retain their sovereign authorities over the patent granted by the EPO.

In addition to centralizing the patent procedure, the EPC also constructs the administrative body and management of the EPO. As an intergovernmental organization, the EPC lays down the legal personality of the institution<sup>93</sup> and sets forth the staff obligations, privileges and immunities,<sup>94</sup> as well as the dispute settlement mechanism.<sup>95</sup> It imposes duties and empowers the President and Administrative Council to function and adopt the relevant regulations and administrative instruction necessary for the performance.<sup>96</sup> The budget of the EPO is mainly from its own financial resources, which mostly are incomes derived from the

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<sup>87</sup> *EPC, supra* note 77, art. 54, 56, 57, 94.

<sup>88</sup> Adams, *supra* note 71, at 92-93.

<sup>89</sup> *EPC, supra* note 77, art. 98.

<sup>90</sup> *EPC, supra* note 77, art. 99.

<sup>91</sup> *EPC, supra* note 77, art. 106, 107.

<sup>92</sup> Connor & Yasong, *supra* note 78, at 188.

<sup>93</sup> *EPC, supra* note 77, art. 15.

<sup>94</sup> *EPC, supra* note 77, art. 8.

<sup>95</sup> *EPC, supra* note 77, art. 9, 13.

<sup>96</sup> *EPC, supra* note 77, art. 10, 11, 26-35.

application process<sup>97</sup> and payments made by Member States in respect of renewal fees for European patent.<sup>98</sup>

For more than three decades, the EPO has continuously developed the filing and granting process to serve the needs of Member States and patent applicants. From seven Contracting States in 1977<sup>99</sup>, the EPO, as of 2016, consists of thirty-eight Member Countries.<sup>100</sup> With the headquarters in Munich, a branch in The Hague<sup>101</sup>, and sub-offices in Berlin, Vienna, and Brussels,<sup>102</sup> the EPO, in 2014, has more than six thousand employees, four thousands of whom are examiners.<sup>103</sup> The larger size of the Office is directly result from the needs to maximize the capacity of the Office in order to handle the higher volume of patent applications consistently filed through the EPO<sup>104</sup>, which has reached more than two hundred thousand since 2006.<sup>105</sup>

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<sup>97</sup> The EPO has been financially autonomous since 1981. *See* Smith, *supra* note 54, at 237; GRISET, *supra* note 76, at 188.

<sup>98</sup> *EPC*, *supra* note 77, art. 37.

<sup>99</sup> Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland, and the United Kingdom.

<sup>100</sup> Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom (as of September 2016).

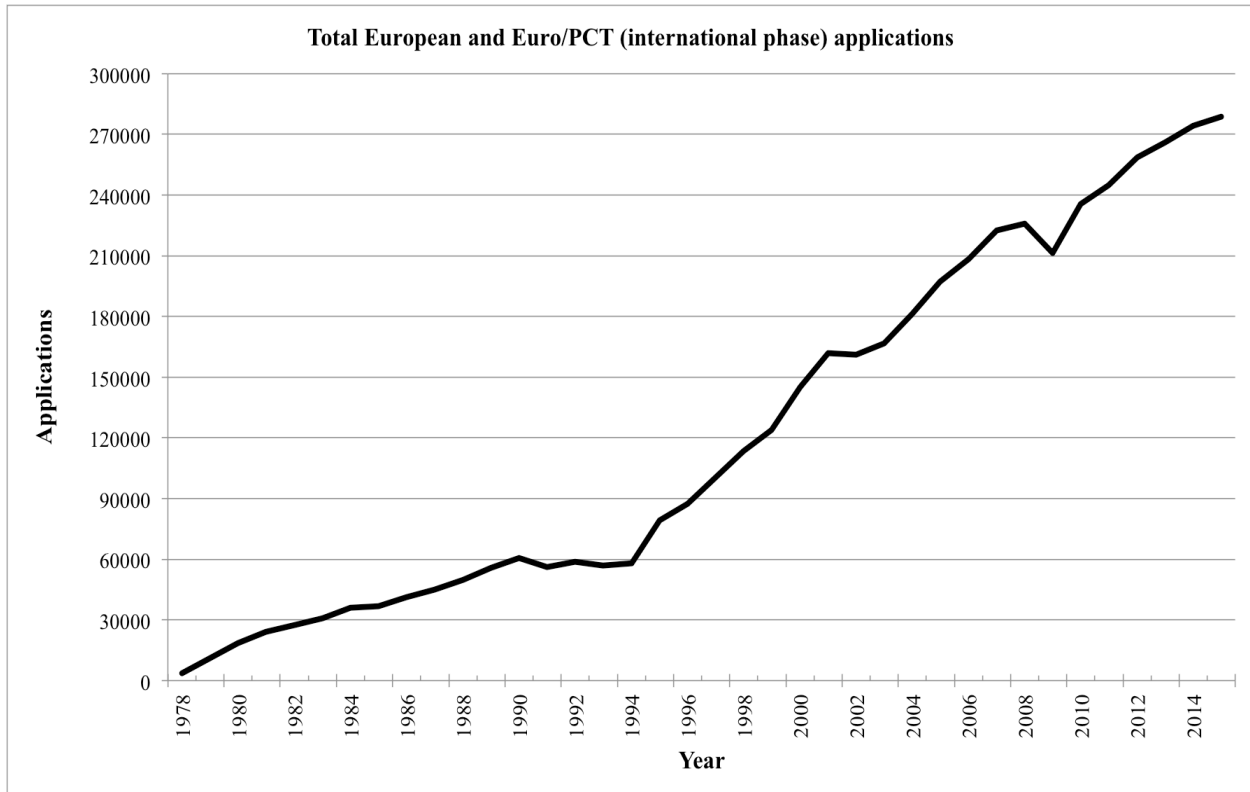
<sup>101</sup> *EPC*, *supra* note 77, art. 6.

<sup>102</sup> *EPC*, *supra* note 77, art. 7. The European patent application cannot be submitted to the sub-offices in Vienna and Brussels. *See EPC*, *supra* note 77, art. 75(1), (2); EPO, *How to Get a European Patent: Guide for Applicants* (5<sup>th</sup> ed., May 2015), available at <http://www.epo.org/applying/european/Guide-for-applicants/html/e/index.html>.

<sup>103</sup> EPO, *Annual Report 2014 - statistics and indicators*, available at <http://www.epo.org/about-us/annual-reports-statistics/annual-report/2014/statistics.html> (last visited Sept. 25, 2016).

<sup>104</sup> GRISET, *supra* note 76, at 146-152.

<sup>105</sup> Total direct European applications and PCT international patent applications. *See* EPO, *Annual Reports and Statistics*, available at <https://www.epo.org/about-us/annual-reports-statistics.html> (last visited Sept. 25, 2016).



**Chart 1** Total European and Euro/PCT (international phase) applications since 1978  
 Source: World Intellectual Property Organization (<http://ipstats.wipo.int>)  
 European Patent Office Annual Reports and Statistics  
 (<https://www.epo.org/about-us/annual-reports-statistics.html>)

The continuing growth of EPO and volume of European patent filings, as shown in Chart 1, has become evident since then and its success today has proved strong efforts and achievement of the European countries to develop the uniform patent procedure.

### **B. The African Regional Intellectual Property Organization (ARIPO)**

Similar to Europe and Southeast Asia, Africa is also a diverse continent. It consists of several countries with different socio-economic, cultural, and political profiles.<sup>106</sup> After their independences, African countries have recognized the IP regime, which has been influenced by the colonizing countries, as a powerful tool to incentivize innovation and promote the economic

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<sup>106</sup> See CAROLINE B. NCUBE, INTELLECTUAL PROPERTY POLICY, LAW AND ADMINISTRATION IN AFRICA: EXPLORING CONTINENTAL AND SUB-REGIONAL CO-OPERATION 1, 10-11 (2016).

growth.<sup>107</sup> In the twentieth century, the patent system in Africa has become more integrated into the international patent framework. However, African countries, at that time, still had difficulties in patent administration due to limited resources and capacity.<sup>108</sup>

To overcome such difficulties, English - speaking African countries, with the assistance from the United Nations Economic Commission for Africa (UNECA) and WIPO, founded the ARIPO on the basis of the Agreement on the Creation of the Industrial Property Organization for English-speaking Africa (ESARIPO) (known today as the Lusaka Agreement in 1976).<sup>109</sup> The objective of Lusaka Agreement is to promote the cooperation among Member States to achieve technological and economic development. It also aims to harmonize and develop the IP laws and related policies and frameworks to meet the needs of its Contracting States and of the region as a whole.<sup>110</sup> The ARIPO was then established as an organ to support the above objectives and, at the same time, to leverage member states' resources and resolve the problems of the limited administrative capacity of the African countries by providing common patenting-services for Member states.<sup>111</sup>

The ARIPO has been operated under four protocols: the Harare Protocol on Patents and Industrial Designs of 1982 (Harare Protocol)<sup>112</sup>, the Banjul Protocol on Marks of 1993 (Banjul

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<sup>107</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 181; Jeremy De Beer et al., *Innovation, Intellectual Property and Development Narratives in Africa*, in *INNOVATION AND INTELLECTUAL PROPERTY: COLLABORATIVE DYNAMICS IN AFRICA* 1, 7 (Jeremy De Beer et al. eds., 2014); *see also* Kamil Idris, *Intellectual Property: A power Tool for Economic Growth*, (2<sup>nd</sup>, June 2003), *available at* [http://www.wipo.int/edocs/pubdocs/en/intproperty/888/wipo\\_pub\\_888\\_1.pdf](http://www.wipo.int/edocs/pubdocs/en/intproperty/888/wipo_pub_888_1.pdf).

<sup>108</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 280.

<sup>109</sup> *About ARIPO*, *supra* note 68.

<sup>110</sup> Lusaka Agreement on the Creation of the Industrial Property Organization for English-speaking Africa art. 3, Dec. 9, 1976, *available at* <http://www.aripo.org/resources/laws-protocols?download=10:the-lusaka-agreement-on-the-creation-of-the-organization> [hereinafter *Lusaka Agreement*].

<sup>111</sup> *Lusaka Agreement*, *supra* note 110, art. 3. *See also* NCUBE, *supra* note 106, at 98.

<sup>112</sup> Harare Protocol on Patents and Industrial Design Within the Framework of the African Regional Intellectual Property Organization, Dec. 10, 1982, *available at* <http://www.aripo.org/resources/laws-protocols?download=9:the-harare-protocol-on-patents-utility-models-designs> [hereinafter *Harare Protocol*].

Protocol)<sup>113</sup>, the Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore of 2010 (Swakopmund Protocol)<sup>114</sup>, and the Arusha Protocol for the Protection of New Varieties of Plants of 2015 (Arusha Protocol).<sup>115</sup>

The Harare Protocol, adopted in 1982 and entered into force in 1984, establishes a system in which patent applications can be administered and granted on behalf of Contracting States by the ARIPO central office, under its own rules and standards.<sup>116</sup> The ARIPO then has pooled Member Countries' resources and was designed to be an additional system coexisting with the national patent system.<sup>117</sup> As a result, patent applicants who wish to obtain patent protection in African Member States can file patent applications through either the national route or the ARIPO route.

Under the Harare Protocol, the applicant is allowed to file a single patent application with the ARIPO or the industrial property office of a Contracting State.<sup>118</sup> The PCT application designating countries that are members of both ARIPO and PCT, can also be filed via the ARIPO.<sup>119</sup> The ARIPO application must be translated into English<sup>120</sup> and designate Contracting

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<sup>113</sup> Banjul Protocol on Marks Within the Framework of the African Regional Intellectual Property Organization, Nov. 19, 1993, *available at* <http://www.aripo.org/resources/laws-protocols?download=8:the-banjul-protocol-on-marks>.

<sup>114</sup> Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore, Aug. 9, 2010, *available at* <http://www.aripo.org/resources/laws-protocols?download=7:swakopmund-protocol-on-the-protection-of-traditional-knowledge-and-expressions-of-folklore> [hereinafter *Swakopmund Protocol*].

<sup>115</sup> Arusha Protocol for the Protection of New Varieties of Plants, July. 6, 2015, *available at* <http://www.aripo.org/resources/laws-protocols?download=52:arusha-protocol-for-the-protection-of-new-varieties-of-plants> [hereinafter *Arusha Protocol*].

<sup>116</sup> *Harare Protocol*, *supra* note 112, § 1; *See also* Tshimanga Kongolo, *The African Intellectual Property Organizations, The Necessity of Adopting One Uniform System for All Africa* 3 J. OF WORLD INTELL. PROP. 265, 269 (2000) [hereinafter Kongolo, *The African Intellectual Property Organizations*].

<sup>117</sup> Kongolo, *The African Intellectual Property Organizations*, *supra* note 116; TSHIMANGA KONGOLO. AFRICAN CONTRIBUTIONS IN SHAPING THE WORLDWIDE INTELLECTUAL PROPERTY SYSTEM 75 (2013)[hereinafter KONGOLO. *AFRICAN CONTRIBUTIONS*].

<sup>118</sup> *Harare Protocol*, *supra* note 112, § 2(1).

<sup>119</sup> *Harare Protocol*, *supra* note 112, § 3*bis*.

<sup>120</sup> *Harare Protocol*, *supra* note 112, § 2(6).

States in which a patent is sought.<sup>121</sup> If the application received by the industrial property offices of Member States meets the formal requirements, it will be transmitted, within one month of receiving the application, to the office of ARIPO in Harare, Zimbabwe.<sup>122</sup> The ARIPO then provides a patenting procedure and undertakes substantive examination on behalf of Member Countries in accordance with the formalities and patentability requirements: namely, novelty, inventive step, and industrial applicability, laid down in the Harare Protocol.<sup>123</sup> The standards of patentability are comparable with the standards required by the patent laws of major industrialized countries.<sup>124</sup>

After the substantive examination, if the ARIPO refuses the application, the applicant can request for the reconsideration. If the ARIPO insists upon the refusal, the applicant then may bring an appeal against the Office's decision to the Board of Appeal<sup>125</sup>, and may amend the application within three months from the notification of refusal to obtain the national patent.<sup>126</sup> On the other hand, if the ARIPO decides to grant a patent, the ARIPO then notifies the applicant and each of the designated Contracting States.<sup>127</sup> The designated State has six months from the date of notification to notify ARIPO whether that patent will have an effect in its territory. The Contracting State has the right to reject the registration in its territory if it does not conform to the provisions of the Protocol or to its national industrial legislations.<sup>128</sup> After the six-months period, if the designated States have not responded or notified ARIPO of the rejection, the

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<sup>121</sup> *Harare Protocol*, *supra* note 112, § 3(1).

<sup>122</sup> *Harare Protocol*, *supra* note 112, § 2(5).

<sup>123</sup> *Harare Protocol*, *supra* note 112, § 3; *see also* ARIPO Regulations for Implementing the Protocol on Patents and Industrial Designs Within the Framework of the African Regional Intellectual Property Organization (ARIPO), Apr. 25, 1984, *available at* <http://www.aripo.org/resources/laws-protocols?download=9:the-harare-protocol-on-patents-utility-models-designs>. [hereinafter *ARIPO Regulations for Implementing the Harare Protocol*]; Kongolo, *The African Intellectual Property Organizations*, *supra* note 116.

<sup>124</sup> Adebambo Adewopo, *The Global Intellectual Property System and Sub-Saharan Africa: A Prognostic Reflection*, 33 U. TOL. L. REV. 749, 766 (2002).

<sup>125</sup> *Harare Protocol*, *supra* note 112, § 3(4) and (5).

<sup>126</sup> *Harare Protocol*, *supra* note 112, § 3(8).

<sup>127</sup> *Harare Protocol*, *supra* note 112, § 3(6).

<sup>128</sup> *Harare Protocol*, *supra* note 112, § 3(6).

ARIPO will grant a ARIPO patent which will be effective in each designated State and be subject to State's applicable national law on compulsory licenses, forfeiture, and the use of patented inventions in the public interest.<sup>129</sup>

The period of ARIPO patents is twenty years from the filing date.<sup>130</sup> Unlike the EPC, the Harare Protocol does not provide any provision for the post-grant opposition or revocation.<sup>131</sup> It only empowers the ARIPO to centralize the granting process and to administer renewal on behalf of Member States. Therefore, the post-grant procedure including the infringement of ARIPO patents is subject to Contracting States' national laws.<sup>132</sup>

As of 2016, the ARIPO consists of nineteen Member States and eighteen of them joining the operation under the Harare Protocol.<sup>133</sup> Despite the diversity among Member States, the ARIPO operates in English<sup>134</sup> and receives the fee payment in U.S. dollars.<sup>135</sup> The income generated from application and maintenance fees is used for the ARIPO Office, and is partly distributed among the designated Contracting States.<sup>136</sup> The number of ARIPO patent applications, of which more than ninety-five percent were foreign origins and came from the PCT route, has continuously grown, but it is still very small comparing to the number of

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<sup>129</sup> *Harare Protocol*, *supra* note 112, § 3(7), (11), (12).

<sup>130</sup> *Harare Protocol*, *supra* note 112, § 3(11).

<sup>131</sup> Adewopo, *supra* note 124, at 767.

<sup>132</sup> *Harare Protocol*, *supra* note 112, § 3(12)(d).

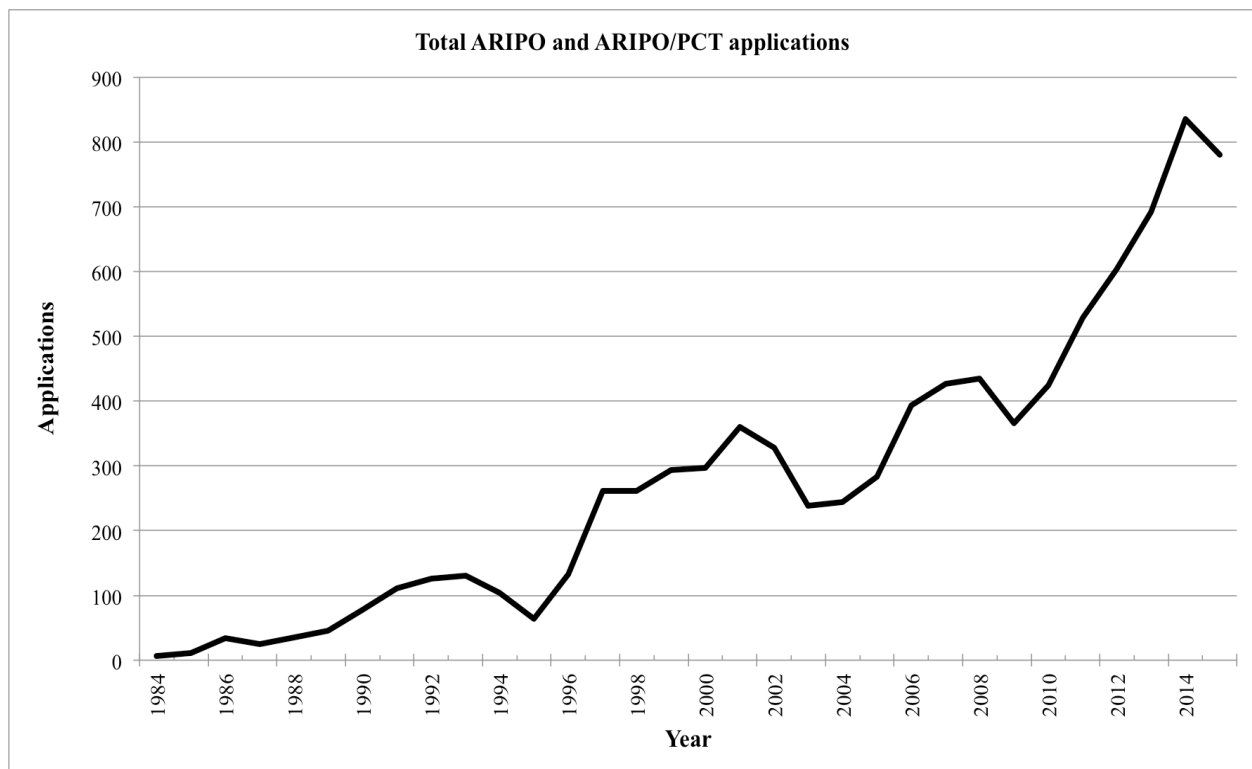
<sup>133</sup> Member States of ARIPO are Botswana, The Gambia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Sierra Leone, Liberia, Rwanda, São Tomé and Príncipe, Somalia, Sudan, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. Only Somalia has not been a Contracting State of the Harare Protocol. There are also twelve potential Member States; Angola, Algeria, Burundi, Egypt, Eritrea, Ethiopia, Libya, Mauritius, Nigeria, Seychelles, South Africa, and Tunisia (as of Sept. 26, 2016). See *About ARIPO – Legal Framework*, ARIPO, <http://www.aripo.org/about-aripo/legal-framework> (last visited Sept. 10, 2016).

<sup>134</sup> English is a primary language for most, though not all, Member States. See Robert J. Sayre, *Inside Perspective on Patenting at the African Regional Intellectual Property Office*, RWS INOVIA (Jan 5, 2012, 09:24 AM), <http://info.inovia.com/2012/01/inside-perspective-on-patenting-at-the-african-regional-intellectual-property-office/>.

<sup>135</sup> *ARIPO Regulations for Implementing the Harare Protocol*, *supra* note 123, rule 21 (2).

<sup>136</sup> *Harare Protocol*, *supra* note 112, § 3(11); *ARIPO Regulations for Implementing the Harare Protocol*, *supra* note 123, rule 12.

applications filed in EPO and ASEAN countries.<sup>137</sup> According to Chart 2, the highest number of ARIPO patent applications are 835 in 2014.



**Chart 2** Total ARIPO and ARIPO/PCT applications since 1984  
 Source: World Intellectual Property Organization (<http://ipstats.wipo.int>)  
 ARIPO Annual Reports

The total number of employees of ARIPO, in 2016, is forty-six. Although the size of the ARIPO office is small and still has limited capacity and resources in patent examination<sup>138</sup>, twelve ARIPO examiners have been highly trained in specific fields of patent examination so that they have solid technical and legal backgrounds that are necessary for the patent process.<sup>139</sup> Moreover, not only providing patent services, the ARIPO also has an important role in protecting

<sup>137</sup> ARIPO Office, *ARIPO Annual Report 2014*, 48-49 (2015), available at

<http://www.aripo.org/publications/annual-reports/item/98-aripo-annual-report-2014> ; Sayre, *supra* note 134.

<sup>138</sup> Ahmed Ibrahim, Patent Examiner, ARIPO, The African Regional Intellectual Property Organization (ARIPO): Challenges in Examination, Presentation at WIPO Regional Seminar on Effective Utilization of the Patent Cooperation Treaty (PCT) and International Work Sharing Initiatives (Nov. 26 - 28, 2013), available at [http://www.wipo.int/edocs/mdocs/aspac/en/wipo\\_reg\\_pct\\_tyo\\_13/wipo\\_reg\\_pct\\_tyo\\_13\\_t2m.pdf](http://www.wipo.int/edocs/mdocs/aspac/en/wipo_reg_pct_tyo_13/wipo_reg_pct_tyo_13_t2m.pdf).

<sup>139</sup> Email from ARIPO official to author (Feb. 4, 2016); Sayre, *supra* note 134.

the Member States' interests in, for instance, the traditional knowledge and varieties of plants<sup>140</sup> as well as providing Member States with information and related documentation for patents.<sup>141</sup> The ARIPO, therefore, is a regional organization which assists Member States to overcome administrative burdens as well as to achieve their development objectives.

In conclusion, the EPO and the ARIPO are examples of existing regional Patent Offices established by multinational treaties with an aim to promote the technological and economic development of Member States and the region. Despite the different structure, the essential concept and function of both regional Patent Offices is to simplify the patent application process and to provide Member States with common services in the patent administration and examination. Both systems provide alternative routes, parallel with national systems, to facilitate patent applicants who wish to obtain patent protection in many countries by allowing them to file a single patent application through a single procedure. The patent granted by the regional Patent Offices has an equal status as the national patent, and Member States still retain their sovereign authority over patents issued by the regional Patent Offices.

### **3. General Impacts of the Regional Patent Office**

The potential impacts of the emergence and operation of the regional Patent Offices has been discussed by scholars and demonstrated by the experiences of the EPO and ARIPO as follows.

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<sup>140</sup> See KONGOLO. *AFRICAN CONTRIBUTIONS*, *supra* note 117, at 104, 132 (explaining the role of ARIPO in raising regional initiatives to develop a policy and legal framework in particular issues, for example, the Swakopmund Protocol On the Protection of Traditional Knowledge and Expressions of Folklore (2010) and the Arusha Protocol for the Protection of New Varieties of Plants).

<sup>141</sup> The Harare Protocol established the ARIPO Documentation and Information Center in Harare to promote the objectives of ARIPO. See generally Zikonda Ar Hon, *State-of-the-Art Searches at ARIPO Documentation and Information Centre*, 14 *WORLD PAT. INFO.* 184 (1992).

## A. Advantages of the Regional Patent Office

In international relations theory, institutions overcome collective action problems, reduce uncertainty, increase stability, assist weaker members, lower transaction costs, increase stability and opportunities for cooperation, facilitate issue-linkages, and offer focal points or salient solutions.<sup>142</sup>

These advantages have also been acknowledged and discussed in the concept of the regional Patent Office. The specific benefits of regional Patent Office can be categorized into two main aspects: the administrative aspect, and the policy and legal aspect.

### Administrative Aspect

The first and foremost benefit of establishing the regional Patent Office is to pool the financial, manpower, and technical resources.<sup>143</sup> The consolidation of resources enables Member States to reduce the duplication of work and mitigate problems of capacity limits which include the problem of lack of human resources and staffs that is frequently found in national Patent Offices.<sup>144</sup>

The regional Patent Office can also fulfill the technical needs, not only in term of technological equipment, but also the technical staff in the patent process. The pool of resources enables the regional Patent Office to provide experts and examiners' funding and intensive

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<sup>142</sup> See Etel Solingen, *Multilateralism, Regionalism, and Bilateralism: Conceptual Overview from International Relations Theory*, in INTERNATIONAL RELATIONS IN SOUTHEAST ASIA: BETWEEN BILATERALISM AND MULTILATERALISM, *supra* note 18, at 3, 7; See also Lisa Martin, *Interests, Power, and Multilateralism*, 46 INT'L ORG., 765, 783 (1992).

<sup>143</sup> This benefit is recognized in the Preamble of the Lusaka Agreement which established the ARIPO. The ARIPO was established to pool the resources of its Member States in order to avoid the duplication of financial and human resources, See *Reasons for establishing the ARIPO*, ARIPO, <http://www.aripo.org/index.php/about-aripo> (last visited Sept. 25, 2016).

<sup>144</sup> See R. Kusady, *The Need for a Regional Patent Organization in South-East Asia*, 7 WORLD PAT. INFO. 264, 266-267 (1985); Christian H. Nguyen, Comment, *A Unitary ASEAN Patent Law in the Aftermath of TRIPs*, 8 PAC. RIM L. & POL'Y J. 453, 469 (1999).

training with variety of skills.<sup>145</sup> The EPO and the ARIPO have provided examiners with solid technical and legal training.<sup>146</sup> The EPO has especially been acknowledged as an institution that actively supports the examiners-trainings for newly recruited examiners as well as examiners from non-Member States.<sup>147</sup> This benefit can reduce Member States' difficulty of recruiting qualified staff and relieve the present staffs' workloads.

The consequence derived from the above benefits is the improvement of the patent process. The regional Patent Office and national Patent Offices can increasingly administer patent rights in an efficient and resourceful manner.<sup>148</sup> The more effective examination process not merely reduces the delay and the backlog of work but also ensures the quality of patents. The studies found that the situation of patent examination has been slightly improved after the establishment of ARIPO<sup>149</sup> and the quality of EPO's patent examination has been highly trusted and used by developing countries.<sup>150</sup>

For patent applicants, the system of the regional Patent Office substantially simplifies the patent procedure and brings about more certainty. Under the traditional regime, if patent applicants wish to obtain patents for the same invention in several countries, they are required to file patent applications separately and bargain with several national patent offices, which might have different scopes of protection and procedural requirements. But under the regional office regime, they can submit only a single application and bargain with only one single office. The

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<sup>145</sup> Kusady, *supra* note 144; *See also* Daniel J. Gervais, *Information Technology and International Trade: Intellectual Property, Trade & Development: The State of Play*, 74 *FORDHAM L. REV.* 505, 533 (2005).

<sup>146</sup> *See Patent Examiner Training*, EPO, <https://www.epo.org/about-us/jobs/examiners/training.html> (last visited Sept. 25, 2016); *ARIPO Academy: Providing an Equally Balanced Approach between Practical and Theoretical Education*, ARIPO, <http://training.aripo.org> (last visited Sept. 25, 2016). Sayre, *supra* note 134;

<sup>147</sup> For instance, the regional Memorandum of Co-operation (MoC) on patents between EPO and ASEAN *See* Press Release, EPO, ASEAN member states' IP offices and the EPO strengthen co-operation on patents (Feb 27, 2014) available at <https://www.epo.org/news-issues/news/2014/20140227.html>.

<sup>148</sup> *See* Gervais, *supra* note 145.

<sup>149</sup> *See* Ikechi Mgbeoji, *African Patent Offices Not Fit For Purpose*, in *INNOVATION AND INTELLECTUAL PROPERTY: COLLABORATIVE DYNAMICS IN AFRICA* 234, 239 (Jeremy De Beer et al. eds., 2014).

<sup>150</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 42, 134.

simplification and centralization also make the process of filing, examining, and granting patent in the region increasingly standardized and consistent. The EPO, for example, assures the uniform of examination by providing the intensive training for patent examiners in order to standardize their approaches and avoid bringing different national attitudes and practices to the examination of European applications.<sup>151</sup> Once the disharmony of standards and requirements, such as the format of application forms, documents, languages, and procedural regulations are removed, not only barriers are greatly reduced, but the certainty and predictability of patent applicants' success in obtaining patent protection in the region also highly increases.<sup>152</sup>

Finally, since the regional Patent Office provides regional services for Member States and reduces the duplication, burdens in terms of time, resources, and high costs incurred from the patent process of both Member States and patent applicants can be reduced.<sup>153</sup> Member States not only reduce their own costs, but also earn a partial renewal fees generated by the regional system. As a consequence, they potentially spend that income to improve the capacity of their national Patent Offices and subsidize the national patent costs.<sup>154</sup> This saving scheme then could benefit Member States, especially those States that have difficulties and capacity limits to run their national Patent Offices.<sup>155</sup>

For the patent applicants, the operation of the EPO, for example, could eliminate the duplication of patent process and reduce the costs for the patent applicants. The centralized

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<sup>151</sup> GRISET, *supra* note 76, at 135.

<sup>152</sup> Yi Deng, *The Effect of Patent Regime Changes: A Case Study of the European Patent Office*, 25 INT'L J. INDUS. ORG. 121, 137 (2007).

<sup>153</sup> Nguyen, *supra* note 144, at 468; See also Jeffrey L. Thompson, *The North America Patent Office? A Comparative Look at the NAFTA, the European Community, and the Community Patent Convention*, 27 GW J. INT'L L. & ECON 501 (1993-1994); STACK, *supra* note 57, at 17.

<sup>154</sup> The current annual renewal fees of the European patent are shared on a 50/50 basis between the designated States and the European Patent Organization. See *EPC*, *supra* note 77, art. 37, 39; Decision of the Administrative Council of 08.06.1984 on the proportion of renewal fees for European patents to be remitted to the EPO (OJ EPO 1984, 296). In ARIPO system, the 5% of the ARIPO patent application fees shall be due to the Contracting State. The 50% of designation fee and 50% annual maintenance fee shall be due to the designated State. See *ARIPO Regulations for Implementing the Harare Protocol*, *supra* note 123, rule 12.

<sup>155</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 325.

process saves the patent applicants' resources to repeatedly file the application and bargain with several national Patent Offices.<sup>156</sup> Therefore, the applicant's expenses to obtain a patent in several countries, such as application fee, attorney fee, and so forth can be smaller. The final consequence of this cost-effective process is that the regional route likely attracts more applications with higher quality of inventions and potentially brings about the higher quality of patents.<sup>157</sup>

### Policy and Legal Aspect

An advantage of the regional Patent Office is the ability to promote the goal of regional community. At the time of the European Community established, some experts identified the different patent system as potential barriers to the free flow of goods between countries.<sup>158</sup> The inconsistent patent procedures are actually a non-tariff cost that prevents free trade among countries. The EPO, therefore, is an international organization that was created with the hope of Contracting States to harmonize the patent services and incorporate the EPO's approaches into national patent procedures.<sup>159</sup> The differences of Member States' laws and practices could consequently be minimized, and barriers of market flow could greatly be removed. In this context, the regional Patent Office then has an important role to remove such barriers and promote the greater free movement and transfer of technology within the community.

In addition to supporting the goal of free-trade community, the regional Patent Office can influence the growth of innovations in the region and Member States. As aforementioned, an

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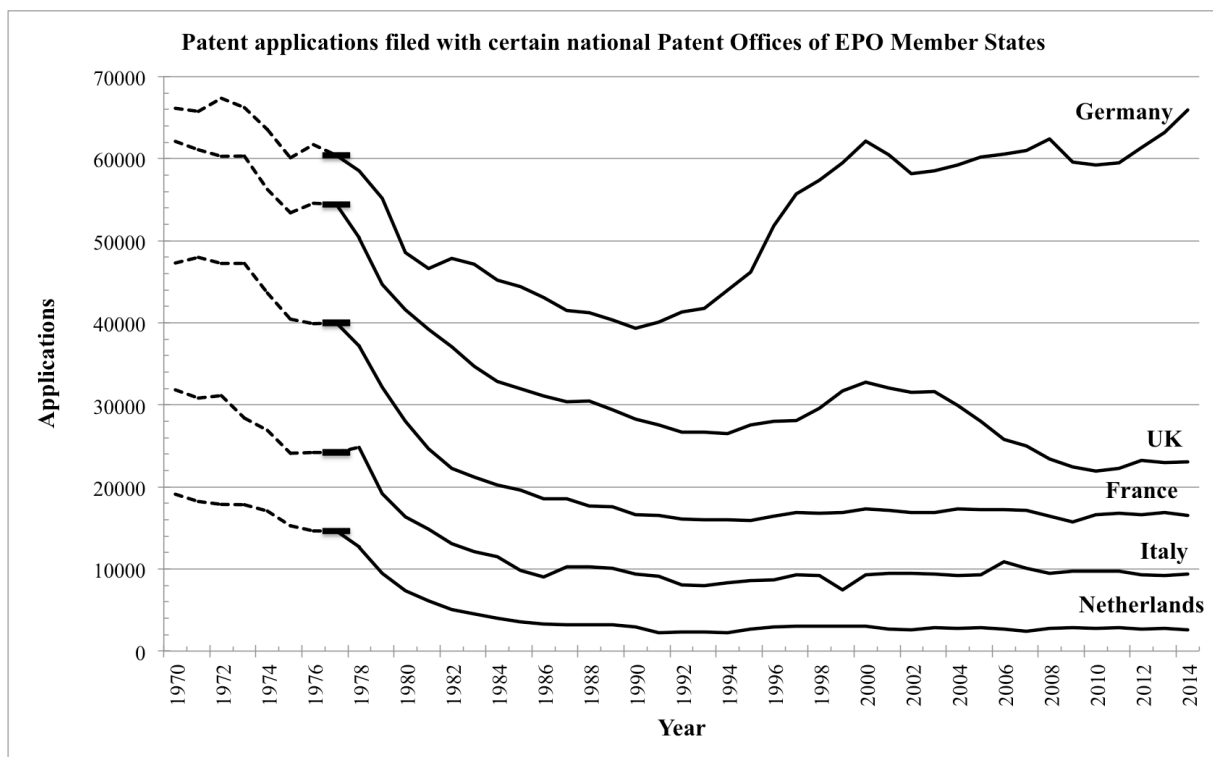
<sup>156</sup> Smith, *supra* note 54, at 237; Deng, *supra* note 152.

<sup>157</sup> See Deng, *supra* note 152, at 122, 136 (studying the quality and value of patent rights in Germany, France and the UK before and after the establishment of the EPO and revealing that the average quality of the European patents is substantially higher than the quality of patents issued by national Patent Offices due to either the fact that the cost-effective process of the EPO route attracts multi-country patent applicants to file applications with higher quality of inventions, or the general increase in the average quality of the inventions in the whole economy).

<sup>158</sup> See Michael N. Meller, *Toward a Multinational Patent System*, 44 J. PAT. OFF. SOC'Y 227, 235 (1962); GRISET, *supra* note 76, at 58.

<sup>159</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 119.

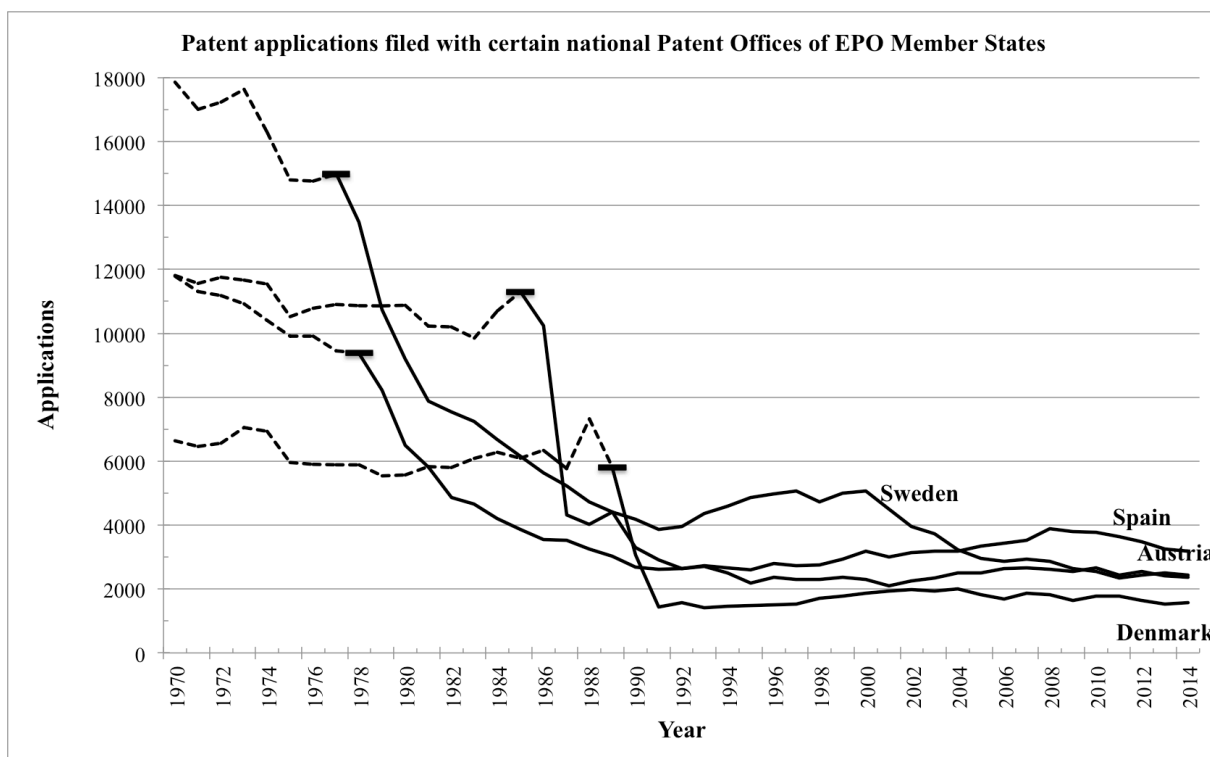
important role of the regional Patent Office is to harmonize the patent procedure in the region. As a result, procedural regulations and some aspects of the substantive law of Member States are standardized.<sup>160</sup> This impact certainly reduces the inconsistency and burdens for patent applicants who wish to obtain a patent in several Member States. In other words, the system that allows an applicant who wants to secure an invention in Member States to file a single patent application through a single process can reduce time and costs in patent procurement procedure. A study reveals that if there is an optional system of obtaining patent protection in a cheaper and easier way, the inventor and corporations will obtain patents through that system.<sup>161</sup> This finding is also supported by the fact that after the EPO operated in 1978<sup>162</sup>, the volume of patent applications filed with national Patent Offices of Member States noticeably declined.



<sup>160</sup> Kusady, *supra* note 144, at 266; *see also* Deng, *supra* note 152, at 121-122 (noting that the uniform examination and granting procedure at the EPO can effectively eliminate Member States' differences in the patentability standards and the scope of protection awarded to the patent holders).

<sup>161</sup> *See* Farquhar, *supra* note 73; Peter Drahos, "Trust Me": Patent Offices in Developing Countries, 34 AM. J. L. & MED. 151, 166 (2008) [hereinafter Drahos, *Patent Offices in Developing Countries*].

<sup>162</sup> The first European application filing date was June 1<sup>st</sup>, 1978.



**Chart 3** The number of patent applications filed with certain national Patent Offices of EPO Member States before (---) and after ratifying the EPC (—)  
 Source: World Intellectual Property Organization (<http://ipstats.wipo.int>)

Chart 3 indicates that many national Patent Offices of EPO Member States have sharp reductions in the annual volume of national patent applications after ratifying the EPC. On the other hand, as illustrated in Chart 1, the volume of European patent applications filed with the EPO has significantly grown over time. This context suggests that patent applicants increasingly filed and shifted their filing route to the EPO, which offers a more convenient way to obtain patent protection in European countries. The regional Patent Office, like the EPO system, therefore, can provide an alternative route and more possibilities for patent protection<sup>163</sup> that can attract patent applicants and, in effect, potentially increase the patented inventions in the region.

<sup>163</sup> Kurt Haertel, Honorary President of Administrative Council, EPO, The New European Patent System, Its Present Situation and Significance, Address at the xxx AIPPI Congress (May 15, 1978), in 19 I.I.C., Dec. 1978, at 505, 510-511.

The role of the regional Patent Office in supporting the optimum synergy and bridging the gap among Member States is also recognized. Since the regional Patent Office standardizes the patent process and regulations, less developing states indirectly heighten their legal standards in order to be comparable to more progressive States and meet international standards. The regional Patent Office can equip Member States needed-information in order to enhance their understanding of the policy impacts as well as the possible form of cooperation. In Africa, the level of understanding of IP law is low in some countries. The collective operation under the regional organization like the ARIPO not only enhances administrative and technical expertise but also influences the exchange of information and assistance among Member States to develop the level of understanding of the patent system.<sup>164</sup> Similarly, the EPO provides the assistance and also protects Member States from having poor-valued patents as a result of the incapacity to run a high-quality examination.<sup>165</sup> The regional Patent Office, therefore, is the place where Member States mutually promote the compliance and assist each other to solve collective problems.

The regional Patent Office can promote communications between national Patent Offices and serve as an information center to promote the patent protection in Member States.<sup>166</sup> This function helps Member States, especially those countries that lack facilities and capacity, to provide reliable information about the national patent system and enable inventors to assess and make a decision to obtain patents. Moreover, since the regional Patent Office pools all information of Member States and has an important role in harmonizing the patent rules and

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<sup>164</sup> Preamble of the Lusaka Agreement clearly states that Member States are "aware of the advantage to be derived by them from the effective and continuous exchange of information and harmonization and co-ordination of their laws and activities in industrial property matters". Member States also recognized that the "creation of an African regional industrial property organization for the study and promotion of and co-operation in industrial property matters would best serve" that purpose. See *Lusaka Agreement*, *supra* note 110, Preamble; KONGOLO. *AFRICAN CONTRIBUTIONS*, *supra* note 117.

<sup>165</sup> See DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 118; Government of the Federal Republic of Germany, *Minutes of the Munich Diplomatic Conference for the Setting up of a European System for the Grant of Patents* 201-202 (Sept. 10 – Oct. 5, 1973).

<sup>166</sup> Kusady, *supra* note 144 at 267.

standards of its members, it can display the regional value and increase the recognition of the region's visions in the international framework.<sup>167</sup> The purpose of ARIPO clearly demonstrates this point. Not only does it harmonize the regional patent procedure, the ARIPO also helps African countries to better control their patent laws by shifting examination away from the influence of developed countries' patent offices.<sup>168</sup> It plays a significant role in creating database, regional initiatives, policy framework, and awareness creation about Africa's concerned issues, i.e. the protection of African folklore and traditional knowledge<sup>169</sup>, and the protection of plant varieties.<sup>170</sup> ARIPO Member States, as a result, can retain their national and regional value in the patent system and gain opportunity to increase bargaining power in the international forum.

Finally, since the regional treaties which established the regional Patent Offices were generally built upon two international agreements, namely the Paris Convention and the PCT, the existence of the regional Patent Office has substantially driven the function of those agreements.<sup>171</sup> Firstly, it offers a one-stop center that enables patent applicants to use the right of priority under the Paris Convention instead of pursuing the right in each Member States. This convenience results in the reduction of costs and time consuming for patent applicants.<sup>172</sup> Next, since the regional Patent Office, as both the EPO and ARIPO, may act as a receiving Office under the PCT<sup>173</sup> and run the patent process on behalf of Member States, it can relieve the

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<sup>167</sup> Kongolo, *The African Intellectual Property Organizations*, *supra* note 116 (discussing the potential roles and benefits of the new African intellectual property organization which will be established to unify two African organizations, i.e. the ARIPO and the OAPI).

<sup>168</sup> See *Objectives of ARIPO*, ARIPO, <http://www.aripo.org/about-aripo> (last visited Sept 25, 2016); See also STACK, *supra* note 57, at 103-104.

<sup>169</sup> See *Swakopmund Protocol*, *supra* note 114; Adewopo, *supra* note 124, at 767.

<sup>170</sup> See *Arusha Protocol*, *supra* note 115; KONGOLO. *AFRICAN CONTRIBUTIONS*, *supra* note 117, at 104, 132.

<sup>171</sup> The European Patent Convention (EPC), for example, states that it is a regional treaty for the purpose of the PCT and a special agreement within the meaning of the Paris Convention. See *EPC*, *supra* note 77, Preamble; DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 58.

<sup>172</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 273.

<sup>173</sup> PCT, *supra* note 51, art. 2(xv) (““Receiving Office” means the national Office or the intergovernmental organization with which the international application has been filed.”). The ARIPO and EPO are intergovernmental organizations that act as receiving Offices under the PCT.

deficiencies of the PCT that incur excessive costs and workload for national Patent Offices.<sup>174</sup> A key objective of European States to create the EPO, for example, was to allow for the alteration of national PCT applications to the EPO because some of them did not want to deal with the increasing workload that the PCT might impose on their patent offices.<sup>175</sup> The Euro-PCT route today is more popular and convenient for both national Patent Offices and patent applicants as seen from the number of PCT applications that has been increasingly filed with the EPO rather than the national Patent Offices.

In addition to the Paris Convention and the PCT, the regional Patent Office can be an actor participating in other international patent collaborations. The PPH, for example, is a collaboration among patent offices with an objective to reduce the duplication of work and speed up the prosecution process by allowing participating IP offices to share and rely upon the S&E information and results with other offices.<sup>176</sup> Nonetheless, instead of performing the process by each national Patent Office, the EPO, as a regional Patent Office, can participate in the PPH program and perform the patent process under the PPH framework on behalf of Member States.<sup>177</sup> This role of regional Patent Office can, as a result, relieve the workload and costs of national Patent Offices of Member States.<sup>178</sup> The collaboration could also promote the performance of the cooperative program and help the regional Patent Office increase the efficiency by sharing the patent S&E information with other patent offices. Lastly, the

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<sup>174</sup> Zion H. Park, *What the PCT Can Learn From Two African Systems*, 6 J. MARSHALL REV. INTELL. PROP. L. 693, 703 (2007); Idris, *supra* note 107.

<sup>175</sup> Denis Thomson, *The Draft Convention for a European Patent*, 22 INT'L & COMP. L.Q. 51, 52, 67 (1973); DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 128.

<sup>176</sup> See *Patent Prosecution Highway (PPH) – Fast Track Examination of Applications*, *supra* note 67.

<sup>177</sup> See The United States Patent and Trademark Office (USPTO), *Patent Prosecution Highway Pilot Program between the United States Patent and Trademark Office and European Patent Office* (Oct. 21, 2008), available at <http://www.uspto.gov/web/offices/com/sol/og/2008/week43/TOC.htm#ref12>.

<sup>178</sup> Because the PPH framework only allows the office of second filing (OSF) to exploit the S&E results of the office of first filing (OFF), it enables the OSF to accelerate the patent process with lower resources. However, the PPH might not reduce the workload of national Patent Offices, especially the OFF, since the OFF is still required to perform the patent examination and administrative work.

collaboration can provide applicants with more filing route options that would result in more efficiency of global patent system.

### **B. Disadvantages of the Regional Patent Office**

While the advantages of the regional Patent Office have been acknowledged and this acknowledgement led to the establishment of the regional Patent Office, the disadvantages of the regional Patent Office must not be overlooked.

The first disadvantage commonly found in the establishment of the international organization is the loss of some aspects of sovereignty. Since most regional Patent Offices were established by international treaties that empower the Offices to centralize and run the patent process on behalf of Member States, they require the supranational power over Member States as well as a certain degree of patent harmonization, of both procedural and substantive law, in order to standardize the formalities requirements and patent examination criterions.<sup>179</sup> Member States, therefore, must relinquish some aspects of national sovereignty over their patent systems in order to enable the regional Patent Office to function.<sup>180</sup> This was a crucial issue when European countries proposed the EPC. Several Member States were concerned about the loss of sovereign authority over the grant of patents. To compromise this issue, Member States, therefore, agreed upon 1973 Munich Convention (EPC). This agreement allowed the EPO to grant a bundle of national patents, instead of a European community patent, as it promotes the administrative function rather than the grant and enforcement of patents which are matters of national sovereignty.<sup>181</sup>

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<sup>179</sup> Heath, *supra* note 79, at 53. See also DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 273.

<sup>180</sup> GRISET, *supra* note 76, at 58.

<sup>181</sup> THUMM, *supra* note 58, at 67-68.

In addition, in order to effectively function, when there arises a conflict between regional rules and any national law, the regional rules should prevail.<sup>182</sup> The creation of regional Patent Office would not generate substantial benefits in terms of the ease administrative costs borne by Member Countries and patent applicants if the examiner has to follow different national patent laws and Contracting States do not rely upon the patent process undertaken by the regional Patent Office.<sup>183</sup> The ARIPO system reflects this problematic point. The performance of ARIPO improved the patent examination situation, but only slightly. This is due to the fact that the ARIPO's Protocols, unlike the EPC, do not automatically have direct application in Member States.<sup>184</sup> To this extent, the patents issued by the ARIPO, therefore, do not have region-wide effect. They are subject to the national patent laws of designated Contracting States and may be declined if, for example, the subject matter is not eligible under the national law.<sup>185</sup> Moreover, despite some general similarities of patent laws, Member States still have different substantive patent laws that cause difficulties for the ARIPO examiners.<sup>186</sup> The lack of adequate supranational power, as illustrated, has obstructed the efficiency of the regional organization in generating the advantages as Contracting States expected.

More significantly, the need of harmonization and the supranational law of the regional Patent Office obviously affect the territoriality principle which empowers each State to regulate the patent system within the national boundary according to its preferential policy and development. The fact that the community interests should prevail over national interests can affect the national identity with respect to laws, regulations, and standards in the way that is inconsistent to national policy and interests. The harmonization might lead to a stronger patent

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<sup>182</sup> KONGOLO. *AFRICAN CONTRIBUTIONS*, *supra* note 117.

<sup>183</sup> Smith, *supra* note 54, at 233.

<sup>184</sup> NCUBE, *supra* note 106, at 3.

<sup>185</sup> *Harare Protocol*, *supra* note 112, § 3(6); Mgbeoji, *supra* note 149.

<sup>186</sup> Mgbeoji, *supra* note 149.

protection which might not be desired for some developing Member States.<sup>187</sup> Moreover, Member States might be barred from experiment legal innovation; namely, to change or adapt the patent law and practice to the unique conditions of a particular time, culture, and preference of the community.<sup>188</sup> This incident not only slows down the progress of legal development in Member States, but also reduces the value of diversity in patent system that matches the goods and services to the tastes and resources of the local population.<sup>189</sup>

Another point worth mentioning is that the concept of regional Patent Office might not convey full benefits and adversely bring about another problem if it lacks the uniform post-grant process. The experience of EPO accurately illustrates this point. Since the European system requires the patent applicants to validate and transform the European patent into the national patents in each designated country, it imposes great burdens upon patent applicants who want to obtain broad patent coverage in Europe. There are costs associated with the validation, such as the translation fee, representation fee, and national renewal fee that must be paid in each country.<sup>190</sup> The translation fee is especially a problematic issue. As the European patent must be translated into the languages of countries where the patent is validated<sup>191</sup>, this requirement incurs high costs to patent applicants.<sup>192</sup> In contrast, the ARIPO system uses only English language and also administers renewals on behalf of Contracting States. This approach can better benefit

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<sup>187</sup> J. Janewa OseiTutu, *Value Divergence in Global Intellectual Property Law*, 87 IND. L.J. 1639, 1680-1682 (2012).

<sup>188</sup> See John F. Duffy, *Patent System Reform: Harmony and Diversity in Global Patent Law*, 17 BERKELEY TECH. L.J. 685, 703-706 (2002).

<sup>189</sup> See Duffy, *supra* note 188; OseiTutu, *supra* note 187; STACK, *supra* note 57, at 35, 159.

<sup>190</sup> Berholtz et al., *supra* note 56, at 257; Mossinghof & Ku, *supra* note 53, at 543.

<sup>191</sup> EPC, *supra* note 77, art. 65.

<sup>192</sup> According to an estimate of the EPO, the costs for translation is about thirty-nine percent of the total cost of a European patent validated in eight countries for a period of ten years. See Connor & Yasong, *supra* note 78, at 185; STACK, *supra* note 57, at 93.

patent holders as they only need one representative and, as a result, the overall costs and time are much smaller.<sup>193</sup>

The lack of regional mechanism to enforce the patent after being granted also creates unnecessary costs as well as the uncertainty. Despite the fact that both Harare Protocol and EPC contain some substantive patent laws, the ARIPO does not provide any post-grant proceedings<sup>194</sup> whereas the EPO only provides post-grant opposition proceedings within nine months from the publication date of the European patent but there is no supranational court with jurisdiction to interpret provisions. The enforcement of ARIPO patents and European patents, therefore, is reserved to the national legal precedent and procedures of States. National courts are free to use their own interpretation and sometimes come to different conclusions, which have no impact in other States.<sup>195</sup> The fragmentation of patent enforcement and litigation is especially an ongoing problem of the EPO Contracting States. It brings about forum shopping for patent suits and creates high costs and uncertainty for patentees as well as other parties to protect their patent rights.<sup>196</sup> To avoid this problem, the region necessarily prepares to harmonize the post-grant enforcement procedure<sup>197</sup> which definitely requires higher budget and resources dedicated to this task.

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<sup>193</sup> Adams, *supra* note 71, at 96.

<sup>194</sup> Adewopo, *supra* note 124, at 767.

<sup>195</sup> Heath, *supra* note 79; Thompson, *supra* note 153, at 510; Adams, *supra* note 71, at 93.

<sup>196</sup> Article 69 of EPC, dealing with the interpretation of the text of patent, is a clear example of the problem of harmonization. Even though there is the Protocol on the Interpretation of Article 69, Member States still have different national philosophies and approaches. See PHILIP LEITH, HARMONISATION OF INTELLECTUAL PROPERTY IN EUROPE: A CASE STUDY OF PATENT PROCEDURE 104-108 (1998); see also Thompson, *supra* note 153, at 510; (2012); Berholtz et al., *supra* note 190, at 257; Mossinghof & Ku, *supra* note 53, at 542; Adams, *supra* note 71, at 93; Kevin P. Mahne, *A Unitary Patent and Unified Patent Court for the European Union: An Analysis of Europe's Long Standing Attempt to Create a Supranational Patent System*, 94 J. PAT. & TRADEMARK OFF. SOC'Y 162, 168.

<sup>197</sup> Nguyen, *supra* note 144, at 475.

Next, the regional Patent Office might not bring about any advantage for applicants who want to obtain patents in few countries if the application fee is not economical. Take the situation of the EPO as example.

(EUR)	EPO		Germany	UK	France	Netherlands
Filing fee	120		40	≈ 33	36	80
Fee for a search	1,300		300	≈144	520	100
Designation fee	585		-	-	-	-
Examination fee	1,635		150	≈ 89	-	-
Fee for grant	925		-	≈22	90	-
Office fees Total	4,565		490	≈288	646	180
Renewal Fee**	1,875		230	≈ 78	144	140
Total	6,440		720	≈ 366	790	320
			≈ 2,196			

**Table 3** Fee schedules of European Patent Office and four national Patent Offices

\* The fees quoted are minimum rate for the online application as of October 30, 2016

\*\* Supposing that the patent is granted in the 5<sup>th</sup> year after the filing date.

Sources: European Patent Office (<https://my.epoline.org/portal/classic/epoline.Scheduleoffees>)  
National Patent Offices' fee schedules

Table 3 clearly demonstrates that the fee schedule for a European patent application until grant specifies high application costs comparing to the fee schedule of national Patent Office of Member States. Therefore, a patent applicant has higher costs of obtaining a patent through the EPO than obtaining a patent from each national Patent Office or even from all four national Patent Offices. After the European Patent is granted, the patentee also has another set of fees to validate the patent in countries he designated. The EPO route, therefore, is not a cost-effective route for patent applicants who seek patent protection in low number of countries. However, the EPO may be a worthwhile route for patent applicants who seek patent protection in more than three or four of major Contracting States.<sup>198</sup> As a result, the European patent might not solely promote the economic advantage in all cases. It indirectly forces applicants who wish to obtain

<sup>198</sup> The costs for obtaining patents through the national route is generally higher than the EPO route when a patent applicant files patent applications in more than three or four countries because of higher attorney fee and translation fee. See Adams, *supra* note 71, at 93; GRISSET, *supra* note 76, at 153; Connor & Yasong, *supra* note 78, at 174, 176; Deng, *supra* note 152, at 125. Interview with European patent attorneys (Mar. 14-18, 2016).

patents in few countries to use the national route in which might have different standards and lower efficiency.

Lastly, the existence of the regional Patent Office can affect the activities of Contracting States' patent offices. Since the regional Patent Office attracts patent applicants who have previously applied for patents in several Member Countries via the national route, instead of being a complimentary mechanism, the regional Patent Office can become a competitor that creates difficulties for national Patent Offices.<sup>199</sup> This is especially the case for the small Patent offices and those offices whose budget is solely derived from the patent activities.<sup>200</sup> Some patent offices in Europe have experienced this impact. As illustrated in Chart 3, the success of EPO has reduced patent applications filed with national Patent Offices. This context, in effect, has reduced national Offices' income derived from application fees.<sup>201</sup> Moreover, despite an effort in the improving patent services, the national Patent Offices still have difficulties in recruiting staff and skill examiners since they prefer working for the EPO.<sup>202</sup> As a result, the size of some national Patent Office, e.g. The Netherlands Patent Office, has shrunk.<sup>203</sup> The loss of national capacity and resources is then another considerable impact brought by the regional system.

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<sup>199</sup> See J.B. van Benthem, President, EPO, The Start of the Europe an Patent Office, Its' planning and Development, Address at the XXX AIPPI Congress (May 15, 1978), in 19 I.I.C, Dec. 1978, at 516, 522 (noting that "the European Patent Office is inevitably to a certain extent in competition with national offices, since we are clearly trying to attract applicants who have previously applied for patents in several European countries using the national routes.")

<sup>200</sup> GRISET, *supra* note 76, at 186;

<sup>201</sup> See Bronwyn Hall & Christian Helmers, *The Impact of Joining the Regional European Patent Convention System* (2012), [https://eml.berkeley.edu/~bhall/papers/HallHelmerts12\\_EPCaccession.pdf](https://eml.berkeley.edu/~bhall/papers/HallHelmerts12_EPCaccession.pdf) (discussing patenting behavior in fourteen countries that acceded the EPC between 2002-2008 and finding that filings of non-resident patent applications with national Patent Offices drastically reduced immediately after countries joining the regional European Patent Convention). See also Smith, *supra* note 54, at 230.

<sup>202</sup> Smith, *supra* note 54, at 230.

<sup>203</sup> GRISET, *supra* note 76, at 188, 254.

## Chapter 3

### Advantages of the Regional Patent Office for ASEAN

ASEAN has long emphasized the significance of the intellectual property as a mechanism to promote the creativity, the technological progress and the economic growth in the region. It has fostered cooperation among Member States in the field of patent system with the ultimate aim to develop ASEAN regional patent system.<sup>204</sup> However, ASEAN countries still confront several difficulties that obstruct the efficiency of the national patent procedure and hence the regional goal to attract the technology transfer and investment in the region.

As the preceding chapter provides the general advantages and disadvantages of the regional Patent Office through the lens of the EPO and ARIPO, this chapter will determine the advantages that ASEAN potentially obtains from the regional Patent Office, if ASEAN successfully establishes its own. The benefits are divided into two aspects: 1) the administrative aspect, and 2) the policy and legal aspect.

#### 1. Administrative Aspect

While the ASEAN IP Framework Agreement encourages Member States to improve the administration of intellectual property<sup>205</sup>, a significant problem commonly found among ASEAN nations is the limited institutional capacity due to the insufficient resources, especially skilled human resource among national patent offices.<sup>206</sup> This difficulty brings about the delay in the patent process. Since it is necessary that a patent office has skilled examiners who can evaluate

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<sup>204</sup> *ASEAN IP Framework Agreement*, *supra* note 2, art. 4.

<sup>205</sup> *ASEAN IP Framework Agreement*, *supra* note 2, art. 3.

<sup>206</sup> For example, Laos lacks information technology and skilled labor. Myanmar also lacks skilled human resource in the industry because its government was under the military forces and has not promoted the industrial development for very long time. As a result, Myanmar has to spend time and money for manpower training and development. Thailand and Vietnam do not have sufficient skilled personnel and institutional capacity to perform necessary patent examination. KENAN INST. ASIA ET AL., *supra* note 46, at 12, 14; Kuanpoth, *supra* note 49, at 316-317. *See also* TRAIRAT YEUNYONG, ROO ROB RUENG PRA-CHA-KOM ASEAN [KNOWING ABOUT ASEAN COMMUNITY] 137, 166-168, 262 (2015).

the patentability, analyze complex scientific literature, and render a sound decision, without the adequate capacity and resources, several ASEAN national Patent Offices would have more difficulties which result in longer time for patent examination. The situation usually gets worse when the number of patent applications in Member Countries increases. Delays from examination process would subsequently result in unmanageable backlogs, which in turn increase delays in the patent process. Recently, the processing time in ASEAN national Patent Offices ranges from two to eight years.<sup>207</sup> For some technical fields, such as biotechnology and software, which are advancing rapidly in terms of development, a patent examination that takes longer than three years could adversely affect their business strategy.<sup>208</sup>

Not only do ASEAN national Patent Offices create quantitative problems, its limited capacity also leads to the qualitative problems. Because the quality of patents assures the enforceability of patents and reduces the risk to be sued<sup>209</sup>, the patent examination also requires sufficient resources and skilled examiners who are capable of dealing with complicated and constantly changing technologies in order to keep up with the quality of patents. The insufficient resources in ASEAN national Patent Offices, however, could lead to an erratic patentability review. Such flaw in the patent review system not only diminishes the quality of patents, but also potentially affects the ability of the office to comply with international standards and handle the increase of the quantitative demands in the patent system in the long run.

If ASEAN Member Countries combine their efforts into the regional Patent Office, it could alleviate the above ongoing administrative burdens and generate the benefits as follows.

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<sup>207</sup> KENAN INST. ASIA ET AL., *supra* note 46, at 14-15 (noting that, in the view of IP offices, the process takes 2-5.6 years, whereas in the view of practitioners, the process takes 2-8 years); *see also* DEGELSEGGER ET AL., *supra* note 47, at 44-54.

<sup>208</sup> Interview with European patent attorneys, *supra* note 198.

<sup>209</sup> KENAN INST. ASIA ET AL., *supra* note 46, at 7.

## A. Pooling Resources

A well-performing patent examination requires substantial resources. Nonetheless, patent offices in developing countries usually lack sufficient resources to administer patent applications and can provide users with only few means to access to the information.<sup>210</sup> National Patent Offices in ASEAN countries which are mostly developing countries also encounter this difficulty.<sup>211</sup> Despite the fact that national Patent Offices have attempted to continuously increase financial and human resources investments in order to support the conducts of full S&E, such investments might not be economical. This is especially the case for small countries where the number of patent applications is relatively small<sup>212</sup>, such as Laos and Cambodia, or countries that have never had examination experience, such as Myanmar.

In the aforementioned context, the concept of regional Patent Office could then be a rational way to deal with patents filed in ASEAN countries without requiring large resources from Member States. Member States do not need to fully invest their scarce resource for their national Patent Offices. Unlike the ASPEC program which Member States still require resources to administer patent applications, the regional Patent Office allows Member States to pool their financial, human, and other resources in order to enable it to fully or partly perform the patent process on behalf of Member Countries. It then could reduce the duplication of resources of Member States for processing the same patent work.

The consolidation of resources also strengthens the capacity of the central office to provide and improve such resources, especially database and human resources, which are essential components of the patent procedure that several ASEAN countries are still lacking.

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<sup>210</sup> Smith, *supra* note 54, at 230.

<sup>211</sup> See KENAN INST. ASIA ET AL., *supra* note 46, at 12, 14; Kuanpoth, *supra* note 49, at 316-317.

<sup>212</sup> See Smith, *supra* note 54, at 231. (noting that it is uneconomic to maintain trained staff capable of carrying out the full S&E where the number of patents granted is relatively small and lodgments few.)

i. Patent Database

To perform the patent work, patent examiners must access to prior art records and review millions of documents, including scientific and technical periodicals and databases, in order to find relevant prior art for that patent application. As a result, the patent office necessarily provides patent examiners with sufficient electronic prior art databases. The electronic resources which include computers, networked computer systems, software, and high speed internet access must also be provided in order to efficiently process large patent applications.<sup>213</sup>

However, several ASEAN national Patent Offices still cannot afford the vast amount of patent documentation, possibly due to the expense of commercial databases.<sup>214</sup> They also have very limited electronic infrastructure; namely, old computers, slow speed internet, and insufficient servers,<sup>215</sup> all of which impede their ability to access to electronic databases and perform prior art search.

To overcome difficulties and enable itself to afford more and wider databases, including efficient electronic infrastructure, the regional Patent Office can pool financial and human resources of Member Countries. This greatly enhances the ability of the regional Office to conduct the required patent process. Additionally, the regional Patent Office can be the center of which ASEAN countries pool information together and develop a database on IP registration in accordance with the goal of ASEAN IP Framework Agreement.<sup>216</sup> This can provide ASEAN with a central and complete database which allows for efficient prior art search and patent applications process for Member States.

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<sup>213</sup> KENAN INST. ASIA ET AL., *supra* note 46, at 6.

<sup>214</sup> *Id.*

<sup>215</sup> Cambodia and Laos, for examples, are ASEAN countries that have lacked information technology and efficient communication infrastructure. *Id.* See also YEUNYONG, *supra* note 206, at 70, 137.

<sup>216</sup> *ASEAN IP Framework Agreement*, *supra* note 2, art. 3.

## ii. Human Resource

A key person in the patent process is the patent examiner whose role is to perform patent examination. Because the examination process is mainly a technical analysis, it requires highly skilled patent examiners who have appropriate academic qualifications and professional training. Ideally, they should be scientists or engineers with a high level of expertise in the field and extensive trainings in the IP law.<sup>217</sup> The qualification and skill of examiners are not only important for the patent office to maintain the quality of patents, but also serve as key considerations for patent applicants and patent attorneys. As there might be a difficulty arising from the communication with inexperienced examiners, such considerations must be taken into account when determining the strategy to file patent applications in certain patent offices.<sup>218</sup>

ASEAN has recognized the significance of manpower in IP offices. ASEAN IPR Action Plans have emphasized the cooperation among Member Countries to keep strengthening human and institutional capacity of IP offices in the region.<sup>219</sup> However, ASEAN patent offices are still confronting common difficulties; namely, the insufficient number of examiners and the lack of well-educated and experienced patent examiners.<sup>220</sup> The main reason seems to be the limit of financial resources and lack of incentive to recruit and retain skilled patent examiners.<sup>221</sup> The recruitment is highly competitive as private sector often offers qualified candidates higher salaries and better positions than what patent offices can do.<sup>222</sup> Moreover, several patent offices in ASEAN countries are still bureaucratic organizations and their ability to increase salaries and

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<sup>217</sup> STACK, *supra* note 57, at 99; KENAN INST. ASIA ET AL., *supra* note 46, at 5.

<sup>218</sup> Interview with European patent attorneys, *supra* note 198.

<sup>219</sup> See ASEAN IPR Action Plan 2004-2010, *supra* note 34; ASEAN IPR Action Plan 2011-2015, *supra* note 34, strategic goal 5.

<sup>220</sup> See KENAN INST. ASIA ET AL., *supra* note 46, at 14-15.

<sup>221</sup> Geoffrey Yu, *Issues in the Protection of Intellectual Property Rights in ASEAN: An International Perspective*, in ASEAN IN THE WTO: CHALLENGES AND RESPONSES 71, 79-80 (Chia Siow Yue & Joseph L.H. Tan eds., 1996).

<sup>222</sup> *Id.*; see also KENAN INST. ASIA ET AL., *supra* note 46.

number of examiners are restricted by national governments.<sup>223</sup> The Thai Patent Office, for example, has a small number of patent examiners. This small group of officers is expected to process thousands of patent applications per year.<sup>224</sup> The Thai Patent Office has probably struggled to recruit qualified examiners because it is a bureaucratic office with low salary scale and limitations for salary increases when comparing to the private sector.<sup>225</sup> As a result, it is difficult for Thai Patent Office to incentivize new comers to join and retain the existing competent examiners.

At the overall level, the shortage of examiners has weakened institutional capacity of ASEAN patent offices in patent administration. The patent offices are unable to effectively deal with the large increase of patent applications that substantially causes the problem of delays and hence patent backlogs.<sup>226</sup> It also potentially affects the patent quality as it is very difficult for a small group of examiners to sharpen their skills and gain expertise in new technology, and the diversity of experience from larger group of examiners is needed to improve this situation. In addition, the short-term work experiences gained by this small group of people, with no incentive to stay for longer years, could not enhance examiners' experience sufficiently for good patent examination quality.<sup>227</sup> This deficiency in patent examiners, in the long run, can impede the development of patent systems of ASEAN countries and hence thwart the ASEAN goal to improve the IP administration in the region.

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<sup>223</sup> KENAN INST. ASIA ET AL., *supra* note 46.

<sup>224</sup> In 2012-2013, there were only 38 patent examiners in total in charging of over 8,000 patent applications (both invention patents and design patents) per fiscal year in average.

<sup>225</sup> FREDERICK M. ABBOTT ET AL, *Emerging markets and world patent order: The forces of change*, in EMERGING MARKETS AND THE WORLD PATENT ORDER, *supra* note 49, at 3, 26.

<sup>226</sup> Department of Intellectual Property of Thailand (DIP) is an example. See KENAN INST. ASIA ET AL., *supra* note 46, at 12, 14; Kuanpoth, *supra* note 49, at 316-318.

<sup>227</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 73, 314 (explaining that the years of examiners' experience are important for the patent quality and examiners need to take time to understand technological literatures and the significance of development in it).

The regional Patent Office could have an important role in fulfilling the lack of human resources in ASEAN countries. Since the regional Patent Office is an international organization, working separately from the national patent system, it could set up its own policy to recruit and secure qualified staffs. The pool of financial resources would increase the potential for the regional Patent Office to offer higher salaries and incentives, which could attract diversely skilled examiners. In addition, the status of the regional Patent Office as an international organization could offer some kinds of privileges that could interest more people to work and stay longer.<sup>228</sup>

Moreover, the consolidation of resources would enable the regional Patent Office to continue providing patent examiners and administrative staffs with funding and trainings with variety of skills. Not only could staffs working for the regional Patent Office benefit from this facilitation, staffs working for national Patent Office in Member States could gain from this potential development as well. Since the capacity of ASEAN nations is frustrated by the lack of financial resource, they could not adequately provide their examiners with technical trainings which are usually costly.<sup>229</sup> Member States could then share the costs to develop the regional Patent Office as an academic center, as the EPO<sup>230</sup> and ARIPO<sup>231</sup> have successfully done by providing funding and capacity building trainings for staffs working in national offices and possibly the public. This activity will significantly support the aim of ASEAN IP Framework

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<sup>228</sup> E.g. Privileges, immunity, tax exemption, etc.

<sup>229</sup> Nguyen, *supra* note 144, at 471.

<sup>230</sup> The EPO regularly provides examiners with trainings. It also established the European Patent Academy as an external education and training center which aims to provide services for national Patent Offices and related institutions such as judges, universities, and businesses. *See European Patent Academy*, EPO, <http://www.epo.org/about-us/office/academy.html> (last visited Sept. 25, 2016).

<sup>231</sup> The ARIPO provides trainings for examiners as well as examiners from national IP offices. It also established the ARIPO Academy to provide trainings and understandings of IP for the public. Recently, the ARIPO and Africa University jointly offer the Master's Degrees in Intellectual Property, with the financial assistance from the Government of Japan. *See ARIPO Academy: Providing an equally balanced approach between practical and theoretical education*, *supra* note 146.

Agreement in which Member States agree “to promote the networking of intellectual property training facilities or centers of excellence on intellectual property” and “to explore the possibility of establishing a regional training institute of intellectual property.”<sup>232</sup>

The regional Patent Office not only reduces the difficulty and cost that individual country has to invest in recruiting and training examiners, but also potentially reduces the high cost and risk incurred from outsourcing work to academic institutions or other countries. Since the regional Patent Office would be established by the agreement of Member States and examiners would be trained consistently with ASEAN law and guidelines agreed by Member States, it could customize the service in accordance with Member States’ needs and prevent the flaw in S&E and patent quality derived from the differences of patent law and examination criteria between countries that outsource the work and countries that provide such service.

### **B. Sharing the Workload and Reducing the Duplication**

Once patent applicants increasingly file patent applications in more than one ASEAN countries, the operation of regional Patent Office could substantially share the burdens of national Patent Offices associated with the patent procedure. After the EPO, for example, has been operated for few years, as illustrated in Chart 1 and Chart 3, the number of European patent applications has significantly increased whereas the number of national patent applications in most Member Countries, except Germany, has declined gradually.<sup>233</sup> An important reason is that the regional Patent Office provides the centralized service that could facilitate and attract applicants who wish to obtain patent protection in many Member Countries. In this regard, the regional Patent Office then would possibly relieve the workload of ASEAN national Patent Offices. In fact, such regional cooperation would also help ASEAN countries, e.g. Myanmar,

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<sup>232</sup> *ASEAN IP Framework Agreement*, *supra* note 2, art. 3.

<sup>233</sup> See *WIPO IP Statistics Data Center*, WORLD INTELL. PROP. ORG. (WIPO), <http://ipstats.wipo.int/ipstatv2/index.htm?tab=patent> (last updated Oct. 2016).

which have not fully developed their patent offices due to lack of resources and expertise, to process and grant patents until those countries can effectively run the offices.

Another reason why the regional Patent Office could reduce the workload of national Patent Office is the fact that the establishment of the regional Patent Office is a form of cooperation that underlines the synergy rather than the duplication of efforts related to patent filings and examinations.<sup>234</sup> The regional Patent Office could provide services on behalf of ASEAN Member States. Patent applicants, therefore, could receive a bundle of ASEAN national patents by filing only one patent application with the regional Patent Office. They do not need to file the same patent applications in every country. As a result, it could reduce the number of patent applications filed in the ASEAN national Patent Offices and hence the duplication that substantially wastes the patent offices' time and resources.

### **C. Reducing the Delay and Application Backlog in National Patent Office**

Speed of patent process is very important for patent applicants as it relates to the time that they can maximize benefits from patented inventions. The longer time in granting patents, the shorter time patent applicants can fully enforce their patents.<sup>235</sup> However, as mentioned above, several ASEAN countries are confronting the problems of delays and large application backlogs. Even though ASEAN countries have created the ASPEC and joined international collaboration such as the PPH, the applications filed through these programs are still small in number. Moreover, these cooperative programs merely enable the patent offices to streamline and share their S&E results to one another. Each national Patent Office is still responsible for administering the application and ultimately determining the applicability of patent applications filed with the Office. The problems of delays and backlogs, therefore, still endure and they are

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<sup>234</sup> See STACK, *supra* note 57, at 100.

<sup>235</sup> STACK, *supra* note 57, at 53.

difficult to eliminate due to lack of resources and continuous increase in the number of applications filed in the ASEAN countries.

Because the regional Patent Office could reduce the duplication and the workload of national Patent Offices by serving as a center for administering and examining patent applications for Member States, it potentially reduces the patent backlogs and enables national Offices to handle patent applications filed in their offices in a resourceful and timely manner. More significantly, a key factor that substantially contributes to the delay and patent backlog in many ASEAN countries is the large volume of PCT patent applications.<sup>236</sup> Therefore, if the ASEAN regional Patent Office could act as a receiving office and perform the work on behalf of Member States, like the EPO and ARIPO do, it would greatly reduce the workload and hence the patent backlog in ASEAN countries. The delay in the patent process then would also reduce, thereby benefiting patent applicants by providing them with more time to maximize benefits from patented inventions.

#### **D. Assuring the Patent Quality**

The patent quality refers to the patent which describes an invention that strictly complies with the patentability criteria.<sup>237</sup> Poor quality of patents not only reduces the level of assurance that inventors would have in respect of patent enforcement, but also diminishes the quality of invention that society needs. It additionally dissuades other inventors to do technological R&D due to the risk of being sued. As a result, this can harm economic and technological development in the long run.<sup>238</sup> The standard of patent examination, therefore, is important for improving the

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<sup>236</sup> See the number of PCT applications in ASEAN countries in Table 2.

<sup>237</sup> Geertrui Van Overwalle, *The impact of emerging market patent systems on Europe: Awaiting 'The Rape of Europa'?*, in EMERGING MARKETS AND THE WORLD PATENT ORDER, *supra* note 49, at 355, 361-362 (“[T]he high quality of patents predominantly refers to patents which describe an invention that is truly new, involves a real inventive step for the person skilled in the art and is industrially applicable.”).

<sup>238</sup> KENAN INST. ASIA ET AL., *supra* note 46, at 7.

quality of patents. Patent office must ensure qualities of patent granted by employing high standard of examination. However, as long as patent offices in many ASEAN countries have very limited resources, it is difficult for them to assure the standard of S&E as they might not be able to adequately deal with patent applications and compare them to existing complicating technologies. This problem could lead to flawed patentability reviews and result in poor quality of patents.

Since the regional Patent Office could have more capacity to afford more resources, to recruit high-skilled staffs and to adequately provide trainings, it could consequently have more ability to adopt the high standard of S&E and to efficiently control the quality of patents granted in the region. In addition, because the operation of the regional Patent Office could remove many administrative and examination burdens from national Patent Offices, provide funding, and raise the level of expertise for ASEAN countries, the ASEAN national Patent Offices could have more opportunity to improve its efficiency in the examination process and administration in a way that brings them close to the international standards. Thus, the regional Patent Office could increasingly ensure the patent quality throughout the region.

#### **E. Cost Savings**

Generally, the process of granting a patent is very expensive for both the national Patent Office and the applicant. However, the operation of the regional Patent Office that centralizes the patent procedure could reduce the costs associated with the patent procedure as follows.

##### **i. National Patent Office**

In order to effectively handle the increase of patent applications and maintain the quality of patents in accordance with international standards, the national Patent Office has considerable operation costs mainly attributable to hiring staff and enhancing facilities, especially the

information technology systems.<sup>239</sup> However, the financial resource in several national Patent Offices in ASEAN countries has been generated and limited by the government.<sup>240</sup> This inflexibility, as a result, limits capacity of the national Patent Office to provide and improve the service in terms of both quantity and quality as mentioned above. Moreover, the considerable costs are potentially great burdens for new patent office in ASEAN developing countries, especially Myanmar, which are in the process of establishing their own patent institution.

Because the regional Patent Office provides the patent service on behalf of Member States, it can share the workload and hence reduce the aggregate costs and financial tension of ASEAN national Patent Offices in administering patents. In addition, if the establishment agreement of the regional Patent Office clearly specifies how the income has to be shared and the operation of the regional Patent Office is successful as the EPO and the ARIPO do, the regional Patent Office could generate a part of the revenue for ASEAN Member States. ASEAN countries then could use that income to subsidize the national patent costs or to support other activities that promote the national patent policy and interests, such as educating and helping domestic applicants or small and medium enterprises (SMEs)<sup>241</sup>, and improving the patent enforcement system.

## ii. Patent Applicants

To obtain a patent in a country, a patent applicant has high expenses associated with patent filing. Apart from the costs of patent office administration and examination, the expenses

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<sup>239</sup> Nguyen, *supra* note 144, at 472.

<sup>240</sup> The national Patent Offices that are not financially autonomous are Cambodia, Laos, Indonesia, and Thailand. *See* KENAN INST. ASIA ET AL., *supra* note 46, at 11.

<sup>241</sup> ASEAN SECRETARIAT, ASEAN ECONOMIC CO-OPERATION TRANSITION & TRANSFORMATION 106 (1997) [hereinafter ASEAN SECRETARIAT, *ASEAN ECONOMIC CO-OPERATION TRANSITION & TRANSFORMATION*] (defining SMEs as “enterprise employing less than one hundred workers, account for a majority of manufacturing establishment in ASEAN.” SMEs are recognized as “a source of employment and savings, serve as “training ground for developing industrial skills and entrepreneurial creativity, support the underground economy, and provide linkages among industries”).

include the patent attorney fee, the annual renewal fee, and the translation fee. Therefore, if the patent applicant wishes to obtain patent protection for the same invention in many ASEAN countries which have different patent system, he unavoidably bears those substantial costs in running several patent applications in parallel before national Patent Offices.

As the regional Patent Office centralizes the patent process in the region, it enables the patent applicant to file only one patent application to obtain patent protection in many ASEAN countries. This single filing process then not only reduces the burdens of patent applicant in terms of the efforts and time, it also reduces the applicant's resources and expenses in obtaining patents particularly including hiring patent attorneys represented in each State and communicating with several patent offices. It could also reduce the translation costs, especially if the regional Patent Office, like the ARIPO, uses one official language and ASEAN Member Countries agree not to require the patent to be translated into their national languages.<sup>242</sup>

The cost savings definitely benefit the patent applicants. More significantly, it makes the patent system more accessible to smaller inventors, especially the individuals and SMEs in ASEAN that have limited capacity to access to finance and to fund patent protection.<sup>243</sup> This opportunity will then promote the efforts of ASEAN to attend the needs and development of both individuals and SMEs.

By reducing difficulties associated with patent procedure and increasing the efficiency of the patent process as mentioned above, the establishment of the regional Patent Office could enable ASEAN to improve the overall productivity of patent system in the region. The more

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<sup>242</sup> Currently, ASEAN countries, except Brunei, Malaysia, Philippines, and Singapore, require the patent applications to be translated into their national languages.

<sup>243</sup> CHIA SIOW YUE & MICHAEL G. PLUMMER, ASEAN ECONOMIC COOPERATION AND INTEGRATION: PROGRESS, CHALLENGES AND FUTURE DIRECTIONS 121 (2015) (indicating that "SMEs in ASEAN face several challenges, including limited access to finance and technology, severe competition from MNCs and SMES of other countries").

effective examination process not merely ensures the quality of patent, but also reduces the delay and the backlog of work. ASEAN and Member States then are able to sustainably handle more patent applications which would potentially come to the community in the long run.<sup>244</sup> Also, the patent applicants could have less burdens in obtaining patent protection in ASEAN countries. This advantage would enhance the patent applicants' opportunity to seek patent protection and transfer technology in the region that, as a result, would promote ASEAN technological and industrial development.

## **2. Policy and Legal Aspect**

The significant challenges that ASEAN is confronting are the disharmony of the patent policy and law among Member States and the lack of efficient mechanism to promote the national and regional patent system. These incidents not only impose barriers upon patent applicants who wish to obtain patents and transfer their technology to ASEAN Member Countries, but also lessen ASEAN's capacity to develop the regional patent system and promote regional economic and technological development.

The emergence of the regional Patent Office in ASEAN could alleviate the above difficulties and benefit ASEAN patent system as follows.

### **A. Reducing the Divergence of the Patent System in ASEAN**

Even though ASEAN has attempted to standardize the patent law and practice by requiring ASEAN Member States to amend their laws in accordance with the standard of international conventions; namely, the PCT and the TRIPs Agreement<sup>245</sup>, the disharmony of patent system among ASEAN Member Countries still endures. The first reason is that, under the PCT, only the filing patent procedures in international phrase are unified. Once the PCT

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<sup>244</sup> See Kusady, *supra* note 144.

<sup>245</sup> *Cooperation in Intellectual Property*, *supra* note 35.

application enters into the national phase, the patent will be granted or rejected by national Patent Office according to the law of each jurisdiction designated by the patent applicant. Therefore, in principle, the PCT does not interfere with the national patent law and the application process of Member States. Member States still have the power to design and control their own patent laws in different ways. The second reason is that, despite TRIPs Agreement's requirement for signatories to enact the law in accordance with the levels of patent rights specified, such minimum standards of levels still leave rooms for flexibility of participating countries to implement the national patent law in their own ways. As a result, although most of ASEAN Member States have moved to comply with the TRIPs standard, the divergences of the patent laws and practices among ASEAN countries are still intact.

A major example of the inconsistency among ASEAN countries is the scope of patentable subject matter. The TRIPs Agreement establishes the basic requirements that "patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application..."<sup>246</sup> However, the TRIPs Agreement also allows members to exclude certain subject matters from patentability.<sup>247</sup> As a result, while the criteria of patentability seems to be the same in ASEAN patent offices, the range of patentable subject matter and the exclusions are practically different and unclear in many ways. Computer program, for example, is apparently unpatentable in many countries such as Vietnam<sup>248</sup>, Philippines<sup>249</sup>, Brunei<sup>250</sup>, and Thailand,<sup>251</sup>

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<sup>246</sup> Agreement on Trade-Related Aspects of Intellectual Property Rights art. 27(1), Apr. 15, 1994, 1869 U.N.T.S. 299 [hereinafter *TRIPs Agreement*].

<sup>247</sup> *TRIPs Agreement*, *supra* note 246, art. 27(2), (3).

<sup>248</sup> Law No. 50/2005/QH11 on Intellectual Property (Nov. 29, 2005) art. 59 (Vietnam).

<sup>249</sup> Intellectual Property Code of the Philippines (Republic Act No. 8293) (1997) § 22 (Philippines).

<sup>250</sup> Patent Order (2011) Part III (Brunei).

<sup>251</sup> The Patent Act 1979 (1999) art. 9 (Thailand).

whereas Cambodia allows certain types of computer processes and products be protected.<sup>252</sup> Singapore and Malaysia do not have specific provision dealing with computer program<sup>253</sup> and do not have case law interpreting whether software patents can be allowed.<sup>254</sup> Scholars and practitioners, therefore, have been uncertain about these countries' position and have been waiting for a clear guidance.<sup>255</sup> Another problematic subject matter is business methods. The patent law of some ASEAN Member States, such as Cambodia<sup>256</sup>, Laos<sup>257</sup>, Malaysia<sup>258</sup>, and Vietnam<sup>259</sup>, explicitly excludes business methods from patentability. However, Thailand and Singapore, for example, do not include this type of invention in their list of non-patentable subject matters. Again, this unclear position leads to the debate on whether business methods are patentable in these two countries.<sup>260</sup>

In addition to the scope of patentable subject matter, the standards of patent's eligibility requirements have been differently interpreted. The novelty of an invention, for example, is

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<sup>252</sup> Declaration on the Procedure for the Grant of Patents and Utility Model Certificates (2007) Rule 44 (Cambodia).

<sup>253</sup> The Singapore Patents Act 1994 removed computer programs from a list of non-patentable subject matter. ASSAFA ENDESHAW, *INTELLECTUAL PROPERTY IN ASIAN EMERGING ECONOMIES: LAW AND POLICY IN THE POST-TRIPS ERA* 36 (2010); Edmund Kok, *Technical requirement for obtaining computer program patents in Singapore?*, IN-HOUSE COMMUNITY, Apr. 28, 2010, at 46, available at [www.inhousecommunity.com/control/Panel/download.php?id=471&download=1](http://www.inhousecommunity.com/control/Panel/download.php?id=471&download=1); Chow Kin Wah, *Software Patenting in Singapore, Indonesia and Malaysia*, LAW GAZETTE, 2008, <http://www.lawgazette.com.sg/2008-10/feature3.htm>.

<sup>254</sup> Mirandah, *The time has come for Software Patents in Malaysia*, MIRANDAH (Apr. 7, 2009), <http://www.mirandah.com/pressroom/item/171-the-time-has-come-for-software-patents-in-malaysia>.

<sup>255</sup> It is expected that Singapore and Malaysia, as common-law countries, may adopt English and Commonwealth decisions that allow a computer program be patentable. *See id.*; Kok, *supra* note 253.

<sup>256</sup> The Law on Patents, Utility Models and Industrial Designs (2003) art. 4 (Cambodia).

<sup>257</sup> Law No. 01/NA on Intellectual Property (December 20, 2011) art. 21 (Laos).

<sup>258</sup> The Patent Act 1983 (1993) § 13 (Malaysia).

<sup>259</sup> Law No. 50/2005/QH11, *supra* note 248.

<sup>260</sup> *See* Fabrice Mattei, *Developing and Implementing a Winning Patent Strategy in ASEAN*, ROUSE THE MAGAZINES, Dec. 1, 2010, <http://www.rouse.com/magazine/news/developing-and-implementing-a-winning-patent-strategy/?tag=patent%20strategy> (discussing the current practice of the Thai Patent Office and noting that “a method or model for doing business, standing alone, no matter how innovative, is considered to lack of the crucial component of an inventive step, according to Section 5 of the Patent Act”); *see also* Chua Siak Kim, *Patenting Business Methods*, LAW GAZETTE, Oct. 2001, <http://www.lawgazette.com.sg/2001-10/Oct01-focus2.htm> (discussing the different perspectives upon the deletion of Section 13(2) of the Patent Act which excluded the method for doing business ‘as such’ from the patentability).

determined by the prior art base of each country which can be defined differently.<sup>261</sup> The examination outcome can also be different from country to country as it depends upon the judgment of examiners whose discretion and interpretation might be influenced by the different educational and cultural backgrounds as well as national policies of each country. As a result, an invention might obtain patent protection in one country but it might not satisfy the patentability standard in another country.

The last diversity is also found in patent procedural rules and administration of ASEAN members that require applicants to follow in many different ways, such as forms of documents, translations, types and amount of fees, currency, processing period, opposition period, and etc. These differences have caused an obvious inconvenience, uncertainty, and high costs to patent applicants who wish to obtain patent protection and have to simultaneously run several patent applications for the same invention in many ASEAN countries.

Because the regional Patent Office would perform the examination and administrative work on behalf of Member States, it requires Member States to agree upon the standards in terms of legal requirements and practice in order to enable the regional Patent Office to operate. The operation of the EPO and the ARIPO, for example, are empowered by the EPC and the Harare Protocol respectively. These Agreements necessarily provide minimum legal framework and standards that allow the organization to perform the work. Consequently, once ASEAN establishes its own regional Patent Office, the Agreement would harmonize the legal requirements and standards of ASEAN Member States that are necessary for the Office to

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<sup>261</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 49. See WIPO Standing Committee on the Law of Patent, *Information Provided by Members of the Standing Committee on the Law of Patents (SCP) Concerning the Definition of Prior Art Brief Summary*, SCP/6/INF/2, Nov. 2, 2001, available at [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_6/scp\\_6\\_inf\\_2.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_6/scp_6_inf_2.pdf) (indicating that different countries (of forty-nine countries) have different rules for the definition of prior art base).

process patent applications. Even though such standards might be at minimum level, they are at least what Member States mutually agree and develop to maximize their interests. The establishment of regional Patent Office thus could be an important step to increase the harmonization of the ASEAN patent system that significantly promotes the ASEAN's objectives and patent applicants' interests as follows.

i. Promote the Objectives of ASEAN Economic Community.

With the aim to be a single market, the AEC Blueprint, which is a master plan guiding the establishment of the AEC, emphasizes primary areas to facilitate the free flow of goods and services within the community. It committed ASEAN members to work towards eliminating tariffs and non-tariff barriers, improving trade facilitation, and addressing standards and technical barriers to trade.<sup>262</sup> Since the different patent systems create the difficulties for inventors or traders to seek patent protection in several countries, it can obstruct the movement of goods and services across borders of Member States and impede innovative activities in ASEAN region. The inconsistency of patent systems then has been recognized as a form of non-tariff barrier that requires ASEAN to address.<sup>263</sup>

The establishment of the regional Patent Office could help ASEAN members overcome this barrier. Because the role of regional Patent Office in centralizing the patent procedure could increasingly harmonize the patent system of ASEAN Member States as aforementioned, it could reduce the differences and hence the difficulties, which hinder the patent progress in the region. The regional Patent Office, therefore, could be a mechanism that removes such barriers and promotes the objectives of the AEC to enhance free flow of goods and services, and transfer of technology within the community.

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<sup>262</sup> See *ASEAN Economic Community*, *supra* note 24; *ASEAN Economic Community Blueprint*, *supra* note 25; *ASEAN Economic Community Blueprint 2025*, *supra* note 28.

<sup>263</sup> See *STACK*, *supra* note 57, at 58; Meller, *supra* note 158.

ii. Promote the Patent Applicants' Interests

For patent applicants, the predictability is very important as it enables them to design patent strategy and business plan.<sup>264</sup> However, due to the divergence of patent system including the limited capacity of national Patent Offices, it is difficult for patent applicants to ascertain whether the patents relevant to the same product will be granted in all countries they seek protection, and how long it would take for their applications to be examined and patented in each jurisdiction. Despite the fact that ASEAN has adopted the work-sharing program, i.e. the ASPEC, the program neither harmonizes the patent process of Member States nor obliges a national Patent Office to follow the decisions of other patent offices. Thus, the process and timeframe of patent to be issued by ASEAN countries are still varied and doubtful. This uncertainty causes applicants risks and costs that could potentially discourage them from obtaining patent protection and operating their businesses in ASEAN countries.

The operation of regional Patent Office can reduce the uncertainty derived from the disharmony of patent system. Since the Office unifies the patent filing and examination process, patent applicants can file one application and follow only one process to obtain patent protection in many Member States. It then would reduce risks and costs arising from such inconsistency and make the process and timeframe more predictable for patent applicants. The regional Patent Office, therefore, not only offers the cheaper and easier channel for patent applicants, but also increases consistency across ASEAN member's patent system, which will instill more confidence into investors in applying for patents in the region.

**B. Developing Patent System in ASEAN**

It could not be denied that there is a wide gap of patent development among ASEAN Member States. While certain countries successfully developed their patent system, some

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<sup>264</sup> Berholtz et al., *supra* note 56, at 245.

countries are still in the beginning stage and some have a low understanding of patent and lack sufficient tools to perform the work. As a result, not all Member States are capable of providing the patent service efficiently. These Member States' difficulties, in effect, could impede the progress of ASEAN to achieve the economic and innovative development. A strong collective operation then is required to assist and support Member States in order to increase the efficiency of patent system in the region.

The regional Patent Office could be a way that helps ASEAN to develop the region and Member States' patent standards. Take the ARIPO as example. Similar to ASEAN's situation, ARIPO Member States also have difficulties in understanding and developing the patent system. With an aim to promote the co-development of Member States, they established the ARIPO to perform the patent work for Member States and, at the same time, assist Member States to improve the patent system.<sup>265</sup> The success of ARIPO today is an example that illustrates the advantages of the regional institution in developing the patent system in the community. ASEAN, therefore, would also obtain a number of benefits from the cooperation under the regional Patent Office that would efficiently promote the patent progress in the region as follows.

First, the services provided by the regional Patent Office would relieve difficulties in patent system of Member States that likely result in the poor quality of patents. When Member States work together to establish the regional organization, they did not only pool resources but also pool their different strengths and expertise. As a result, Member States can take advantage to build up the institutional capacity to provide the high-standard patent procedure for all members. This service would greatly assist Member States that have limited capacity or do not have patent examination experience, thereby preventing the poor patent quality potentially resulted from the flaw of national patent system.

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<sup>265</sup> KONGOLO. *AFRICAN CONTRIBUTIONS*, *supra* note 117.

In addition to processing patent applications on behalf of Member States, the regional Patent Office could offer ASEAN members with a number of additional facilities. Because the regional system does not necessarily make national systems disappear, the regional Patent Office could have an important role in providing services, such as the staff training programs, technical assistance, expert analysis, etc., that would improve national patent process to standards maintained by the regional Patent Office and more progressive States. The work and services of the regional Patent Office, therefore, would help ASEAN members to narrow the gap in patent system to meet Member States' needs. In addition, this could be a mechanism that support ASEAN's objective to reduce disparities in the region.<sup>266</sup>

Next, the regional Patent Office could foster ASEAN Member States' development of patent law and process, in both national and regional levels, to meet international standards. The patent process and services provided by the regional Patent Office would reduce administrative burdens that create ASEAN member's difficulties to comply with international standards and requirements. Once such burdens are alleviated, ASEAN countries could have more potential to conform to the international agreements, especially ASEAN IP Framework Agreement and TRIPs Agreement which all ASEAN countries are signatories.<sup>267</sup> Moreover, the regional Office would provide the opportunity for ASEAN countries to share experiences and work together. The works with more progressive ASEAN countries would assist and influence less developed

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<sup>266</sup> The ASEAN Heads of State at their Summit in 2000 launched the Initiative for ASEAN Integration (IAI) with the objectives to narrow the development gap among ASEAN Member States and foster regional cooperation and economic integration of the newer members of ASEAN, namely Cambodia, Lao PDR, Myanmar, and Vietnam (CLMV). The IAI is a key policy instrument to provide economic and technical assistance to CLMV countries. It also promotes the transfer of know-how, development experience and best practices from the more advanced countries. *See Initiative for ASEAN Integration (IAI) and Narrowing the Development Gap (NDG)*, ASEAN, <http://asean.org/asean-economic-community/initiative-for-asean-integration-iai-and-narrowing-the-development-gap-ndg/> (last visited Oct. 30, 2016).

<sup>267</sup> Nguyen, *supra* note 144, at 453.

countries to fulfill the requirements and participate in the international system.<sup>268</sup> In this regard, all members could have more capacity to mutually advance the patent system in ASEAN to the level of international practice.

Last, the regional Patent Office and national Patent Offices, with the increase of capacity, could complement each other for the greater patent service in ASEAN. The strengthened system would enable ASEAN to sustainably welcome and handle the increase of patent applications in ASEAN as it would provide more alternatives for patent applicants to obtain patent protection in ASEAN countries. Additionally, the regional Patent Office could be a player in the international arena. It could enhance collaborations with the international community that could facilitate the filing of patent applications. For example, as the EPO and the ARIPO do, the regional Patent Office can act as a receiving Office under the PCT<sup>269</sup> and run the patent process on behalf Member States. This service would greatly benefit ASEAN members where the PCT applications are dominantly filed as well as patent applicants who wish to acquire patent protection in more ASEAN countries through the PCT route. The regional Patent Office, therefore, could be an important mechanism that develops patent facilities and services, and thereby promoting the free movement of technology in the region.

### **C. Advancing ASEAN's Interests**

Apart from performing patent work on behalf of Member States, the regional Patent Office could have significant roles in promoting the ASEAN's policies and advancing the interests of ASEAN members and stakeholders as following aspects.

#### **i. Centralizing ASEAN Patent Information**

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<sup>268</sup> See ASEAN SECRETARIAT, ASEAN ECONOMIC COMMUNITY FACTBOOK 56 (2011), available at [http://www.asean.org/?static\\_post=asean-economic-community-factbook-2](http://www.asean.org/?static_post=asean-economic-community-factbook-2) [hereinafter ASEAN SECRETARIAT, ASEAN ECONOMIC COMMUNITY FACTBOOK]; Elizabeth Ng Siew-Kuan, *ASEAN IP Harmonization, Striking the Delicate Balance*, 25 PACE INT'L L. REV. 129, 151 (2013).

<sup>269</sup> See PCT, *supra* note 51, art 2.

Since the significance of patent system is to encourage innovation that will ultimately benefit the public, the patent information that the public will receive is important. The accuracy of patent information not only ensures the rights and duty of those who may be affected by claimed inventions, but also enables the public to learn and plan their market and technology strategy.<sup>270</sup> A patent office, which is the core authority dealing with patents, then has a duty to provide the public with comprehensive information. It should also develop the system that allows the public to easily access and find relevant patent information.<sup>271</sup> Some patent offices, including the EPO and the ARIPO, not only offer the search system, but also act as a consultative service to the industry in this respect.<sup>272</sup> The inventors and stakeholders, therefore, can receive and use the patent information in a practical manner.

In ASEAN countries, however, some national Patent Offices still lack information technology and effective communication infrastructure.<sup>273</sup> This scarce resources cause difficulties for the Offices to make the information available to public comprehensively. The public, as a result, cannot be certain about the patent system and innovation in those countries. Despite the fact that ASEAN has launched the ASEAN IP Portal which aims to be a central database of all IP activities and information throughout the region since 2013<sup>274</sup>, the ASEAN IP Portal facilitates only IP basic information of ASEAN countries which is very brief and incomplete.<sup>275</sup> There is no patent search system that allows the public to find relevant patent information, including details regarding industries and innovations that have been registered or

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<sup>270</sup> LEITH, *supra* note 196, at 16.

<sup>271</sup> See DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 16.

<sup>272</sup> LEITH, *supra* note 196, at 16.

<sup>273</sup> KENAN INST. ASIA ET AL., *supra* note 46; YEUNYONG, *supra* note 206, at 70, 137.

<sup>274</sup> See *About Us*, ASEAN INTELL. PROP. PORTAL, <https://www.aseanip.org/About-Us/About-the-ASEAN-IP-Portal> (last visited Oct. 30, 2016).

<sup>275</sup> For example, the information about the registration procedure in some countries, such as Laos, and Indonesia, cannot be found. The patent statistics of ASEAN countries are not completed and updated.

filed for patent protection in the region.<sup>276</sup> The patent information in ASEAN, therefore, is still limited. This problem could lead to the difficulty of ASEAN to promote its patent system and facilities that will educate the public. It would also affect the confidence of inventors and industries that could potentially drive the businesses and their technology transfers to ASEAN.

The regional Patent Office could be a powerful tool for the region to collect and distribute the patent information of the region. This role of the regional Patent Office can be seen from the ARIPO. In Africa, the lack of patent information in ARIPO Member States has caused difficulties for the public to access and learn about African countries' patent system. Since the ARIPO is a regional Office equipped with resources and operated by strong cooperation among Member States, it can act as a center that pools patent information of the region as well as Member States, and provide the public with a more convenient channel for accessing to the patent information. The regional Patent Office, therefore, could have more capacity to develop facilities and work as an ASEAN information center where ASEAN members can pool and share their patent information among members and for the public. It could have more potential to create one database that unifies relevant patent information, including records of the same invention from ASEAN Patent Offices. This center then would be a one-stop service for members and the public to access to patent information of all ASEAN countries. For Member States, this center not only reduces the costs of building their own national system and the transaction costs, but also enables ASEAN members to monitor each other and detect potential defect that probably occurs in ASEAN system. From the perspective of users, this one-stop service can also reduce the costs of obtaining information from various ASEAN countries as well

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<sup>276</sup> As of December 2016, there is only ASEAN TMview, the search tool for information on trademark registrations and trademark applications that have effect in the participating ASEAN countries.

as the uncertainty arise from the poor quality of information. Consequently, the regional Patent Office would be a mechanism for ASEAN to promote the patent protection in the region.

ii. Assembling Patent Expertise

Since the foundation of the regional Patent Office necessarily requires officials and experts from academic institutions and organizations to work upon the regional operation, ASEAN countries could share the costs to create pools of expertise in ASEAN patent system. Apart from the tasks to systemize the regional Office and procedure, the pools can serve the mutual needs of the region, such as, to provide training and education about patent system for ASEAN institutions, industries, stakeholders and general public. They can be platform to help ASEAN deliberate patent and relating issues, such as the protection of pharmaceutical products, traditional knowledge, etc., and assure that the regional position will truly benefit ASEAN countries.<sup>277</sup> The regional Patent Office, therefore, could resolve problems of lacking experts in some ASEAN countries and help ASEAN to strengthen the expertise that would sustainably develop the regional patent system in the long run.

iii. Strengthening ASEAN Position and Power

A great concern of small developing countries is about their weak position and bargaining power in the international arena. The domination of developed countries in international negotiations often brings about comparative disadvantages for developing countries. Even though the developing countries' position on certain issues are accepted<sup>278</sup>, the patent administrations of developing countries are still integrated and molded into the international system that is administered by the world's major patent offices. This threatens the

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<sup>277</sup> This benefit is also recognized as an aim of Pan-African Intellectual Property Organization (PAIPO) – a new African intellectual property organization created under the auspices of the African Union (AU). *See* NCUBE, *supra* note 106, at 127.

<sup>278</sup> For example, the patent protection for pharmaceutical product

identities of the developing countries. Patent offices of developing countries, including ASEAN countries, which require resources and assistances from the global network, therefore, have to unavoidably administer patent system following standards of those major patent offices.<sup>279</sup> This has led to the concerns of the quality of patents that may not meet the developing countries' needs. The Thai Patent Office, for example, has been exemplified as a developing-country Patent Office that its' administrative practice has been transplanted to the system of major patent offices, especially the EPO, through technical assistances.<sup>280</sup> Since the EPO assists developing countries by providing the examination manuals, examiners trainings, and the information technology systems that enable examiners to follow the decisions of EPO examiners, it encourages those countries to accept its standards and ultimately influences the decision-making processes of those countries' Patent Offices.<sup>281</sup> The Thai Patent Office, in effect, has been criticized that it has administered pharmaceutical patents, for instance, in the way that follows the decisions of the EPO, which results in the low quality of patents.<sup>282</sup> This outcome definitely benefits the interests of European pharmaceutical market rather than promotes Thailand's needs of affordable medicines.<sup>283</sup> Another example is Indonesia Patent Office where developed-country patent offices have also provided patent examiners with the training programs. It has been aware that while the quality of office administration might be improved, the quality of patents could be affected if such assistances enable patent examiners to automatically follow the low quality output of those providers.<sup>284</sup> The low quality patents, especially in important sectors such as

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<sup>279</sup> See DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 138-142; Frederick M. Abbott, *The WTO Medicines Decision: World Pharmaceutical Trade and the Protection of Public Health*, 99 AM J. INT'L L. 317, 349-54 (2005).

<sup>280</sup> See DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 138-142, 295-296; Abbott, *supra* note 279; Drahos, *supra* note 161, at 161-168.

<sup>281</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 138-142; Abbott, *supra* note 279.

<sup>282</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 295-296.

<sup>283</sup> See Drahos, *Patent Offices in Developing Countries*, *supra* note 161, at 161-168.

<sup>284</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 261-262.

pharmaceuticals and business methods, will incur great costs to the country as it will have an impact upon the competitiveness of local firms and hence the country's economy.<sup>285</sup>

This flaw has been recognized by ASEAN Member States and was officially addressed by the Minister of Trade and Consumer Affairs of Malaysia, Datuk Abu Hassan Omar, at the inauguration of the ASEAN Intellectual Property Association in 1996. The Minister urged ASEAN countries to establish systems that would truly be compatible to ASEAN members' needs and expectations.<sup>286</sup> He also emphasized the needs of ASEAN to set up its own system in order to prevent ASEAN from absorbing the influences from other countries, which would not suit the nature of ASEAN.<sup>287</sup> Despite this address by the Minister, ASEAN members, in more than ten years later, still exhibit difficulties strengthening their power in their negotiations with other countries. These ASEAN members are still unable to prevent the resulting dominations by other countries, as evident by the cases of Thailand and Indonesia above. Without any effective systems, this problem could be ongoing and difficult to resolve, especially when patent filings in ASEAN countries originated in developed countries. In this context, ASEAN countries need to establish great efforts to strengthen their position and bargaining power in order to protect their interests.

The regional Patent Office could be the system that helps ASEAN Member States to strengthen their position and increase their power in international arena. The first reason is that the creation of the regional Patent Office and the improvement of patent facilities of ASEAN countries would echo the readiness and commitment of ASEAN and Member States in

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<sup>285</sup> *Id.*

<sup>286</sup> Jeffrey Ramayah, *ASEAN needs own laws to "protect IP rights"*, THE NEW STRAIT TIMES (MALAYSIA), Feb. 12, 1996, cited in Assafa Endeshaw, *Harmonization of Intellectual Property Laws in ASEAN: Issues and Prospects* 2 J. WORLD INTELL. PROP. 3, 21 (1999) (it is "time ASEAN countries formulated their own system on the use of trademarks and patents, that would still suit ASEAN's needs and expectations.").

<sup>287</sup> *Id.* ("[W]e have to set up our house in order and we have to lead and not follow all the time. Otherwise, others will come into the region to impose on us what they want done, which would be mainly beneficial to IP owners from outside the regions.").

strengthening their patent protection systems in order to meet the international standards, while at the same time promoting their own interests. This message would increase not only the confidence of inventors to invest and seek patent protection in ASEAN countries, but also the recognition from international community upon the identities of ASEAN and Member States as well as their roles in promoting the patent protection. The position of ASEAN then would be stronger and more visible. It consequently would enable ASEAN to reflect their needs and vision, which could be increasingly acknowledged in international arena.

In addition, the collective operation under the regional Office will allow Member States to merge their small voices to become a large one. The EPO, for example, has a bargaining power in negotiating about patent procedural or technical issues internationally because it was empowered to represent 38 Member States. It can claim what Member States mutually agreed and what procedures were successful and worked for 38 countries.<sup>288</sup> The regional Office, like the EPO, then can speak louder than individual country can. In addition, the joint resources, information, and experts of the regional Office will enable ASEAN to deliberate relevant issues and reach the regional position that best serve ASEAN interests. Member States then could enhance competitiveness and comparative advantages in international negotiations.

The regional operation could also be an approach to strengthen the power of Member States to prevent pressures to adhere to the developed countries' standards.<sup>289</sup> This consideration was taken when the ARIPO was established. The founding members, which were mostly developing and least-developed countries, created the ARIPO with an aim to allow Member

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<sup>288</sup> However, the EPO cannot speak for 38 Member States regarding substantive patent law because the EPC does not empower it. Therefore, it depends on how the regional Patent Office is established and mandated to represent Member States. Interview with Stefan Luginbuhl, Lawyer, European & International Legal Affairs, PCT, EPO, in Munich, Ger. (Mar 18, 2016) (The statement is a personal view and does not necessarily reflect the position of the EPO.).

<sup>289</sup> See STACK, *supra* note 57, at 103-104.

States to maintain their patent systems and shift the examination criteria away from developed countries' standards.<sup>290</sup> Despite the small growth of patents, the ARIPO today successfully proves its role as a platform of Member States to raise and control their own legal framework and standards. The regional Patent Office, therefore, could be an alternative shelter for ASEAN countries to protect their patent systems in accordance with their own cultures and needs.

iv. Enhancing ASEAN's Capacity to Develop Regional Framework and Initiatives to Protect Regional Interests

The ASEAN Vision 2020 clearly states the vision of ASEAN Member States to be partnership in dynamic development. It encourages ASEAN members to adopt strategies that will promote economic and technology development and, at the same time, enhance national and regional interests.<sup>291</sup> As a result, the regional IP system, which is recognized as a mechanism to promote the regional economic goal, should be developed in the way that promote innovations while protecting interests of Member States. ASEAN countries then should work closely in order to create the patent system that is in line with their mutual objectives.

The regional Patent Office could enhance Member States' the opportunity to adjust policies and standards to the level that suit the community. The work of regional Office, with the pool of information and technical assistances from experts, would encourage Member States to share their perspectives and concerns that could lead to the adoption of the regional policy framework that best fits their cultures and needs. Take the ARIPO as example. The ARIPO provides not only the patent services, but also the platform for Member States to work closely upon the regional policy framework. By their strong cooperation and sufficient resources under the ARIPO, Member States were able to fit the patent policy framework to their needs and

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<sup>290</sup> See *Objectives of ARIPO*, *supra* note 168.

<sup>291</sup> ASEAN Secretariat, *ASEAN Vision 2020*, *supra* note 7.

successfully raised initiatives to address Africa's concerned issues, i.e. the protection of African folklore and traditional knowledge<sup>292</sup>, and the protection of plant varieties.<sup>293</sup> This success of ARIPO reflects the potential of the regional Office that could also be beneficial for ASEAN in fostering the cooperation and addressing issues that are commonly concerned in the region, such as the pharmaceutical patents<sup>294</sup> and the protection of traditional knowledge and cultural expression.<sup>295</sup> The regional policies and standards that are shaped by Member States will secure ASEAN's value and position in processing and granting patents in the region. Furthermore, the work of regional Office could contribute to the recognition within the international framework of the ASEAN vision and support Member Countries to achieve desirable bargaining outcome that possibly influences the change in global norms as the ARIPO and African community successfully did in protecting traditional knowledge and folklore and promoting the access to essential medicines.

The regional Patent Office could also assist ASEAN to determine the regional market and make policy decisions that advance the interests of ASEAN Member States and industries. The pool of expertise and information would enable ASEAN to systematically detect the incentives and problems of industries in the region and find solutions that best match to ASEAN's policies and industries' needs. The use of proper patent policies, together with other industrial initiatives, would build up capacity of local R&D and technology-dependent industries to be active in ASEAN market. Moreover, with the abovementioned capacity to present the ASEAN region to

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<sup>292</sup> See *Swakopmund Protocol*, *supra* note 114; Adewopo, *supra* note 124, at 767.

<sup>293</sup> See *Arusha Protocol*, *supra* note 115; KONGOLO, *supra* note 117, at 104, 132.

<sup>294</sup> The issue of pharmaceutical patent, including the compulsory license, has been debated in Thailand, Malaysia, Philippines and Indonesia. See Susan K. Sell, *The geo-politics of the world patent order*, in *EMERGING MARKETS AND THE WORLD PATENT ORDER*, *supra* note 49, at 46, 54-55.

<sup>295</sup> ASEAN countries, e.g. Thailand and Indonesia, have important traditional knowledge and cultural expression. The protection of traditional knowledge and cultural expression then is an important issue that ASEAN has taken into account. See ASEAN, *Draft ASEAN Framework Agreement on Access to Biological and Genetic Resources*, (Feb. 24, 2000), available at <http://www.tebtebba.org/index.php/all-resources/category/100-supporting-documents?download=583:the-asean-framework-agreement-on-access-to-biological-and-genetic-resources>.

the international community, the regional Patent Office could support ASEAN in negotiating and developing linkages between ASEAN and the networks of multinational patent prosecution system. The connections will broaden channels for ASEAN industries to obtain patent protection and trade their technology internationally. These policies and supports of the regional Patent Office, therefore, could maximize interests of the local industry and result in the sustainable development of economy and technology in the ASEAN region in the long run.

As can be seen from all abovementioned advantages, the operation of regional Patent office could promote the interests of both ASEAN members and inventors interested in acquiring patent protection in any or all ASEAN countries. For ASEAN, the regional Patent Office would reduce administrative difficulties of Member States and bring about the improvement of infrastructure and capacity in administering patent applications filed in the region. Its centralized service would remove barriers caused by different patent systems among ASEAN countries. As a result, it can promote the goal of ASEAN to become a single market and facilitate free flow of goods and services, including the transfer of technology in the region.

For patent applicants, the one-stop service of the regional Office could reduce their uncertainty, burdens, and costs in obtaining patent protection in several ASEAN countries. This benefit would provide inventors, especially the local SMEs, with more opportunities to seek patent protection and become active in both domestic and other ASEAN markets. In this context, the regional Office thus could help SMEs increase its competitiveness and have more incentives to R&D that will contribute to the industrial development according to ASEAN's visions.<sup>296</sup> Moreover, the service of regional Patent Office could fulfill the needs of particular industries that require broad coverage of protection. A pharmaceutical product, for example, could usually be

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<sup>296</sup> A vision of ASEAN is to promote a modern and competitive SME sector in ASEAN which will contribute to the industrial development and efficiency of the region. ASEAN thus has put a lot of efforts into formulating several projects to assist SMEs in the region. See ASEAN Secretariat, *ASEAN Vision 2020*, *supra* note 7.

used in several countries. To protect its substances, the company needs the patent protection covering all countries potentially using its products. The centralized process of regional Office, as a result, could facilitate these industries and reduce their burdens, time, and costs in obtaining patents in ASEAN countries.

Finally, the easier and cheaper system of the regional Patent Office will be an attractive alternative for inventors, particularly to those inventors who want to apply for patents in several ASEAN countries. The establishment of the regional Patent Office not only increases the opportunity for applicants to obtain patents in more ASEAN countries, but also creates the opportunity for ASEAN countries, especially small developing countries, to have more patent technology and investment.<sup>297</sup> This benefit is evident in the European patent system.

Year	Ireland		Cyprus		Turkey		Bulgaria	
	National application	European patent	National application	European patent	National application	European patent	National application	European patent
2014	321	57,749	4	1,097	5,097	7,249	234	1,613
2013	390	56,025	3	1,174	4,661	7,713	297	.
2012	555	51,288	12	1,372	4,666	6,812	259	1,851
2011	561	45,505	8	1,293	4,113	5,643	283	.
2010	792	39,538	8	1,244	3,357	4,744	260	1,493
2009	961	33,844	12	1,356	2,732	4,959	266	1,049
2008	1,007	36,822	21	1,518	2,397	4,318	271	1,111
2007	925	31,723	19	1,647	2,021	4,161	239	1,027
2006	935	33,895	34	1,875	1,232	3,646	291	618
2005	864	26,866	64	1,625	1,146	2,025	313	187
2004	845	26,445	94	1,578	917	957	396	19
2003	939	21,843	97	1,324	837	177	958	.
2002	982	13,753	69	472	1,838	11	1,024	.
2001	1,169	7,922	48	62	3,212	.	1,068	.
2000	1,080	5,916	70	3	3,433	.	940	.
1999	1,114	6,968	46	.	3,020	.	898	.
1998	1,108	6,518	.	.	2,483	.	798	.
1997	940	.	.	.	1,530	.	932	.
1996	927	.	.	.	924	.	723	.
1995	990	.	.	.	1,690	.	731	.
1994	1,009	.	.	.	1,367	.	850	.
1993	1,017	.	.	.	1,226	.	564	.
1992	2,955	.	57	.	1,252	.	680	.

<sup>297</sup> In Europe, the EPO can incentivize applicants to file patent applications in small countries. It motivates inventors to conduct R&D in small-market countries. The regional patent system then can enhance small countries' opportunity to have more technology investments. Interview with European patent attorneys, *supra* note 198.

1991	4,580	.	53	.	1,205	.	748	
1990	4,735	.	43	.	1,228	.	529	
1989	4,230	.	.	.	1,048	.	330	
1988	3,901	.	.	.	900	.	259	
1987	3,565	.	.	.	898	.	314	
1986	3,421	.	30	.	726	.	212	
1985	3,340	.	43	.	593	.	250	

Year	Estonia		Lithuania		Iceland		Latvia	
	National application	European patent	National application	European patent	National application	European patent	National application	European patent
2014	50	1,250	165	1,390	49	908	107	1,034
2013	42	1,345	137	1,247	46	911	233	999
2012	25	1,283	124	1,309	44	881	205	832
2011	77	1,200	108	1,176	71	778	183	674
2010	97	1,054	114	1,125	76	572	185	540
2009	96	1,134	107	941	86	414	243	370
2008	72	1,009	105	1,039	81	275	215	147
2007	63	871	82	776	114	71	147	16
2006	45	531	99	277	371	3	151	.
2005	38	157	115	332	592	.	169	.
2004	124	23	114	12	529	.	151	.
2003	602	.	113	.	805	.	115	.
2002	719	.	131	.	450	.	214	.
2001	717	.	123	.	762	.	180	.
2000	804	.	127	.	876	.	179	.
1999	617	.	157	.	392	.	182	.
1998	463	.	205	.	295	.	285	.
1997	375	.	202	.	238	.	202	.
1996	210	.	178	.	91	.	469	.
1995	79	.	133	.	68	.	300	.

**Table 4** National patent applications and European patent validations in certain EPO Member States

The shaded rows present the period that these countries became Member States of the EPO.

Source: World Intellectual Property Organization (<http://ipstats.wipo.int>)

National Patent Office Annual Reports

The data in Table 4 indicates that, after certain Member States, which had had a small number of application filings, had participated in the EPO system, there were a growing number of European patents validated in these countries. This context suggests that the regional system, like the EPO, can attract and enable inventors to increasingly obtain patent protection in these countries. Member States, in effect, can benefit from the increase of patents, which potentially bring about more patent innovation. With respect to the ARIPO, even though the statistic showing countries that ARIPO patent holders designated is not publicly available, the average of

designated countries is about twelve countries, which is more than half of Member States.<sup>298</sup> The ARIPO, therefore, can also provide applicants with the opportunity to obtain patents in many Member States and, at the same time, increase the ARIPO countries' opportunity to have more patent technology. From the above facts, the regional Patent Office, consequently, could be a mechanism for ASEAN to facilitate the expansion of innovations that would accelerate the technological progress in the region and could in turn promote the industrial development and wellness of people in the community.

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<sup>298</sup> Email from ARIPO official to author (Nov. 9, 2016).

## Chapter 4

### ASEAN's Challenges of Establishing the Regional Patent Office

While the regional Patent Office could reduce burdens and costs of Member States and patent applicants, it could potentially increase other costs. As pointed out in Chapter 2, there are a number of challenges in operating the regional Office, which participating countries need to recognize. This chapter will elaborate these challenges and specifically examine how ASEAN would potentially be affected by establishing its own regional Patent Office. Also, it will explore challenging issues in the operations of regional Patent Office that ASEAN needs to be aware of.

#### 1. Impacts on ASEAN Member States' Sovereignty and the ASEAN Way

To create and enable the regional Patent Office to effectively operate, there are certain tasks and conditions that ASEAN Member States have to work on and subject themselves to. First, since the regional Patent Office centralizes the patent procedure and perform the patent work on behalf of Member States, ASEAN members have to embark upon a process of harmonizing some aspects of their patent law and standard in order to achieve the regional framework and practice that would benefit all members. Not only would the requirements relating to formalities and methods of patent filings be harmonized and incorporated into national system, the substantive requirements and the post-grant procedure would also be expected to undergo the integration process to avoid problems and costs which the stakeholders would have in interpreting and enforcing the patents in different Member Countries.<sup>299</sup> In addition, to become an effective system, the operation of the regional Office, governed by rules agreed by Member States, must have supranational effect.<sup>300</sup> The system would substantially

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<sup>299</sup> The EPC is a great example. The lack of post-grant harmonization of the EPC leads to differences in the interpretation approaches and post-grant procedures of Member States. Such differences cause a forum shopping, unpredictability, and expensive costs for users.

<sup>300</sup> Heath, *supra* note 79, at 53.

benefit ASEAN and patent applicant, provided that the Member States do rely upon standards and decisions made by the regional Office.<sup>301</sup> If the regional rules could not prevail over national laws, as seen in the ARIPO system, the patent system in the region would remain fragmented and consequently obstructs the progress of the regional system.<sup>302</sup> ASEAN, therefore, needs to assure that Member States will endorse and comply with the regional rules and practices carried out by the regional authority.

The need for harmonization of law and the supranational dynamism of the regional Patent Office means that ASEAN Member States have to surrender a part of their sovereignty in regulating the examination and grant of patents to the regional Patent Office. In effect, the regulatory and discretionary power of Member States over patent policy would be limited. Member Countries could not set or adopt any patent criterions that diverge significantly from the standards set forth by the regional Office. This consequence would potentially affect the national policy and identity with respect to legal standards and practice, especially in the areas that have been concerned e.g. patents relating to traditional knowledge and medical innovation. In the medical innovation industry, in which methods of medical treatment and medicines are developed, the question of whether and to what extent patent should be granted is an important policy decision that each State has to carefully make. While the patent might provide a return on the R&D investment and encourage the R&D of new medical innovations, it has been criticized as a critical factor, which drives up costs of medical care as well as impedes the future R&D that could affect national health care system and, hence, the wellness of people of a country.<sup>303</sup> It,

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<sup>301</sup> Smith, *supra* note 54, at 230. *See also* KONGOLO, *supra* note 117.

<sup>302</sup> NCUBE, *supra* note 106, at 3 (explaining that the ARIPO system has been slightly improved because the ARIPO's Protocols do not have direct application in Member States and hence the IP systems of ARIPO Member States are still fragmented).

<sup>303</sup> *See generally* EDDY D. VENTOSE, *MEDICAL PATENT LAW: THE CHALLENGE OF MEDICAL TREATMENT* (2011); Chris J. Katopis, *Patients v. Patents?: Policy Implications of Recent Patent Legislation*, 71 ST. JOHN'S L.

therefore, creates controversies not only in ASEAN countries, but also around the world because it involves public health and ethical considerations in which each State experiences and perceives differently. The changes of patent granting criteria and procedures to the regional system, as a result, would limit the State's power to determine its interests. It might bring about the changes of patent quality that might not meet national policies and expectation.<sup>304</sup> In this context, the work of regional Office then might not always benefit Member Countries. Rather, it might hinder the autonomy and flexibility of ASEAN countries in adjusting national patent policy and standard in accordance with their preferential policies and needs.

Significantly, the above impact of the regional Patent Office on national sovereignty significantly contradicts the ASEAN regional order. In the political history, ASEAN has emphasized the respect for the national sovereignty and territorial integrity of neighboring states as reflected in “the principle of non-interference” or the “ASEAN way.”<sup>305</sup> The ASEAN region, in consequence, does not favor supranational norms. Rather, it underlines associations and interactions based upon the relationships.<sup>306</sup> This culture can be seen from the structure and function of ASEAN. Unlike the Western international community, ASEAN is neither an established supranational organization nor a community which currently seeks to establish any

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REV. 239 (1997); Richard Gold et al., *Are Patents Impeding Medical Care and Innovation?*, PLOS MEDICINE, Jan. 5, 2010, <http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000208>.

<sup>304</sup> This point was also an important reason that many States were reluctant to accede to the Patent Law Treaty (PLT). They perceived that the PLT, which aims to harmonize formal patent procedure and unify documentation, potentially threatened their respective national sovereignty and national economic needs. Due to this concern, the PLT does not have a wide membership base. See *Summary of Patent Law Treaty*, WIPO, [http://www.wipo.int/treaties/en/ip/plt/summary\\_plt.html](http://www.wipo.int/treaties/en/ip/plt/summary_plt.html) (last visited Oct. 30, 2016); see also Amir H. Khoury, *The End of the National Patent Office* (2012) 52 IDEA 197, 213.

<sup>305</sup> See *Treaty of Amity and Cooperation in Southeast Asia*, *supra* note 15; Loke, *supra* note 12; COLIN Y.C. ONG, CROSS-BORDER LITIGATION WITHIN ASEAN: THE PROSPECTS FOR HARMONIZATION OF CIVIL AND COMMERCIAL LITIGATION 50 (1997).

<sup>306</sup> Paul J. Davidson, *The ASEAN Way and the Role of Law in ASEAN Economic Cooperation*, 8 SING.Y.B. INT'L L. & CONTRIBUTORS. 165, 166-167 (2004).

regional supranational body to regulate particular issues.<sup>307</sup> Its operation has been driven by the meetings of heads of government, senior officers, or representatives of ASEAN countries. Moreover, it is worth noticing that the agreements between ASEAN Member States were in the forms of, for instance, ‘Action Plan’, ‘Declaration’, or ‘Agreement’ rather than ‘Treaty’ because they were merely frameworks, which were less legally binding by nature. Hence, it is difficult for such agreements to fit to the traditional concept of ‘treaty’ according to Article 2(1)(a) of the Vienna Convention.<sup>308</sup> These aforementioned circumstances affirm that ASEAN is an intergovernmental regional organization without a supranational objective. It highly respects the national identity of each Member Country.<sup>309</sup> As a result, it would be a great challenge for ASEAN to harmonize national laws or construct a regional authority like the regional Patent Office that would significantly affect the national sovereignty and norms of ASEAN countries.<sup>310</sup>

In addition to the non-interference principle, the consensus decision making, which is an important ASEAN norm, would also challenge ASEAN in running the regional Patent Office. Despite its significant role in maintaining the relationship in ASEAN, the need for the unanimous decision has created difficulties for ASEAN, which consists of countries with variety

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<sup>307</sup> It is worth noting that even though the Office of ASEAN secretariat is the key organization of ASEAN, its function is merely to initiate, facilitate, and coordinate ASEAN collaboration. It does not have a power over the way of making regional decision which requires the consensus of Member States. *See ASEAN Secretariat*, ASEAN, <http://asean.org/asean/asean-secretariat/> (last visited Oct. 30, 2016). *See also* SOMKIAT TANGKITVANICH, ROO TAO TUN AEC [KNOWING AEC] 43-44 (2014); Teuku Mohammad Radhie, *Regional Cooperation in Law and Development Study in the ASEAN Region*, in LAW AND DEVELOPMENT STUDY IN ASEAN COUNTRIES 43 (Teuku Mohammad Radhie & Nobuyuki Yasuda eds., 1991).

<sup>308</sup> Vienna Convention on the Law of Treaties art. 2(1)(a), *opened for signature* May 23, 1969, 1155 U.N.T.S. 331. (“Treaty means an international agreement concluded between States in written form and governed by international law...”); *see also* ONG, *supra* note 305, at 60 (noting that the term ‘treaty’ is rather used for agreements concluded between ASEAN and other intergovernmental organizations).

<sup>309</sup> This condition can also be seen from the ASEAN IPR Action Plans. AWGIPC clearly states that “instead of trying to formulate single set of laws and designing a harmonized regional system in IP, the AWGIPC has crafted its own means of integrating through a higher level of cooperation by undertaking programs and activities together, with ASEAN Member States strengthening linkages with each other to improve their capacity, and participating in global IP structures, subject to the capacity and readiness of each ASEAN Member State.”

<sup>310</sup> *See* Deborah A. Hass, Note and Comment, *Out of Other’s Shadows: ASEAN Moves Toward Greater Regional Cooperation in the Face of the EC and NAFTA*, 9 AM. U.J. INT’L L. & POL’Y 809, 861(1994).

of cultures and needs, to conclude the agreements and move forward. It has been criticized as a key factor that causes the failure to solve various regional problems and long delays in achieving the ASEAN's goals.<sup>311</sup> An obvious example is the ASEAN Non-tariff measures. Even though ASEAN countries have signed the ASEAN Trade Goods Agreement since 2010, ASEAN cannot completely remove all tariffs due to the fact that the elimination is based upon voluntary actions of Member States.<sup>312</sup> This consequence could also happen to the ASEAN goals of developing the regional patent system. Even if the regional Patent Office is successfully established, as long as ASEAN strongly adheres to the consensus decision, it would be difficult to move forward. This is especially the case, given that there are still wide differences in the development and readiness of ASEAN Member Countries for providing patent protection, which inevitably makes it difficult for Member Countries to reach a consensus over such patent issues.<sup>313</sup> The system of regional Patent Office, which requires continuing progresses to manage the rapid change of global technology, therefore, does not fit in with the ASEAN nature. As a consequence, the regional Patent Office might not be able to effectively work for the ASEAN region.

It could be concluded that the contradiction between the concept of regional Patent Office, which requires the supranational power, and the 'ASEAN Way', which demands respects for national sovereignties and identities of Member States, would present a challenge for ASEAN in establishing and operating the regional Patent Office. Not only does the regional Patent Office concept deprive national sovereignty and identity, but it also potentially brings about inefficient progresses and results that might not meet the ASEAN interests and

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<sup>311</sup> See, e.g., DONALD E. WEATHERBEE, *INTERNATIONAL RELATIONS IN SOUTHEAST ASIA: THE STRUGGLE FOR AUTONOMY* (2d ed. 2009); DAVID MARTIN JONES & M.L.R. SMITH, *ASEAN AND EAST ASIAN INTERNATIONAL RELATIONS: REGIONAL DELUSION* 144 (2006). PHOPHUEKSANAND, *supra* note 11, at 8, 50; TANGKITVANICH, *supra* note 307.

<sup>312</sup> TANGKITVANICH, *supra* note 307, at 25.

<sup>313</sup> Weerawit Weeraworawit, *The Harmonisation of Intellectual Property Rights in ASEAN, in* *INTELLECTUAL PROPERTY HARMONIZATION WITHIN ASEAN AND APEC*, *supra* note 54, at 205, 214 (explaining that the complexity of the patent issues causes big differences in the readiness of Member States).

expectation. The concept of regional Patent Office, consequently, would potentially cause ASEAN difficulties rather than benefits that ASEAN would expect.

## **2. Impacts on ASEAN's Diversity and national interests.**

Apart from the ASEAN Way, an important nature of the ASEAN community is its rich diversity. There are wide differences in historical backgrounds, languages, religions, politics as well as the legal systems of Member States. In terms of the economic and technological development, ASEAN also has a big gap among Member Countries. While Singapore, which is a top economy in the region, is likely to be classified as the developed country, Cambodia, Laos, and Myanmar remain the least developed countries in ASEAN. This divergence, in effect, has led to the variety of needs and sets of rule to protect each Member State's interests.

The heterogeneous nature of ASEAN also affects to the way ASEAN Member Countries have framed their national patent system. ASEAN countries have constituted their patent laws according to their national policies which vary for political, economic, and legal reasons. Moreover, like many countries in Asia, some ASEAN countries do not share the same perception upon the IP protection as Western countries. Their history and culture have emphasized the contribution and community interests to access to the creative work rather than the protection of private interests.<sup>314</sup> In consequence, the concept of patent regime in ASEAN countries has not been developed to the level standardized by industrialized countries. Rather, it has been differently adjusted in a timely manner to suit the values and needs of these ASEAN countries.

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<sup>314</sup> See Chun, *supra* note 52, at 132; Lei Fang, *Chinese Patent System and Its Enforcement*, SUTHERLAND ASBILL & BRENNAN LLP (2005), <https://us.eversheds-sutherland.com/portalresource/lookup/poid/Z1tO19NPluKPtDNIqLMRV56Pab6TfzcRXncKbDtRr9tObDdEuSpDv0!/fileUpload.name=/Chinese%20Patent.doc> (last visited Oct. 30, 2016) (arguing that many countries in Asia have similar traditions as the Chinese which believes that inventions belonged to the community and should be freely to share, and this culture is believed to make each patent system unique and effect the development of patent system).

Even though one might argue that the divergence of patent criteria in ASEAN has been increasingly reduced by the international agreements such as TRIPs, as described in the preceding chapter, there still are differences in requirements, levels of protection, and discretions of the Patent Office to adjust the laws to suit their local circumstances. For example, while Singapore has a significant interest in patent protection and has tailored its patent law to exclude only few subject matters from patentability<sup>315</sup>, other ASEAN countries' patent laws still have a wide range of non-patentable subject matters. Additionally, these countries attempt to implement laws and policies to limit the patent right over certain types of invention that affect their local interests, such as traditional knowledge, medicines, and plants. These differences reveal that the ASEAN Member States' positions over the patent system still vary in a number of ways. This is due to the substantial divergence of social and economic context, and domestic interests of ASEAN countries. Consequently, if ASEAN centralizes the patent administration under the regional Patent Office, there could be impacts upon the ASEAN diversity and national interests of Member States in the following ways.

#### A. Impacts on National Interests and Preferences of Member States

The creation of the regional Patent Office would obscure the ways in which each ASEAN Member State protects its local preferences. Since the regional system will harmonize the standards of patent procedure in the region, each Member State might be required to adjust its national patent law and practice to achieve the regional standards that might not be responsive to local variations. In the case when there exists vast differences between Member States, the harmonization could especially bring about the standards that might not meet local needs and preferences of some Member Countries.

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<sup>315</sup> See ENDESHAW, *supra* note 253; Kok, *supra* note 253; Wah, *supra* note 253.

On one hand, if the regional Patent Office chooses to adopt the patent standards of highly progressive Member States, i.e. Singapore, ASEAN countries would have to follow the standards in which Singapore has committed under the international agreements even they do not want to. The United States-Singapore Free Trade Agreement (USSFTA), for instance, is an agreement that requested Singapore to change procedural matters concerning patent applications and patent protection to the level that is consistent with the U.S. practice.<sup>316</sup> The important changes include the patent term which can be extended to compensate for administrative or regulatory delays in granting patent<sup>317</sup>, the increase of protection for patents covering particular subject matters, i.e. biotech plants and animals<sup>318</sup>, and the limit of States' power to refuse a patent based upon public health and environmental concern.<sup>319</sup> While these USSFTA's required standards might benefit the overall economic and technological development of Singapore<sup>320</sup>, they might provide disadvantages for some ASEAN developing countries in respect of social welfare and public health of these countries.<sup>321</sup> Moreover, the higher level of patent protection that Singapore has adopted would create high costs and burdens for local industries and citizens in small countries wishing to utilize and develop inventions. This situation, as a result, would be detrimental to the competitiveness and the economic and technological progress of small ASEAN countries.

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<sup>316</sup> The United States – Singapore Free Trade Agreement, May 6, 2003, U.S.-Sing., available at <https://ustr.gov/trade-agreements/free-trade-agreements/singapore-fta/final-text>.

<sup>317</sup> *Id.* art. 16.7-7, 16.7-8, 16.8-4(a).

<sup>318</sup> *Id.* art. 16.8-1.

<sup>319</sup> The USSFTA does not provide the government with the flexibility to refuse a patent based upon public health and environmental concern. It then leads to the concern that Singapore could be required to patent inventions despite possible harm to the environment or public health and safety. See THE U.S. LABOR ADVISORY COMMITTEE, REPORT FOR THE LABOR ADVISORY COMMITTEE FOR TRADE NEGOTIATIONS AND TRADE POLICY 14 (2003) discussed in Kenneth Chiu, Comment, *Harmonizing Intellectual Property Law Between the United States and Singapore: The United States – Singapore Free Trade Agreement's Impact on Singapore's Intellectual Property Law*, 18 TRANSNAT'L L. 489, 505 (2005).

<sup>320</sup> The adoption of foreign standards as a part of free trade agreements is a Singapore strategy to benefit its overall economic position and open free trade. See Eugene Kheng-Boon Tan, *Law and Values in Governance: The Singapore Way*, 30 HONG KONG L.J. 91, 91-92 (2000).

<sup>321</sup> See OseiTutu, *supra* note 187.

On the other hand, if the regional Patent Office chooses to adopt the standards of the less progressive country, e.g. Cambodia, which exclude from patentability criteria several inventions, including patent software, business methods and inventions that harmful to health and environment, this would create significant difficulties for Singapore to weaken its patent protection for the purpose of standard uniformity. This incident not only obstructs Singapore's distinct objective to promote the innovations, but also puts Singapore in a difficult situation in which the country would have to deal with the conflicting standards between the USSFTA and the ASEAN.

In summary, no matter which standard the regional Patent Office applies, the harmonization can clash with ASEAN countries' policies to protect their national interests in certain ways. The impact could be greater when some ASEAN Member States acceded to international trade treaties which increasingly heighten the standards of patent requirement and protection. These include the trend of Trans-Pacific Partnership (TPP) which the U.S. negotiated with only certain ASEAN countries; Brunei, Malaysia, Singapore, and Vietnam, with the exceptions of Cambodia, Laos, and Myanmar.<sup>322</sup> These treaties, therefore, increasingly divide ASEAN. They widen the gap of interests and patent standards of ASEAN members. As a result, it would be more difficult for ASEAN to harmonize the regional standard at the level of which the national needs and interests of all ASEAN countries will not in any way be affected.

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<sup>322</sup> These three ASEAN countries are not eligible for accession because they are not members of the Asia-Pacific Economic Cooperation (APEC) forum. See TPP, EXEC. OFF. OF THE PRESIDENT OF THE U.S., <https://ustr.gov/tpp/> (last visited July 15, 2016); Prashanth Parameswaran, *The Power of Balance: Advancing US-ASEAN Relations under the Second Obama Administration*, 37 FLETCHER F. WORLD AFF. 123, 126 (2013); Ernest Z. Bower, *U.S. Strategic Alignment: Squaring Trade and Grand Strategy in Asia*, Center for Strategic & International Studies, Mar. 30, 2012, CTR. FOR STRATEGIC & INT'L STUD., [www.cis.org/analysis/us-strategic-alignment-squaring-trade-and-grand-strategy-asia](http://www.cis.org/analysis/us-strategic-alignment-squaring-trade-and-grand-strategy-asia).

## B. The Decrease of the Opportunity to Legal Innovation

Diversity has great values as it enables States to decide what legal system they want to adopt and develop the system to suit their domestic conditions and preferences overtime through experimentation.<sup>323</sup> In the context of patent system, such experimentation has significantly led to findings of new superior laws and practices that can effectively address both the problems of patent laws and the changes of social and economic conditions at a particular time.<sup>324</sup> These legal innovations include, for instance, the deferred examination which was first introduced by the Dutch Patent Office in 1964 as a response to the backlogs of increased patent applications and high costs of patent office operations at that time<sup>325</sup>, and the English limited examination system which was created to tackle the increase of patent applications with little or no validity.<sup>326</sup>

It is worth noting that some legal innovations not only deal with the problems or promote the interests of that country, but can also subsequently influence other countries to follow and obtain the same benefits. The deferred examination, for instance, has successfully addressed the Dutch Patent Office' problem, and has benefited the patent applicants in a number of ways. Due to its success, the deferred examination has been widely adopted by the EPO and many countries nowadays, e.g. Canada and Japan.<sup>327</sup> The potential values of legal innovations thereby leads to ongoing processes of experimentation of Member States, which covers the fundamental patent issues, such as the extension of the range of patentable subject matters to cover particular works, e.g. the business methods.<sup>328</sup>

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<sup>323</sup> See Duffy, *supra* note 188, at 707-708; Peter K. Yu, *Five Disharmonizing Trends in the International Intellectual Property Regime*, in 4 INTELLECTUAL PROPERTY AND INFORMATION WEALTH: ISSUES AND PRACTICES IN THE DIGITAL AGE 73, 73-74 (Peter K. Yu ed., 2007).

<sup>324</sup> Duffy, *supra* note 188, at 709.

<sup>325</sup> STACK, *supra* note 57, at 35.

<sup>326</sup> Duffy, *supra* note 188, at 715.

<sup>327</sup> STACK, *supra* note 57, at 35.

<sup>328</sup> Duffy, *supra* note 188, at 716-717.

As legal diversity allows countries to pioneer an experiment to discover valuable legal innovations as demonstrated above, there will be difficulties if ASEAN decides to centralize the patent procedure of Member States. The consolidation would minimize the value of diversity and hence the ability and flexibility for ASEAN States, particularly the national Patent Offices, to experiment their legal frameworks and practices. ASEAN countries then would lose the opportunity to provide appropriate rights to the legal innovations that suit their economic needs and domestic conditions. This incident, in consequence, would slow down the progress of legal development in Member States, as well as the regional community, which could hinder the States' potential development in the long run.

### C. Eliminating Choices and Competition

Another value of the diversity of patent system is the fact that it maintains competition and enables Member States to offer a variety of services that could provide choices in the market.<sup>329</sup> Various studies show that, in Europe, many firms and applicants still prefer the differentiated patent system because the differences in, costs, speed, expertise of examiners, languages, etc., enhance their opportunities to find the systems that best serve their needs.<sup>330</sup> Furthermore, the competition among countries brings about greater value and service that can satisfy their preferences. In short, it encourages States to develop their own system and, at the same time, provides applicants with choices. This benefit thus results in the patent system that meets all parties' expectations.

As explained above, if ASEAN harmonizes the patent process through the regional Patent Office, a potential result is that it would eliminate competitions and choices in the ASEAN

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<sup>329</sup> THUMM, *supra* note 58, at 105-106.

<sup>330</sup> *Id.* at 105-106 (surveying the role of national patent offices in the European patent system and finding that the large firms support the differentiated system and still need to maintain the national patent offices.); Interview with European patent attorneys, *supra* note 198.

patent system. It would freeze the progress of Member States in developing the national patent system and, at its worst, lead to the extinction of national patent systems eventually.<sup>331</sup> Patent applicants, in effect, would have very few or even no option to obtain the patent protection through the route that fits their needs and preferences. This condition then would diminish the benefits that ASEAN countries and applicants expected to receive and, significantly, make the patent process in ASEAN counterproductive in the long term.

The all above explanation clarifies the significance of ASEAN diversity and how the emergence of the regional Patent Office would negatively impact national interests of ASEAN countries. This presents another challenge for ASEAN to reach the regional compromise, particularly when ASEAN countries still have divergent preferences and different ways to approach the patent system. For example, how to reconcile the position of Singapore, a country with one of the most progressive economies, with the position of Thailand, a country which is less progressive. While Singapore might want to adopt pharma-friendly patent law in order to promote the medical development, Thailand might not want to adopt such rigorous approach to pharmaceutical patents due to existing serious public health problem in the country.<sup>332</sup> Similarly, Myanmar, one of the least developed countries in ASEAN, may seek to prioritize national security over economic policy and financial progresses.<sup>333</sup> To solve this type of conflict can be difficult in several fronts. For instance, it can be even more difficult to harmonize the different practices of the national Patent Offices. The regional Patent Office, unlike other international IP agreements, cannot only harmonize the law but also need to harmonize the practices of national Patent Offices as well. In this context, a situation of which ASEAN nations feel obligated to enter into an agreement that might not meet their domestic conditions for the purpose of

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<sup>331</sup> Chun, *supra* note 52, at 138.

<sup>332</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 141.

<sup>333</sup> YEUNYONG, *supra* note 206, at 166, 168.

centralization can leave them feel that their national interests are not protected. Therefore, whether or not the Member States can adjust international patent standards to fit their local conditions can present great challenges.

The final crucial point is that the wide diversity of development and preferences of ASEAN Member States could lead to differing perceptions of how the regional Patent Office will operate to benefit them. ASEAN then would have difficulties to reach the consensus. As a result, as long as ASEAN still requires the consensus approach in the regional decision-making process, this circumstance would obstruct the progress of ASEAN in establishing and operating the regional Patent Office. If the regional system could not be kept in check, the consequence would not only make worse the inefficient of ASEAN patent system, but also the costs and risks pertaining to persisting future divisions.

### **3. Impacts on National Patent Offices of Member States**

Generally, the existence of regional Patent Offices, like the EPO and the ARIPO, does not necessarily replace the national Patent Offices of Member States. They are separate patent-granting bodies that can work together in order to advance the patent system in the region.<sup>334</sup> However, since the regional Patent Office delivers the service similar to the national Patent

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<sup>334</sup> For example, the representatives from the national Patent Offices of the EPO Member States are members of the Administrative Council, which is the supervisory body and legislative body of the EPO. As a result, they can directly specify the direction and the development of the EPO in various aspects. *See The Administrative Council of the European Patent Organization*, EPO, <http://www.epo.org/about-us/organisation/administrative-council.html> (last visited Sept. 25, 2016); LEITH, *supra* note 196, at 25. At the same time, the EPO has provided Member States with many supports, especially the training programs, in order to foster the development of patent-related training in the EPO Member States and strengthen the co-operation between the EPO and the national Patent Offices. *See European Patent Academy*, *supra* note 230. The EPO also has a cooperation with national Patent Offices in developing, for example, patent information centers (PATLIB) which are located in national Patent Offices and universities of Member States with the aims to provide the public with the local access to the patent information and to work with each other in a convenient way. *See Patent Information Centres (PATLIB)*, EPO, [www.epo.org/searching-for-patents/helpful-resources/patlib.html](http://www.epo.org/searching-for-patents/helpful-resources/patlib.html) (last visited Sept. 26, 2016); *The PATLIB Network supported by the European Patent Office*, WIPO, [http://www.wipo.int/sme/en/best\\_practices/patlib.htm](http://www.wipo.int/sme/en/best_practices/patlib.htm) (last visited Sept. 26, 2016).

Office, it could affect the capacity and operation of national Offices of Member States in the following ways.

First, the emergence of the regional Patent Office could pose difficulty for the national Patent Offices in managing human resources. The experiences of the EPO and the ARIPO reveal that the Contracting States had to assist their regional Offices during the formative years by providing experienced examiners to work for them. Even after that period, Member States might still have to release their staffs for transfer to the regional Office due to its limited capacity to recruit skilled examiners.<sup>335</sup> As a result, once ASEAN establishes the regional Patent Office, ASEAN Member States would potentially be required to send their skilled staffs to work for the regional Office. This transfer, in effect, would worsen human resource shortage problem in many Patent Offices. If ASEAN does not have any effective strategy to deal with this problem, Member States would have more difficulties in running their Patent Offices and, in the worst case, might not be able to transfer sufficient number of their staffs for the regional Office to be launched. In creating negative impacts on the national Patent Offices of Member States and the regional operation, this whole situation would finally result in an inefficiency of patent system in the region as a whole.

In addition to reducing the number of existing staffs of national Patent Offices, the operation of regional Patent Office could impact the ability of national Patent Offices to recruit new staffs and make their current employees stay in the long term. This is due to the fact that the regional Patent Office is commonly an intergovernmental organization. Its status and benefits, such as tax-free and privileges and immunities, are generally more attractive, and this creates higher interest for people to work for the regional Patent Office in comparison to the national

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<sup>335</sup> Some examiners of the ARIPO are from national Patent Offices of Member States. Email from ARIPO official to author, *supra* note 139; Ibrahim, *supra* note 138.

Patent Offices. In this context, the national Patent Offices would have difficult times attracting qualified staffs and prevent the rapid outflows of staffs from their Offices to the regional Office. Take the impact of the EPO on patent offices of Member States as an example. The emergence of the EPO has increasingly caused recruitment difficulties for many patent offices, including the German Patent and Trade Mark Office (DPMA), which is recognized as a major patent office in Europe. The main reason is that the DPMA, like many national Patent Offices, is a governmental authority in which the wage and welfare of staff are limited by law and are in direct competition with industry and international organizations such as the EPO. It is therefore difficult for the DPMA to recruit skilled persons in special technical fields based on an attractive salary and privileges alone. The DPMA thus offers other kinds of benefits to staffs such as teleworking or work-life balance.<sup>336</sup> Otherwise, those people would rather want to join other workplaces or the EPO, which have similar kind of works with higher salary, privileges, and benefits.

This effect would intensify the problems of many ASEAN national Patent Offices, specifically those bureaucratic offices which the salary scale and benefits are very low and limited, in incentivizing competent staffs to work and have a long stay.<sup>337</sup> The Thai Patent Office, for example, has an ongoing difficulty in recruiting new examiners as higher wages offered by other general industries work to attract and retain talented people to work in their business. If the regional Patent Office is set up, it would become another competitor that possibly makes the Thai Patent Office lose more potential skilled examiners. The establishment of the regional Office, therefore, would increase the manpower difficulty for the Thai Patent Office and possibly other Patent Offices, especially the Patent Office of Member State where the regional Patent Office will be located. It would also heighten the operational risk of national Offices that

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<sup>336</sup> Interview with Volker Ruger, Head of Section 4.3.4- International Cooperation, German Patent and Trade Mark Office (DPMA), in Munich, Ger. (Mar 16, 2016).

<sup>337</sup> ABBOTT ET AL., *supra* note 225; *see also* KENAN INST. ASIA ET AL., *supra* note 46, at 12, 14.

could result in the increase in backlogs and the poor quality service and national patents. This situation would, in the end, obstruct the goal of ASEAN countries to increase the efficiency in dealing with the increase of national patent applications and promote the innovative development of the country.

Next, the operation of the regional Patent Office could affect the existence and business of Member States' national Patent Offices. Since the aim of establishing regional Patent Office is to perform the patent filing and granting process similar to the activity of general patent office, it is foreseeable that there would be competition between the regional Patent Office and the national Patent Offices of Member States in attracting patent applications. This concern was clearly addressed when the EPO was established. The first president of the EPO, Bob van Benthem, accepted that the EPO would, to some extent, compete with national Patent Offices, and lead to the loss of work for national Offices.<sup>338</sup> However, he believed that the EPO and national Patent Offices offered different kinds of advantages, and the loss of work was expectable as the aim of the EPO is to reduce the workload of national Patent Offices.<sup>339</sup> National Patent Offices, thus, had to adapt to the EPO system by, among other things, shrinking their sizes.<sup>340</sup>

After the EPO has operated for a while, these expected impacts became true. As illustrated in Chart 3, the success of the EPO has reduced the national patent activities and led to the smaller size of many national Offices.<sup>341</sup> The Netherlands Patent Office, for example, was a

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<sup>338</sup> Benthem, *supra* note 199.

<sup>339</sup> *Id.* (“[W]e firmly believe that the European route truly offers many advantages to applicants seeking the protection provided by a patent in many European countries, but that the national route is more advantageous for those who want patents in just one country, or maybe two.... However, the loss of work for national offices was fully expected and for some of them very much to be welcomed in view of the difficulties they were facing in coping with their backlogs. The loss of work was plain from the beginning that national offices would have to adapt to the new system by shrinking in size”).

<sup>340</sup> *Id.* GRISSET, *supra* note 76, at 188, 254.

<sup>341</sup> Smith, *supra* note 54, at 230.

once large examining office that has shrunk in size because the emergence of the EPO had halved the number of applications filed with the Office, and many examiners had moved to the EPO.<sup>342</sup> Nonetheless, the challenges that national Patent Offices of Member States experienced have gone beyond this anticipation. The reduction in national filings has greatly resulted in the reduction in fees collected at the national Offices.<sup>343</sup> This impact posed difficulties to national Patent Offices of Member States, especially those Offices whose income was solely based upon the national application filing, search, and examination fees.<sup>344</sup> Moreover, the smaller size of national Patent Offices and the financial limits made Member Countries difficult to retain expertise in all areas of technology and, hence, had a great effect upon the examination capability and the quality of national patents.<sup>345</sup> In order to avoid these impacts and maintain the national Offices' capacity, some national Patent Offices of EPO members, such as the Danish Patent Office, had to shift its strategy to do examination work for national Patent Offices of other countries, e.g. the United States Patent and Trademark Office (USPTO) and the Intellectual Property Office of the United Kingdom (UKIPO), which have a larger number of patent applications.<sup>346</sup> But for some countries such as France and Italy, the impacts of the EPO upon their national Patent Offices were too great to maintain their businesses and, as a result, made their national Patent Offices almost disappear.

The above European experience can signal the difficulties that national Patent Offices in ASEAN, which mostly are small offices, would face once the regional Patent Office is established. For ASEAN, these competition and impacts would likely be more critical since

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<sup>342</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 41; *see also* GRISET, *supra* note 76, at 188, 254.

<sup>343</sup> GRISET, *supra* note 76, at 187-188.

<sup>344</sup> GRISET, *supra* note 76, at 186 (citation omitted).

<sup>345</sup> LEITH, *supra* note 196, at 149-150.

<sup>346</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 131.

many national Patent Offices of Member States such as Brunei, Cambodia, and Laos, have had very few patent applications and have undergone the ongoing operational problems in their own Offices. If the regional Patent Office were operated, it would be difficult to see how they can compete with the regional Office and prevent the undesirable outcome resulting from the reduction of national patent activities. Moreover, since a number of patent applications in ASEAN national Patent Offices, as illustrated in Table 2, have been predominantly filed by non-residents, there is high potential that many applicants would shift their patent filing route to the regional Office which has a more efficient process and can maximize their opportunity to get patent protection in more ASEAN countries. This incident could lead to the significant loss of patent work in ASEAN national Patent Offices. Even though it might be beneficial for national Patent Offices to reduce the backlogs in the long run, the national Offices may have very few works left to the point that they are no longer worth performing.

The decrease of work could also have an effect upon the financial ability and the operation of ASEAN national Patent Offices. For the self-sustaining Offices whose financial equilibrium is based solely upon national patent activities, such as Malaysia, Philippines and Singapore,<sup>347</sup> the loss of revenue would cause serious difficulties in maintaining their performance and existence. For other Patent Offices which are government authorities, one might argue that they might not be impacted as their budgets are solely supported by their governments. Nevertheless, in truth, the reduction of work might not only mean the loss of government income, but also the decrease in the budget that national Patent Offices would receive from the government. The Thai Patent Office, for example, is a government department that has received annual budgets from the Thai government. However, the application and maintenance fees collected by the Thai Patent Office have been recognized as a source of income

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<sup>347</sup> KENAN INST. ASIA ET AL., *supra* note 46, at 11.

for the Thai government.<sup>348</sup> Thus, if the number of applications were to be reduced, the income that the Thai Patent Office can potentially generate for the government would be lower. This circumstance would then effect the overall budget of government that can be subsequently distributed to its departments, including the Thai Patent Office. In addition, because the annual budget that the Thai Patent Office receives depends upon its activities, the reduction of the national patent filings could lead to lower office activities and lower budget received. Consequently, no matter how the structure of the national Patent Office is, the reduction in revenue resulted from emergence of the regional Patent Office can cause more difficulties for national Patent Offices in maintaining the operation and deliverance of quality patent service.

The regional Patent Office, therefore, could greatly impact upon the operation of national Patent Offices of ASEAN Member States. The reduction of work and resources could lead to the loss of national Offices' capacity to perform their works and grant national patents effectively. For ASEAN countries, this problematic situation is likely unavoidable. Due to the existing limited examination capability, it is difficult for national Patent Offices to change their strategies, for example, to work beyond the border like what Danish Patent Office did in order to maintain expertise and financial capacity. This threat, as explained, poses higher risk to the existence of national Patent Offices. If ASEAN and Member States do not have any solution, the national Patent Offices in many ASEAN countries would likely disappear.

Despite the fact that Member States may welcome the regional Patent Office to relieve the administrative burdens, the potential inefficiency or disappearance of the national Patent Offices are not desirable outcomes since they would affect the interests of Member Countries in a number of ways. First, it would impact the ASEAN States' power to protect public interests. As mentioned in the preceding chapter, the patent office is a key mechanism of a country used

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<sup>348</sup> Kuanpoth, *supra* note 49, at 317.

for promoting innovations and targeting inventions which ensure social value without creating conflict with the national policy.<sup>349</sup> If ASEAN countries lost the national Patent Offices, they would lose not merely the tool to implement the national patent strategies, but the gatekeeper to protect their social interests as well. Second, since the national Patent Office is regarded as the center of patent examiners and patent specialists, the loss of national Office could mean the loss of national patent expertise. Losing national Office would entail that there no place left for patent practitioners and experts to practice and build up their skills in national patent system. Such lack of expertise could then lead to the challenge of Member States in checking, negotiating, and developing patent system to promote their national policy and interests.

Last, the inefficiency or loss of the national Patent Offices resulting from the operation of regional Patent Office substantially burdens the inventors, especially the domestic inventors who wish to obtain patent protection in their country. Not only do these inventors incur more costs and difficulties in applying for patent protection, but they also lose a national authority to support their activities in the long term. In addition, as foreign applications shift to the regional Patent Office, the income that national Patent Office can potentially use to subsidize domestic patent applications would be reduced.<sup>350</sup> This condition would increasingly incur domestic applicants' costs and discourage R&D activity. The effect of the regional Patent Office, as a result, could somehow impede domestic innovation to the benefit of regional innovation.

#### **4. The Limit of Operational Language**

The regional Patent Office, as an international organization, normally requires one or more official languages in the operation. The selection of language might not be a problem for the Office where Member States have a common language. The ARIPO, for example, has

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<sup>349</sup> See DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59.

<sup>350</sup> LEITH, *supra* note 196, at 141 (discussing the experience of U.K.).

selected English as an official language for its business and this was not a problem because all founding countries are mostly English-speaking countries.<sup>351</sup> However, for the region where Member States do not have common languages, selecting a language for the operation might be a challenging issue. In Europe, for example, European States do not have a common official language. Therefore, during the establishment of the EPO, adopting a working language was an important debate among Member States which reluctantly gave up their national languages.<sup>352</sup> Finally, due to politics, volume of documentation, and EPO's role in international patent system, three languages, i.e. French, German, and English, were selected as the EPO operational languages.<sup>353</sup>

In the context of ASEAN, where Member States have a variety of national languages similar to the European region, the question of language to be used is an important issue that ASEAN needs to consider. Nonetheless, many scholars advised that English language should be employed as a common language for the operation because it is a commonly used language not only in certain ASEAN countries, i.e. Brunei, Philippines, and Singapore, but also in the global business context.<sup>354</sup> In this regard, the English language would benefit non-resident applicants who predominantly file the applications in ASEAN Member States. Moreover, ASEAN has concluded to employ English as a standard language for official communication during ASEAN

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<sup>351</sup> Because participating countries are mostly former territories of the British Empire, English is an official language commonly used in those countries. Then when the ARIPO was firstly established, the founding Agreement was called "the Agreement on the Creation of the Industrial Property Organization for English-speaking Africa", known as the Lusaka Agreement.

<sup>352</sup> See GRISET, *supra* note 76, at 78 (referring to Kurt Haretel's reflection that the question of languages to be used was the most delicate problem after the question of location of the EPO and the solution was one of the main success of the system.) The language issue was also a critical problem of establishing the EU patent system. While the use of English language had been expected due to the need of industry and many European countries, it was difficult for other countries, such as Germany, France, Spain, and Italy to give up their national languages. See PIETER CALLENS & SAM GANATA, INTRODUCTION TO THE UNITARY PATENT AND THE UNIFIED PATENT COURT: THE (DRAFT) RULES OF PROCEDURE OF THE UNIFIED PATENT COURT 12-13 (2013).

<sup>353</sup> GRISET, *supra* note 76, at 78.

<sup>354</sup> See, e.g., Nguyen, *supra* note 144, at 487.

events and for several regional projects, including the regional trademark system<sup>355</sup> and the ASPEC program.<sup>356</sup> Therefore, the selection of official language for the ASEAN regional system may not be problematic as in the case of the EPO since English has always been the one language commonly used in ASEAN activities and is highly identified as an official language for the operation of the regional Patent Office.

While the selection of official language for the ASEAN regional Office might not be a complicated issue, the use of English language in the operation might be one of the most challenging issues for ASEAN. Since the major population of non-English speaking ASEAN countries is unable to speak, write, and read English language fluently<sup>357</sup>, the English language requirement would create costs and complexity for applicants in these countries to file patent applications. More significantly, the need to translate into a language that applicants cannot understand could make more difficulties for them to control the correctness of patent claims or descriptions. It could lead to the poor translation that could lead to mistakes and subsequent loss of patent rights.<sup>358</sup> These difficulties and risk of language could influence domestic applicants to simply obtain patent protection through their national Patent Offices, which use the language they can understand, rather than the regional system. The regional Patent Office, in consequence, might not truly benefit domestic applicants as the ASEAN aims. This is especially the case for the small inventors who wish to disburse their innovations and obtain patent protection regionally.

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<sup>355</sup> See Weeraworawit, *supra* note 313 (noting that during the negotiation of regional trademark system, ASEAN concluded that English would be the filing language to avoid the pitfalls of high interpretation costs).

<sup>356</sup> The ASPEC program uses English as the language for applications and communication.

<sup>357</sup> See ONG, *supra* note 305, at 75-76.

<sup>358</sup> LEITH, *supra* note 196, at 138.

In addition to applicants, too few examiners in ASEAN countries are fluent in English.<sup>359</sup> This circumstance would firstly challenge ASEAN in recruiting examiners who meet both technical and linguistic requirements. The national Patent Offices, especially those Offices of non-English speaking ASEAN countries, would have more recruitment problems because the qualified examiners might rather want to work for the regional Patent Office. This difficulty, as a result, could lead to the next challenge of ASEAN in sharing the patent information and decisions between the regional Patent Office and national Patent Offices. Without English-language proficiency, the national examiners might be unable to efficiently and accurately share their S&E results in English language with the regional database. At the same time, they might not be able to understand the S&E reports and patent documentation of other Patent Offices, which are written in highly technical terms, and compare those documents to the scope of patents at hand efficiently. Consequently, this limited language proficiency may obstruct the ASEAN's aim to run the regional Patent Office and centralized patent database of ASEAN for the benefit of all Member Countries.

The English language deficiency could also cause problems after the patents are granted. As the aim of patent is not only to educate the public about the innovation but also to enable stakeholders to determine the scope and rights of patentee over the innovation, the language of patent documentation must be comprehensible for them. Nevertheless, as mentioned above, the majority of the population of many ASEAN countries is still not fluent in English language. It would then be difficult or even impossible for them to understand the patent if it was granted in English.

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<sup>359</sup> KENAN INST. ASIA ET AL., *supra* note 46.

Even though many ASEAN countries nowadays require the patent applications and their specifications to be translated into national language,<sup>360</sup> the translation requirement for patents granted by the regional Patent Office might not be an efficient solution for ASEAN countries. The current situation in the Thai Patent Office, for example, reflects difficulty of the national Patent Office in dealing with the translated documents. There remain a large number of patent applications with incomplete specifications and poor translations submitted to the Thai Patent Office.<sup>361</sup> These documents, in effect, make it more difficult for patent examiners, who also have limited English language proficiency, to read and understand.<sup>362</sup> This situation then could signal the problems that the ASEAN countries, at least Thailand, might have if they were to require the patents issued by the regional Patent Offices to be translated into national languages. As long as the English language deficiency still exists in ASEAN countries, there would be a high risk that the translation of patent documents, which contain highly technical description, might be incomplete and inaccurate. The national officials would also have difficulty checking the correctness of the translation once the patents validated in the country. Member States, therefore, cannot be assured the right scope and description of patents granted by the regional Patent Office. This uncertainty could affect not only the rights of the public and other inventors to R&D, but also the rights of patentees to enforce their patent in that country as well.

The translation requirement also incurs patent applicants' huge costs. In the European Patent system, this issue has been widely discussed for very long time. Despite the attempts to address this problem, the translation costs remain high as the EPC and many Member States still

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<sup>360</sup> As of March 2016, there are at least six ASEAN Member States, i.e. Cambodia, Laos, Indonesia, Myanmar, Thailand, and Vietnam, require the translation of documents into national language. *See* Kuanpoth, *supra* note 49, at 308 (indicating that some ASEAN countries aim to advance their own national interests in the ASEAN IP systems by preserving their national languages and national IP offices.)

<sup>361</sup> Kuanpoth, *supra* note 49, at 319.

<sup>362</sup> *Id.* Interview with experts and patent lawyers (July 2016).

require the European patent to be translated into the language of countries in which the patent is validated.<sup>363</sup> This concern, therefore, could happen if ASEAN allows Member Countries to require the translation. The high translation fee could be a burden that discourages applicants, especially local and small inventors who wish to save costs, from validating their patents in many countries. Even worse is that it might discourage them from filing a patent application through the central office in order to obtain patent protection in many Member Countries. This consequence then could lead to inefficiency or failure of the regional Patent Office to promote the ASEAN's aims to facilitate patent applicants with economical costs and boost the movement and expansion of technology in the region.

In conclusion, the lack of common language in the region and lack of English language proficiency in many non-English speaking ASEAN countries could make the operation of the regional Patent Office ineffective. They could pose translation risks and costs not only for Member States, but also the public and inventors who should benefit from the patent system. The regional Patent Office, in such circumstance, would therefore provide disadvantages to the ASEAN countries and people who are not ready to communicate in other languages.

## **5. High Costs of Operation**

Another point that challenges ASEAN in establishing the regional Patent Office is the resources required for the operation. This issue could concern ASEAN because its organization structure and sectoral bodies are not strong and do not have financial supports sufficient for running activities and integration in accordance with the regional work plan.<sup>364</sup> More

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<sup>363</sup> See *EPC*, *supra* note 77, art. 65; Dietmar Harhoff et al., *Patent Validation at the Country Level – The Role of Fees and Translation Costs* 38 RES. POL'Y 1423, 1423-1437 (2009); Connor & Yasong, *supra* note 78, at 185; STACK, *supra* note 57, at 93 (noting that, according to an estimate of the EPO, the cost for translation is about thirty nine percent of the total cost of a European patent validated in eight countries for a period of ten years).

<sup>364</sup> The inadequacy of financial resource to support ASEAN's programs has been addressed for very long time. See PHOPHUEKSANAND, *supra* note 11, at 50; YUE & PLUMMER, *supra* note 243, at 70-71.

significantly, the establishment of regional Patent Office requires high financial resources which may be beyond ASEAN and its Member States' current economic realities. ASEAN then could have difficulty in creating and operating the regional organization and system effectively.

Moreover, the harmonization of patent procedure will result in high costs of ASEAN Member Countries to modify their national patent legislations and policies, as appropriate, to achieve the community standards. As Member Countries have experienced in acceding to the TRIPs Agreement, Member Countries had to repeal or amend existing legislations in order to adjust their administration processes and to develop enforcement system in order to implement the TRIPs standards.<sup>365</sup> These actions entailed huge financial and social costs for ASEAN members, most of which are developing countries that do not have competitive system for IP protection.<sup>366</sup> Therefore, if ASEAN harmonizes the patent procedures by establishing the regional Patent Office, Member States, again, would have huge costs in changing their patent system in line with the regional practice. Additionally, if ASEAN also aims to harmonize the post-grant procedure and enforcement to avoid the problem of costs and uncertainty after the patents are granted, Member Countries would require more resources dedicated to this task. This need then could raise more burdens for ASEAN countries wishing to participate in the regional Patent Office system.

The significant resources required by the regional Patent Office would also create difficulty for ASEAN to allocate costs to Member States which still have different levels of economic development. Particularly for small and least-developed ASEAN countries, the costs they have to bear may outweigh the potential benefits they would obtain from the regional Patent Office. The lesson from the European patent system, for example, shows that, in practice,

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<sup>365</sup> Chun, *supra* note 52, at 145.

<sup>366</sup> *Id.*

companies could not designate all Member Countries due to the high costs of European patent. They would rather extend coverage of its patent to only a few countries which are important market and have a large economy.<sup>367</sup> Countries with small economies, therefore, may not benefit from the European patent system. This incident could also occur in ASEAN countries. If the cost of obtaining patent in the region is not economical, the ASEAN countries, which have small economy or market, might have difficulty capturing the interest of business and end up losing investment and innovation which they previously expected to attract. The establishment of regional Patent Office, therefore, might not benefit them. Instead, such regional cooperation would benefit only few Member States at the expenses of these small countries. The high costs with low returns might also make them feel unworthy to be a part of the regional system. This would then present a significant challenge for ASEAN in allocating the costs to ASEAN members in a way that can benefit all countries, thereby making small countries feel like they can remain in the system without too great of a burden.

## **6. The Lack of Skilled Patent Practitioners**

The patent practitioners, i.e. patent attorneys or agents, are another key mechanism in the patent system. These practitioners have an important role in ensuring the quality of patents. They function to draft patent claims and specifications, and make them precise in order to enable the searchers and examiners to ascertain the scope and description of the claims.<sup>368</sup> As this patent work is a technical and difficult process which requires the intensive communication with applicants and examiners, the qualifications and experience of patent practitioners are extremely important. Similar to the patent examiners, patent attorneys and agents should ideally have the relevant technical backgrounds, well trained skills, and the ability to communicate in English

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<sup>367</sup> Randy L. Campbell, Note, *Global Patent Law Harmonization: Benefits and Implementation*, 13 IND. INT'L & COMP. L. REV. 605, 626. (2003).

<sup>368</sup> LEITH, *supra* note 196, at 18.

language fluently. The more these practitioners are professionals, the more efficient and timely patent process would be.

If the regional Patent Office is established in ASEAN, skilled patent practitioners would be increasingly needed to handle the potential higher volume of patent filings in ASEAN. However, this demand poses another challenge for ASEAN countries which have concerns regarding the slow development of the IP professions and limited number of practitioners, especially the skilled practitioners who can work internationally.<sup>369</sup> This problem is caused by the facts that the patent is not a popular IP instrument in comparison to copyright and trademark. People in many ASEAN countries, therefore, do not much pay attention to the patent protection. This generally results in fewer numbers of professions relating in the patent area. Moreover, many ASEAN countries still lack a good university program and training program on IP, especially in patent.<sup>370</sup> This in turn leads to the lack of patent expertise and capacity to further develop skills of patent practitioners in the community. The limited number of professional practitioners in ASEAN results in the difficulty for applicants in finding skilled representatives to do the patent work for them. Also, if the practitioners are not knowledgeable and unable to prepare applications professionally, both applicants and the regional Patent Office might require more communications and processes than usual, in order to tackle obstacles, which would in turn increase costs in the patent process.<sup>371</sup>

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<sup>369</sup> Christoph Antons, *Intellectual Property Law in Southeast Asia: recent legislative and institutional developments*, I J. OF INFO., L. AND TECH., 2006, [http://go.warwick.ac.uk/jilt/2006\\_1/antons](http://go.warwick.ac.uk/jilt/2006_1/antons).

<sup>370</sup> *Id.*

<sup>371</sup> LEITH, *supra* note 196, at 18 (arguing that patent organizations prefer applications prepared by knowledgeable and trained professional representatives because the lack of precision of patent claims leads to more communication between patent office and applicant which also means more costs to the office). *See also* DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 44 (noting that the lack of professional expertise in patent claim drafting can cause local companies or research institutions difficulty in getting their patent applications through patent offices).

In this context, ASEAN should increase the number and develop the capacity of patent practitioners. Not only do ASEAN countries need to create a system to increase qualified patent practitioners in the regional level, the ASEAN community and Singapore, as a potential location for the regional Patent Office in particular, should develop the capacity of their practitioners.<sup>372</sup> This is to assure the sufficiency and capacity to handle the significantly growing volume of patent filings in the region. This task certainly requires substantial resources and time. More importantly, the regional system requires that the qualification of patent practitioners be standardized. ASEAN then has to mutually work on the educational and training programs as well as regional patent bar exam. The harmonization of exam, however, might not be an easy process. This is particularly the case when the legal system of ASEAN Member Countries varies significantly from the common law to the civil law and to the hybrid systems due to their different historical backgrounds.<sup>373</sup> As the divergence of legal systems leads to the different applicable legal rationales and approaches, ASEAN may face the challenge of choosing standards to be used to test and qualify patent practitioners. In the European patent system, for example, even though the EPO is located in Germany, a civil law country, the European qualifying examination is a British system or a common law style. Candidates in civil law countries, in effect, might have some difficulties switching their thoughts back and forth between

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<sup>372</sup> In fact, Singapore is a country that has been concerned about the number of qualified patent agents in the country. Due to the growing volume of patent filings, in April 2015, the Intellectual Property Office of Singapore (IPOS) and the Singapore Workforce Development Agency (WDA) launched a new Professional Conversion Program for training patent agents and providing employers with the funding for trainee-related expenses in order to boost patent agent numbers in the country. As at November 10, 2016, there are around two hundred registered patent agents. See *The Register of Patent Agents and the Register of Foreign Patent Agents*, INTELL. PROP. OFF. OF SINGAPORE, <http://www.ipos.gov.sg/IPforYou/IPforProfessionals/TypesofIPProfessionals/PatentAgentsInformation/TheRegisterofPatentAgentsinSingapore.aspx> (last updated Nov. 11, 2016); see also Press Release, Intellectual Property Office of Singapore, New Programme to Boost Skilled Manpower for Intellectual Property Sector (Apr. 7, 2015) available at <https://www.ipos.gov.sg/MediaEvents/Readnews/TabID/873/articleid/308/Default.aspx>.

<sup>373</sup> Thailand and Vietnam, for example, are civil law countries, whereas Singapore and Malaysia follow common law system and Indonesia adopts legal pluralism.

different legal systems.<sup>374</sup> This situation can also happen in ASEAN. If the standards of exams follow the common law approaches, it would be more advantageous for candidates from common law countries, such as Singapore and Malaysia, to embrace. However, this same situation might be more difficult for candidates from civil law countries, such as Thailand and Vietnam. In sum, the standard that the regional community adopts could impact the employment opportunities of candidates from different legal system. In addition, it would also result in limiting pool of qualified applicants, especially the local applicants who are patent practitioners that can offer competitive fee rates but possess the ability to communicate local language.<sup>375</sup> In this regard, ASEAN has to put more efforts and resources in creating and standardizing the regional system which can enhance capacity of patent practitioners from all ASEAN countries. Otherwise, the lack of skilled patent practitioners would cause difficulty for patent applicants and obstruct the regional Patent Office from effectively performing the patent work.

All of the above explanations lead to the conclusion that even though the centralized system under the regional Patent Office could simplify the patent process and reduce administrative burdens, it could also bring significant costs to ASEAN countries. The harmonization process, in itself, presents disadvantages, particularly in terms of the impacts upon national sovereignties and patent activities of Member States. In addition, the rich diversity and limitations of ASEAN countries would considerably challenge ASEAN in its attempt to establish the regional Patent Office and make the regional system workable for all ASEAN Member

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<sup>374</sup> Even though the number of European patent attorneys in Germany is more than other countries, the percentage of candidates from Germany passing the European Qualifying examination is lower than candidates from UK. See EPO, *Result and Statistic of the European Qualifying Examination*, available at <https://www.epo.org/learning-events/eqe/statistics.html> (last visited Nov. 15, 2016). Interview with European patent attorneys, *supra* note 198.

<sup>375</sup> Generally, the fee rates of legal service vary from country to country depending on cost of living of that country, the fame of firms, etc. For ASEAN countries, because there are big gaps of level of development and cost of living, the legal service fees in Singapore, for example, can be significantly higher than other countries such as Thailand and Vietnam. As a result, if there are few qualified patent practitioners available in applicants' countries, it might be difficult for patent applicants to find local practitioners who might offer more affordable service fee rates and might have to recruit practitioners from other countries which might require higher service fees.

States. These conditions would create more burdens and costs which might be beyond the capacity of Member Countries to afford, and therefore not worth it for small ASEAN countries that do not have high patent application filing rate.

Not only do the aforementioned difficulties and disadvantages impose costs upon Member States, such difficulties and disadvantages would also conceivably pass on the costs and uncertainties to patent applicants. For example, if the countries could not maintain their offices as a result of the emergence of the regional Patent Office, the patent applicants, especially local SMEs and individuals, would have more burdens in obtaining patent protection in their own countries. They would have to file patent applications through the regional Patent Office, of which the fee structure might not work to the advantage of applicants who seek protections in just one or few countries. Furthermore, if the applicants are required to file patent applications to the regional Patent Office in English language and these applications have to be translated into national languages of the countries they wish to file for effectiveness of patents, there would be high validation and translation fees which could discourage them from taking the process in various ASEAN countries.<sup>376</sup> Instead of promoting innovations in the region, these problematic circumstances would instead impede R&D and obstruct the ASEAN's goal to enhance technology transfer in the region.

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<sup>376</sup> See Dietmar Harhoff et al., *supra* note 363 (discussing the role of fees in the European patent system in influencing the patenting behavior of firms).

## **Chapter 5**

### **Balancing ASEAN's interests:**

#### **Considerations in Establishing the ASEAN Regional Patent Office**

As the preceding chapters have pointed out, the concept of regional Patent Office, similar to the EPO and the ARIPO, could benefit ASEAN in a various ways. Not only in the context of administrative supports, the regional patent Office could also serve as a mechanism that helps ASEAN and its Member States to promote the goal of fostering innovation and growth. However, the regional Patent Office also has a number of aspects that negatively impact national sovereignty rights over patent system and policies. In addition, there are also several challenges that could make it difficult for ASEAN to effectively run the regional Patent Office for the benefits of Member States. These impacts, in consequence, would greatly reduce the interests that ASEAN should obtain from the operation of regional Patent Office.

As the ASEAN IP Framework Agreement evidently states the aim to create the regional Patent Office and as explained in chapter 3, the regional Patent Office could benefit ASEAN in several ways, this chapter will seek to determine whether and how ASEAN could adopt the regional Patent Office to maximize benefits and alleviate challenges in significant ways. The analysis will be divided into two main parts. The first part will re-evaluate impacts and challenges of establishing the regional Patent Office in ASEAN and examine the feasibility of ASEAN in overcoming such challenges. The second part will additionally address policy considerations and recommendations that ASEAN should take into account in institutionalizing the regional patent organization in order to maximize the benefits of the regional patent system.

## **1. Re-considering and Minimizing Impacts and Challenges of Establishing the Regional Patent Office in ASEAN**

### **1.1 Impacts on the ASEAN Member States' Sovereignty and the ASEAN Way**

As mentioned in chapter 4, the emergence of the regional Patent Office has significant impacts upon the power of Member States in many dimensions. Specifically speaking, since the regional Office must have supranational power and require the harmonization of patent process, this would not only affect the States' sovereignty rights over patent system but also the "ASEAN Way," which is an important character of ASEAN region. The main consideration, therefore, is really to what extent ASEAN would be challenged and how to regionalize the national patent systems to yield best benefits and minimize potential harms.

In regard to the effect upon the national sovereignty, it is true that to centralize patent procedure necessarily requires Member States to surrender a part of their sovereignty rights and accept decisions delivered by the established regional organization. This condition would inevitably be detrimental to the power of Member States in adopting patent strategies to promote their national policies and interests. When the ARIPO and the EPO were formed, in fact, the national sovereignty was considered a significant issue of concern. In the case of ARIPO, despite the assistances from the UNECA and WIPO, the national sovereignty was an important issue that led to the system allowing Member States to reject patent issuance within six months. Also, before it could successfully become an established organization today, the EPO founders had several negotiations as well as long debates due to the sensitivity surrounding the national sovereignty issue and the attitude towards this issue, which linked to national economic interests.<sup>377</sup> Nonetheless, the globalization of innovations and the mutual aim of Member States

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<sup>377</sup> See GRISET, *supra* note 76, at 35; DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 15-91 (discussing the preparation and difficulties of establishing the EPO).

to gain economic advantage prevailed over the sovereignty issue. Participating countries relinquished a part of their sovereignty to enable the regional Offices to function efficiently for them. Finally, the benefits that Member States have received prove the success in the operations of both regional Offices and led to the increase participations by countries which voluntarily surrendered their national sovereignty right in order to be part of the the regional system.

Moreover, the surrender of national sovereignty, indeed, is commonly found and acknowledged in present context where international cooperation becomes increasingly significant. Not only the Agreement establishing the regional Patent Offices, a number of international agreements have been successfully concluded and implemented today are the results of the agreement of participating States to voluntarily surrender a part of their sovereignty. For ASEAN, the surrender of sovereignty is not a new circumstance. ASEAN Member States have entered into a number of international treaties such as TRIPs and have been members of international organizations such as World Trade Organization (WTO) which commonly affect certain level of ASEAN States' sovereignty.<sup>378</sup> This situation then reflects that ASEAN countries do not strictly withhold their sovereignty. They voluntarily and repeatedly relinquished their power if international cooperation could render benefits to them. As a result, if the regional Patent Office could truly address Member States' difficulties and promote their interests, the need to surrender a part of their sovereignty rights for the betterment of a regional patent procedural system might not be a significant problem to them.

The next challenging points are the supranational aspect and legal binding effect of the regional Patent Office. There are concerns that these characters would be contradictory to the nature of ASEAN. This is due to the fact that ASEAN, within the context of "ASEAN Way",

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<sup>378</sup> PAUL J DAVIDSON, ASEAN THE EVOLVING LEGAL FRAMEWORK FOR ECONOMIC COOPERATION 158 (2002); Joseph Sedfrey S Santiago, *A Postscript to AFTA's False Start: The Loss of Sovereignty Issue*, 12 ASEAN ECON. BULL. 18, 25 (1995).

does not have the authority to impose its ruling upon its Member States. Nonetheless, this concern might not be a big issue because ASEAN has gradually developed the institutional structure and legal instruments to regulate ASEAN members since its establishment. Even though one might argue that the ASEAN Declaration, which is the document founding ASEAN, does not have strong legal binding effect as a treaty. ASEAN members, in facts, have had the mutual intent to be bound by this Declaration and have conducted themselves in accordance with the terms of the Declaration.<sup>379</sup> Moreover, in practice, it is accepted that once the decisions have been made in the ASEAN Ministerial meetings, Member States undertook to abide by them, despite the lack of a supranational body to enforce it.<sup>380</sup> These circumstances then indicate that while it is true that ASEAN does not have a supranational character, to say that ASEAN's agreements and decisions never have any binding effects in reality is certainly an overstatement.

In addition, ASEAN has made notable the progress in shifting away from the "ASEAN Way" in several ways. First, in order to move into further integration and enhance accountability, ASEAN has developed a legal framework to regulate relations among ASEAN Member States. A significant achievement is the adoption of the ASEAN Charter, which aims to strengthen the rule of law in ASEAN. The Charter develops the new decision-making approach and dispute settlement mechanism by empowering the ASEAN Summit, which comprises of the Heads of States and Governments, to deliver the decision in the case that Member States cannot reach a consensus or resolve a dispute.<sup>381</sup> In a significant way, it underscores the duty of Member States to comply with the obligations. If Member States do not comply with the findings, decisions or recommendations resulting from the ASEAN dispute settlement mechanism, the ASEAN

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<sup>379</sup> DAVIDSON, *supra* note 378, at 34.

<sup>380</sup> VITIT MUNTARBHORN, *THE CHALLENGE OF LAW: LEGAL COOPERATION AMONG DEVELOPING COUNTRIES* 17 (1987).

<sup>381</sup> *ASEAN Charter*, *supra* note 16, art 7, 20(2), 26.

Summit would have the power to make the decision.<sup>382</sup> This Charter, therefore, evidently reveals the consensus of ASEAN countries to soften the ASEAN Way and to increasingly accept the authority and rules of ASEAN. Secondly, ASEAN Member States have increasingly adopted ASEAN agreements, including the ratified international treaties and conventions which impose more rigid legal regimes, and established the efforts to adjust the relevant legislations to be in line with the requirements of such agreements.<sup>383</sup> These evolutions reflect the change of ASEAN nature from a lenient organization, whose principle is based upon the ASEAN Way, to an entity governed by the more legalistic framework. As a result, the supranational and legal binding effects of the regional Patent Office might not challenge the ASEAN Way too significantly.

Although the impacts upon national sovereignty and the ASEAN Way might not be significant due to the adjustment of ASEAN countries' practice, ASEAN still requires a careful consideration of what instruments to use and how to create the regional Patent Office in order to reduce and prevent potential difficulties that ASEAN may encounter. To begin with, ASEAN Member States, in formulating the regional rules, must take the step to specify the thresholds of authority delegated to the regional body, i.e. minimum function and authority of that the national offices are willing to designate to the regional patent Office. The most challenging issue at this step, however, is to determine to what extent ASEAN Member States are ready to transfer their sovereignty rights to the regional Patent Office. For example, the participating States of the EPC commonly give their sovereignty rights in respect of patent examination and decision to the EPO. Nevertheless, once the patent is granted, the authority over that patent will belong to the States. Similarly, the signatories of the Harare Protocol surrender their sovereignty rights over the patent examination to the ARIPO. Nonetheless, the ARIPO Member States retain their

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<sup>382</sup> *ASEAN Charter*, *supra* note 16, art 27.

<sup>383</sup> Santiago, *supra* note 378.

authority to review and reject the decisions made by the ARIPO within certain periods if the decisions do not conform to the States' national legislations. In this context, ASEAN Member States need to clearly define the scope of power that they will assign to the regional Patent Office and identify the scope of power of the regional Patent Office in other respects, such as the power to grant utility models or petty patents and the power to represent ASEAN Member States in international forum.

Member States have to keep in mind that the transfer of States' rights to the regional Patent Office does not mean that Member States will not have any authority left. As seen from the EPO and the ARIPO, the regional arrangement does not necessarily replace the national patent systems but rather coexists with those systems. Member States, therefore, can maintain sovereignty over their patent scheme and work independently from the regional Patent Office if they wish. Moreover, if the rules and procedural requirements of the regional Patent Office are set as minimum standards, there might be some differences between the national system and the regional system.<sup>384</sup> But those differences and conducts of Member States must not be against obligations of Member States under the regional system.

The defined scope of regional Patent Office's power would enable Member States to determine their capacity and readiness to relinquish national sovereignty. At this stage, all ASEAN Member States might not necessarily be members of the regional Patent Office. The participation of Member States can be on a voluntary basis. Member States of the EPO and the

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<sup>384</sup> In the European patent system, there are still divergences of laws and practices among Member States and between Member States and the regional Patent Office. For example, some patent offices of Member Countries, such as Switzerland and Slovenia, do not examine the novelty and inventive step criteria whereas French Patent Office outsources the search task to the EPO and has limited substantive examination. Moreover, while the EPO requires three examiners in patent examination, many national Patent Offices, such as the DPMA, require only one examiner. There are also some minor differences with respect to examination criteria. For example, the products resulting from essential biological process are not excluded by the EPC but they are excluded by the German Patent Act. While the DPMA considers the unity of a patent application, the EPO rather considers each element of an invention. *See* GUIDO FRIEBLE ET AL., OBJECTIVES AND INCENTIVES AT THE EUROPEAN PATENT OFFICE 46-47 (2006). Interview with European patent attorneys, *supra* note 198.

ARIPO, for example, do not include all European and English-speaking African countries, respectively, when they were first established. There were only few countries participating in the system at the beginning before the increase of members in subsequent years. ASEAN, therefore, might alternatively provide Member States with the flexibility and opportunity to observe and delay the participation if they are not ready or remain unwilling to surrender their sovereignty.

One might argue that the participation, which is based on voluntary basis, will not conform to the ASEAN Way, which requires the consensus from Member States in implementing regional arrangements. As discussed above, ASEAN has shifted its strategy away from the ASEAN Way. It has also relaxed the consensus approach in the decision-making process by allowing Member States, which are not ready to implement the regional scheme at the time to participate later. This movement can be seen from the principle laid down in the 1992 Framework Agreement on Enhancing ASEAN Economic Cooperation which stated that “All Member States shall participate in the intra-ASEAN economic arrangements. However, in the implementation these economic arrangements, two or more Member States may proceed first if other Member States are not ready to implement these arrangements.”<sup>385</sup> It was also mentioned again in the Bangkok Summit Declaration of 1995 where the Heads of States and Governments addressed the ASEAN economic cooperation and stated that “all ASEAN economic cooperation decisions shall be made by flexible consensus so that Member Countries wishing to embark on any cooperation scheme may do so while the others can join at a later date.”<sup>386</sup>

After repeated expressions, the principle was finally affirmed by the ASEAN Charter, which allows ASEAN to apply flexible participation, including the ASEAN Minus X formula, in

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<sup>385</sup> ASEAN, *ASEAN Framework Agreement on Enhancing ASEAN Economic Cooperation*, art. 1 para. 3 (July 28, 1992), available at [http://www.asean.org/storage/images/2012/Economic/AFTA/Common\\_Effective\\_Preferential\\_Tariff/Framework%20Agreements%20on%20Enhancing%20ASEAN%20Economic%20Cooperation%20.pdf](http://www.asean.org/storage/images/2012/Economic/AFTA/Common_Effective_Preferential_Tariff/Framework%20Agreements%20on%20Enhancing%20ASEAN%20Economic%20Cooperation%20.pdf).

<sup>386</sup> ASEAN, Bangkok Summit Declaration, Para. 8 (Dec 14-15, 1995), available at [http://asean.org/?static\\_post=bangkok-summit-declaration-of-1995-bangkok14-15-december-1995](http://asean.org/?static_post=bangkok-summit-declaration-of-1995-bangkok14-15-december-1995). See also DAVIDSON, *supra* note 378, at 42.

the implementation of economic commitments, provided that there is a consensus to do so.<sup>387</sup> There have also been many ASEAN projects that enable Member States to voluntarily participate. Those projects are, for example, the setting up of the ASEAN Patent and Trademark System<sup>388</sup> and the ASPEC Program.<sup>389</sup> Therefore, the participation of the regional Patent based on the voluntary basis does not obviously conflict with the ASEAN Way. ASEAN has legal basis and experiences that could make it possible to the benefit of Member States.

Nonetheless, if ASEAN would like to enhance the engagement of Member States that might not be ready to fully participate in the regional Patent Office, there are potential alternatives that ASEAN might adopt. The first alternative is to provide those States with the observer status before they actually become members like in the ARIPO system.<sup>390</sup> Another method is to create a pilot project that enables those States to test the system and determine their readiness. For example, the European Patent Organization has made the European patent extension agreements with certain European States, which at the time were not parties to the EPC.<sup>391</sup> Under this extension system, the European patent can be extended to the non-Member States that have an extension agreement with the EPO and have national law which expressly recognizes a patent granted by the EPO.<sup>392</sup> The European patent extended to these States will have the same effect as national patents and will be subject to national laws.<sup>393</sup> The advantage of the extension agreements is that it provides the extension States and users with the opportunity

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<sup>387</sup> *ASEAN Charter*, *supra* note 16, art. 21(2).

<sup>388</sup> See ASEAN SECRETARIAT, *ASEAN ECONOMIC CO-OPERATION TRANSITION & TRANSFORMATION*, *supra* note 241, at 209.

<sup>389</sup> The ASPEC program was first commenced on 15 June 2009. Brunei subsequently joined the program on January 1<sup>st</sup>, 2012 and Myanmar has not participated in the program yet. See *ASEAN Patent Examination Co-operation (ASPEC)*, INTELL. PROP. CORP. OF MALAYSIA, <http://www.myipo.gov.my/en/asean-patent-examination-co-operation-asper/> (last visited Jan. 2, 2017).

<sup>390</sup> *Lusaka Agreement*, *supra* note 110, art. 6.

<sup>391</sup> *Extension/Validation system*, EPO, <http://m.epo.org/law-practice/extension-validation-system.html> (last visited Aug 12, 2016); see also *Extension States*, EUROPEAN PAT. OFF, <http://m.epo.org/about-us/organisation/extension-states.html> (last visited Aug. 12, 2016).

<sup>392</sup> *Extension/Validation system*, *supra* note 391.

<sup>393</sup> *Id.*

to test the system and determine how the system works in their States during the contract period.<sup>394</sup> After the end of the agreement, the State then can decide whether it will participate as a full member of the European Patent Organization. If the State becomes a member, its' national law would no longer include the recognition of European patent because the European patent would be effective automatically on the basis of the EPC.<sup>395</sup>

The EPO extension system could be an alternative model for ASEAN to follow. It could benefit ASEAN in terms of reducing the delay and fragmentation of Member States in taking part in the regional Patent Office system. It allows Member States, which might not be ready or might not be certain to fully participate in regional Patent Office, to experiment the regional system as well as to examine the compatibility of their systems before moving towards full membership. Also, it would provide applicants, who aim to maximize their market in the ASEAN region, with the opportunity to extend their patents granted by the regional Patent Office to those States even though those States have not been members of the regional system yet. The extension system, as a result, could benefit not only the ASEAN States but also the potential ASEAN patent applicants. ASEAN should then consider and apply it as a strategy in reducing Member States' concerns and, hence, drive the regional Patent Office system.

## **1.2 Impacts on ASEAN's Diversity and National Interests**

While it might be true that the regional harmonization would diminish the values of diversity and national interests of ASEAN members, the impacts might not be significant because there are other considerations that potentially outweigh these values. Take for instances, the change of global commerce, the revolutions in technology and communication, and the creation of a common market with free movement of goods, services, capital, and people have

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<sup>394</sup> Interview with Stefan Luginbuhl, *supra* note 288.

<sup>395</sup> *Id.*

more significant roles in the ASEAN community. They become factors or pressures that have made Member States gradually change their nature and values; namely, to surrender their national identity and interests in order to collectively move forward to promote the regional economic ties.

Some scholars then argued that the diversity of Member States might not be a significant obstacle if Member States have a mutual vision to promote their interests in the common patent system.<sup>396</sup> In Europe, for example, there were significant differences in the principles underlying various patent systems, which caused difficulties in the harmonization.<sup>397</sup> However, those differences have slowly been replaced by common interest and goal of European States to have a patent framework that matched the industries' needs and supported the free trade expansion in Europe.<sup>398</sup> After working with the mutual aim to achieve their common goal for decades, European States successfully created the European patent system and the EPO, which remain the remarkable achievements of European community today. This experience of the European patent system then suggests that there must be some common goals that could mandate Member States to surrender their own interests in order to achieve harmonization.

For ASEAN, although Member States do not specifically express the aim in building the regional patent system in national policies and plans, they have historically exchanged and exposed their visions to develop and harmonize the patent system with the common goal to promote the economic and innovative growth in the region.<sup>399</sup> They have shared their aims not only through the ASEAN IP Framework Agreement, but also through ASEAN IP Action Plans

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<sup>396</sup> See, e.g., Chun, *supra* note 52, at 159.

<sup>397</sup> See GRISET, *supra* note 76, at 5-91; DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 116-117.

<sup>398</sup> See GRISET, *supra* note 76, at 5-91; LEITH, *supra* note 196, at 12.

<sup>399</sup> Weeraworawit, *supra* note 313, at 205, 206 (noting that ASEAN nations has exchanged their views and exposed to various aspects of IP harmonization even before establishing the ASEAN IP Framework Agreement).

and initiatives. Those programs, for instance, are the creations of central online platform, which allows national offices of Member States to access IP-related information and encourages regional cooperation on emerging IP issues and legislation.<sup>400</sup> They also include the Regional Dialogue Partners (DPs), which comprise of major IP organizations that provide ASEAN with the assistances to achieve regional IP integration through cooperation and improved office policies and practices<sup>401</sup>, and the ASPEC, which is the first regional patent work-sharing program among Member States. These ASEAN works reveal the mutual vision of ASEAN countries to develop a common patent system in order to benefit Member States and transform ASEAN to a competitive and innovative region according to the ASEAN goal.<sup>402</sup> They also reflect the progress of ASEAN that has slowly narrowed the gaps among Member States and manifest the fact that diversity among Member States is not a significant obstacle in the regional integration. This condition, therefore, positively signals an ability of ASEAN Member States to make the regional harmonization more tangible.

In addition, the harmonization would not greatly affect the national identity and interests of Member States because the regional Patent Office only centralizes and performs the patent process for Member States. Its existence neither replaces the national authority nor removes national legislations and practices. Member States then can maintain the national patent system to promote their national interests. Moreover, since the function of regional Patent Office focuses upon the patent process and administrative work, the harmonization would mainly affect the administrative and procedural rules, and some substantive laws that are essential in the patent process. These legislations in ASEAN Member States, nowadays, are not significantly different. This is due to the facts that ASEAN members have been engaged in narrowing this different. In

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<sup>400</sup> ASEAN SECRETARIAT, ASEAN ECONOMIC COMMUNITY FACTBOOK, *supra* note 268.

<sup>401</sup> See KENAN INST. ASIA ET AL., *supra* note 46.

<sup>402</sup> See ASEAN IPR Action Plan 2004-2010, *supra* note 34; ASEAN IPR Action Plan 2011-2015, *supra* note 34.

this regard, most Member States have acceded to international agreements such as the TRIPs and the PCT, which result in the amendment of their national laws to meet those international standards.<sup>403</sup> They also have strategic plans, capacity-building programs, and initiatives, which seek to bring patent laws and practices of Member States to the same level. The divergence in ASEAN then has been gradually mitigated and, as a result, might not be significantly affected by the regional Office's centralization.

In addition, the decrease of diversity among ASEAN States would likely make less compelling the argument that the harmonized system would deprive each Member State of the opportunity to conduct legal experimentation. The above ASEAN's practices demonstrate the common preferences of Member States in the patent system and expose their visions for finding the regional measures and practices, which would better promote Member States' needs and interests. Furthermore, some scholars have interestingly pointed out that legal innovations in patent law would less likely occur in the less-developed nations because they do not have the sophisticated understandings and long experience with patent system like the developed countries.<sup>404</sup> An experimentation rationale, in consequence, would reasonably support the diversity between developed countries. It might not be a significant concern in ASEAN countries, which are mostly developing countries with limited understandings, resources, and capacity in developing the patent system.

Apart from the above points, Member States can prevent the impacts that potentially occur by designing the institution and regulation which correspond with their needs. It is worth noting that even though both the EPO and the ARIPO can essentially perform the patent work for Member States, their structure, legal framework, and authority in the patent administration and

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<sup>403</sup> *Cooperation in Intellectual Property*, *supra* note 35.

<sup>404</sup> *See* Duffy, *supra* note 188, at 708.

examination have been shaped differently. The important differences include, for example, the power of Member States to re-consider the patent decision of the central Offices, the patent criteria, the post-grant procedure, and etc. This divergence, similar to other international agreements, results from the different needs and interests of Member States. In this context, ASEAN would then have to find their Member States' priorities and develop the regional Patent Office and its framework in such a way that it reflects and corresponds to their needs and value.

However, an important challenge that ASEAN still has to carefully consider is how to strike an appropriate balance between the mutual regional interests and the national interests that might still significantly diverge among Member Countries. For example, while Singapore supports the pharmaceutical patent with the aim to promote the medical development of the country, other ASEAN countries, such as Thailand and Indonesia, would unlikely favor pharmaceutical patenting<sup>405</sup> but rather promote the protection of traditional knowledge used in innovations. To address this issue, ASEAN Member States need to assess and prioritize their interests, objectives, and whole circumstances in order to integrate relevant regional rules and practices. ASEAN should adopt the rules and standards that are neutral as much as possible to avoid negative impacts on members' significant interests and sensitive issues.<sup>406</sup> Moreover, the harmonized rules should be set as a minimum standard and focus should be on the roles of regional Patent Office in streamlining patent procedures, providing technical assistances and trainings, and increasing regional awareness. They should leave room for ASEAN members to tailor their own patent laws and standards to suit their national objectives. In the EPO system, the European patent law was set as a minimum standard. Member States thus could maintain their

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<sup>405</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 141.

<sup>406</sup> In fact, some scholars address that the patent, as a part of IP system, and science and technology are neutral areas in nature and will not impinge upon the members' cultural sensitivities or legal constructs. *See, e.g.*, Teuku Mohammad Radhie, *Harmonization of Laws: Issues and Prospects in ASEAN Law, Technology and Development*, 1 ASEAN L. & SOC. J. 50, 54 (July-Dec. 1986).

national patent systems and adopt the patent laws and standards differently.<sup>407</sup> Similarly, the ARIPO model allows Contracting States to retain their patent system and, more significantly, enables them to customize the patents granted by the ARIPO to fit their national criteria and needs.<sup>408</sup> Therefore, despite the emergence of regional Patent Office and rules, Member States should have flexibilities in implementing and enforcing the national patent system. They should also still maintain their national Patent Offices to adjust the patent standards to fit their local circumstances. This strategy would help ASEAN reduce the impacts of the regional Patent Office on the diversity and interests of Member States.

The last point to address here is that ASEAN must be conscious of the benefits of regional Patent Office system. It needs to assure that the advantage of the regional harmonization would heavily outweigh the costs of loss of diversity and national interests. At the same time, Member States have to realize the facts that the establishment of a regional organization is a trade-off between the value of national autonomy and the gains from harmonization. These conditions might not be too difficult for Member States, which have great experiences and success in creating and sustaining their cooperation in ASEAN for a very long time. Their strengthened capacity, with a mutual aim in developing the regional patent system, can support and enable them to achieve the goal of regional development.

### **1.3 Impacts on National Patent Offices of Member States**

Even though it has been accepted that the regional Patent Office, like the EPO, acts in competition with the national Patent Offices of Member States and its success brings about the impacts on the national patent activities, it might not always mean that the existence of national Patent Offices would be affected or be at a disadvantage. There can be some circumstances that

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<sup>407</sup> FRIEBLE ET AL., *supra* note 384.

<sup>408</sup> See *Harare Protocol*, *supra* note 112, § 3(7), (11), (12); Adewopo, *supra* note 124.

national Patent Offices, especially those Offices of big-market States, can be engaged in competition and be able to maintain their facilities and operations.<sup>409</sup> The DPMA is a clear example. The emergence of the EPO does not result in the substantial decrease of the volume of national patent applications. There has been a continuous increase in the number of applications filed with the DPMA every year.<sup>410</sup> The reasons of this situation might not only be due to the fact that these countries have big and important markets, but also due to the nature of that their markets might attract the investment of a particular technology.<sup>411</sup> In addition, the cheaper costs in national patent system is still an important factor that applicants consider. They usually decide to obtain patent protection through the national Patent Office if it is worthwhile and more affordable than the EPO system.<sup>412</sup> Therefore, the creation of the regional Patent Office might not greatly impact the existence of national Patent Office in all circumstances. The diverse ASEAN market and needs for inventors, especially individual inventors or SMEs, would potentially help the national Offices remain in operations while the regional Patent Office would share workload in the area of international applications.

The experiences of the EPO and its Member States additionally reflect the fact that the success of the regional Patent Office might not necessarily terminate the operation of the national Patent Office. But each Member State might adopt a proper strategy to retain or change the roles of its national Office. In the European community, some national Patent Offices, such as the DPMA, provoked a real effort to compete with the EPO by offering a competitive package and reducing the pricing structure. Some small patent offices wished to retain their traditional

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<sup>409</sup> Duffy, *supra* note 188, at 722.

<sup>410</sup> See *WIPO IP Statistics Data Center*, *supra* note 233.

<sup>411</sup> Interview with European patent attorneys, *supra* note 198.

<sup>412</sup> Interview with European patent attorneys, *supra* note 198; Interview with experts and patent lawyers, *supra* note 362.

formats and reoriented their activities towards servicing their users.<sup>413</sup> However, if Member States wish to adopt this strategy, they need to ensure that their workload would be maintained and their weaknesses and difficulties in national patent administration and examination can be overcome.

For ASEAN countries, the problem of limited resources should be the primary focus. It is clear that ASEAN countries have undergone great difficulties, most specifically in recruiting, training, and retaining staffs and specialists. If the regional Patent Office is established, there is also a high potential that the problem would be more serious because national Patent Offices might be required to allocate their specialists to construct the regional system at the beginning. Moreover, the status and potential benefits offered by the regional Office might be the more attractive employment opportunity to skilled persons. It then would be difficult for ASEAN countries that wish to run the national Patent Offices in parallel with the regional Patent Office to ensure that they would have sufficient staffs and examiners to provide high quality examination and service.

To address this problem, ASEAN requires a strategic plan to prepare and manage resources for the regional Patent Office. It should clearly define resources and timeline of which it would require to enable Member States to lay out a strategy to manage and properly allocate the resources to the regional system, if necessary. For the long-term plan, Member States should make the recruitment policy more flexible. They should allow national Patent Offices to be able to determine their conditions and adopt strategies to increase incentives to potential skilled employees. Not only should the Member States consider adopting a strategy of higher pays and incentives that are comparable to or higher than the general industry and the regional Office, they should also consider other welfares that are more attractive. This approach will enhance more

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<sup>413</sup> Smith, *supra* note 54, at 230.

opportunities for national Patent Offices to have sufficient competent staffs for the operation and, hence, prevent the impacts of the regional Patent Office on resource management of the national Offices.

Nonetheless, if the national Patent Offices determine that the workload could not be maintained at a level which guarantees their continued capability, they might design their national patent systems to take advantages of the regional system. They might choose to contract out all or parts of their works to the regional Patent Office or other national Patent Offices. For example, after having been affected by the success of the EPO, the French Patent Office has shrunk its examination work and outsourced its search task to the EPO.<sup>414</sup> Member States then could benefit from the regional and international collaboration while they maintain their patent institution at a lower cost. Alternatively, the national Patent Offices might transform their role to work and promote other facets. The Netherlands Patent Office, for instance, has shrunk its size due to the success of the EPO. However, it has shifted its role to perform patent work for bigger Patent Offices such as the UKIPO. It has also changed the philosophy to be a complementary system to promote awareness of the patent system, encourage R&D, and help SMEs and local businesses by providing advice and searches.<sup>415</sup> Similarly, the role of UKIPO has been altered to local delivery approach. The UKIPO now views its function as one which promotes SMEs and local firms, and serves industrial customers rather than processes applicant's documentation.<sup>416</sup>

The above illustrations, therefore, suggest that ASEAN national Patent Offices might not necessarily have to terminate their operations even if the emergence of the regional Patent Office may affect their performance. In this regard, the national Offices can still maintain their

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<sup>414</sup> FRIEBLE ET AL., *supra* note 384.

<sup>415</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 130-131; LEITH, *supra* note 196, at 141-161.

<sup>416</sup> LEITH, *supra* note 196, at 141-161.

important role as a stepping stone to the more developed and holistic patent system. As local entities, they might adjust their positions to focus on domestic needs but at the same time function to complement the regional system for the greater benefit of applicants. However, to prevent and reduce potential negative impacts, ASEAN and Member States need to assess and keep up with the potential consequences of the growth and success of the regional Patent Office. This would also be a challenging task for the governing Council of the regional Office, which is generally composed of representatives of Member States and national Patent Offices of Member States, as they may need to give the direction in a way that the needs of the regional Patent office match with the needs of their own national authority.<sup>417</sup>

#### **1.4 The Limit of Operational Language**

The language issue, in fact, is not only problematic in ASEAN but also in other communities. When the EPO was shaped, the selection of official languages for the office operation is a condition that was strongly criticized by Member States which do not use English, French, and German as the official languages.<sup>418</sup> However, after operating for decades, the works of EPO have been well processed and reviewed with excellent translation. Its success has proved that, in order to obtain benefits from the EPO system, the EPO Member States and users are able to adjust themselves with the language requirement, even though the required languages are not their official languages.<sup>419</sup>

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<sup>417</sup> The EPO is directed by the President who is responsible for the EPO's activities to the Administrative Council. The Administrative Council of the EPO is composed of the representatives and alternate representatives of the Contracting States. *See EPC, supra* note 77, art. 10, 26. The ARIPO consists of two Councils: (1) The Council of Ministers consists of Ministers of the Government of Member States who are responsible for the administration of intellectually property, and (2) The Administrative Council consists of Heads of Offices dealing with the administration of IP of Member States. *See Lusaka Agreement, supra* note 110, art. 6bis and 7; *id.* at 25.

<sup>418</sup> There are twenty-six official languages in Europe. However, the EPO uses only three languages; English, French, and German for its operation and patent process. *See Chun, supra* note 52, at 160.

<sup>419</sup> *See* Thomas Borecki, *Moving Towards Regional Patent Systems*, in RETHINKING INTERNATIONAL INTELLECTUAL PROPERTY: BIODIVERSITY & DEVELOPING COUNTRIES, EXTRATERRITORIAL ENFORCEMENT,

For ASEAN, the selection of language used in the regional operation is not as complicated as Europe. It is obvious that English language is necessarily used as an official language in the operation of the regional Patent Office in ASEAN. This is not only because English is the language of diplomacy in ASEAN<sup>420</sup>, but also because it becomes the main language for commerce, science and technology.<sup>421</sup> The world's scientific and technological information now published and stored its database in English.<sup>422</sup> The patent applications have been increasingly originated and processed in English to obtain protection internationally. This trend has influenced major Patent Offices such as the DPMA, Japan Patent Office (JPO), and State Intellectual Property Office of the People's Republic of China (SIPO) to require examiners to be fluent in English and increasingly use English language in the operation.<sup>423</sup> English, thus, becomes the language commonly used in the patent community. To respond to the global trend and needs, it is, therefore, necessary for ASEAN to employ English as an operational language of the regional Patent Office.

The use of English language would be beneficial and attractive for patent applicants, especially non-resident applicants who have dominantly filed patent applications in ASEAN countries. It would be easier for them to communicate and enable them to check and control the patent applications, including patent claims, specifications, and other documentation, that hence

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THE GRACE PERIOD, AND OTHER ISSUES: PROCEEDINGS OF THE 2000 HIGH TECHNOLOGY SUMMIT CONFERENCE, UNIVERSITY OF WASHINGTON, SEATTLE. 58, 61 (Kraig M. Hill eds., 2000).

<sup>420</sup> Since ASEAN issued ASEAN Declaration, the following ASEAN agreements, initiatives, and official communication have been conducted in English and have been designed with the assumption that English will be the single language used in the communication and operation.

<sup>421</sup> See Mossinghof & Ku, *supra* note 53, at 551; Rainer E. Hamel, *The Dominance of English in the International Scientific Periodical Literature and the Future of Language Use in Science*, 20 AILA REV. 53, 57 (2007).

<sup>422</sup> Alex Y. Seita, *Globalization and the Convergence of Values*, 30 CORNELL INT'L L.J. 429, 455 (1997); *see also* Donna E. Cromer, *English: The Lingua Franca of International Scientific Communication*, 12 SCI. & TECH. LIB. 21 (1991).

<sup>423</sup> Mossinghof & Ku, *supra* note 53, at 552. Interview with Volker Ruger, *supra* note 336 (noting that the DPMA allows applicants to submit patent applications in English or French to the DPMA and the examiners at the DPMA are advised to examine patent applications in English or French as well. Therefore, English and French language skills are required for being a DPMA patent examiner.).

would prevent the error that might occur from the translation.<sup>424</sup> Even for non-speaking English applicants and practitioners, both locals and foreigners, the English language requirement neither presents a significant obstacle in obtaining patent protection nor weakens the value of patent.<sup>425</sup> Rather, English is the international patent language. If English would be employed as the official language in the process of regional office, this would reduce the costs, difficulties, and risks of inaccuracies from communication and translation into many languages. Also, the patent issued in English would make the database of the region more easily accessed and searched worldwide. This in turn would enhance the certainty for patent applicants in determining the novelty of their inventions, and at the same time allow for the opportunity to prevent others from patenting these same inventions.

Therefore, if the ASEAN regional Patent Office uses English language in its operation, in practice, it might not be problematic for domestic industry, international patent applicants, and users who commonly file patent applications with or usually involve in the international patent system. However, adopting English language as the official language might still be problematic for local SMEs and individuals who have limited experiences, as well as proficiency in English language. ASEAN and Member States, therefore, should consider these groups' limits and provide assistances, such as the translation service, to help them reduce this barrier and be able to obtain patent protection internationally.

In the context of national Patent Offices of the non-English speaking ASEAN States, compromises by adjustment of local rules and infrastructures to support the English language usage may have to be made. Despite the limited language proficiency of staffs and examiners,

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<sup>424</sup> Interview with European patent attorneys, *supra* note 198; Interview with experts and patent lawyers, *supra* note 362.

<sup>425</sup> Interview with European patent attorneys, *supra* note 198; Interview with experts and patent lawyers, *supra* note 362.

adopting English language may not be too difficult to overcome because the English language has been commonly used in processing PCT and ASPEC patent applications in most of Patent Offices. However, because their limited capacity can cause the delay and probability of error in the translation, national Patent Offices need to improve their language skill of staffs and examiners. They may also need to adjust their recruitment policies and strategies to increase the number of staffs and examiners fluent in English. Even though it might take time and incur more costs, the improvement is necessary and is not impossible. The progress would not only correspond with the users' real needs but also finally result in the more efficient national Patent Offices and overall regional patent system.

The translation of the patent into a national language is another important issue that ASEAN needs to consider. On the one hand, the translation would impose great burden and cost that would potentially dissuade patentee from validating the patent issued by the regional Patent Office in many ASEAN countries.<sup>426</sup> On the other hand, the translation would make the patents comprehensible for national industry and people that still have limited English proficiency. It would also be beneficial for the patent litigation which is generally proceeded in national languages. ASEAN, therefore, should balance these consequences and consider whether the regional system would require the patent translated into national languages. Since many non-English speaking ASEAN States might not be ready to validate the patents in English language, ASEAN might leave these issues subject to each State' rules. But if ASEAN Member States strongly request the translation into national languages and want to clearly unify the requirements in the regional agreement like the EPC<sup>427</sup>, ASEAN might adopt an optional agreement similar to the London Agreement in which EPC Member States agree to waive,

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<sup>426</sup> Interview with European patent attorneys, *supra* note 198; Interview with experts and patent lawyers, *supra* note 362.

<sup>427</sup> EPC, *supra* note 77, art 65(1).

entirely or largely, the requirements for translation of European patent.<sup>428</sup> This optional agreement would provide Member States with the opportunity to assess the response, adjust their capacity, and subsequently reduce or waive the translation requirement once they are ready.

ASEAN countries should also consider providing assistance or service to relieve burdens of applicants and patent offices in the translation process. A suggestion is the machine translation that should be developed to allow patent holders satisfy the obligation through automated translation and provide patent information to all countries in their national languages.<sup>429</sup> An example is the “Mutual Machine Translation” project in which five IP offices (IP5), in 2008, adopted to help participating offices remove language barrier in understanding patent information and allow greater access to each other’s patent information.<sup>430</sup> Another model is the “Patent Translate”, a new machine translation service launched by the EPO and Google in 2012, with an aim to improve access to patent documents in multiple languages.<sup>431</sup> However, because patent documents are highly technical and complicated, ASEAN and users have to be aware of the function and limits of the machine that could potentially result in the translation error and, hence, would affect the scope of patent claims and decisions.<sup>432</sup> In this regard, ASEAN should consider other means during the development of machine translation. An alternative is the

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<sup>428</sup> See *Agreement on the Application of Article 65 EPC-London Agreement*, EPO, <https://www.epo.org/law-practice/legal-texts/london-agreement.html> (last updated Apr. 30, 2008).

<sup>429</sup> See Mossinghoff & Ku, *supra* note 53, at 552; Interview with experts and patent lawyers, *supra* note 362.

<sup>430</sup> Five IP offices are the European Patent Office (EPO), the United States Patent and Trademark Office (USPTO), the Japan Patent Office (JPO), the State Intellectual Property Office of the People’s Republic of China (SIPO), and the Korean Intellectual Property Office (KIPO). See Press Release, USPTO, *Blueprint Laid Out for Work-Sharing Among Five Intellectual Property Offices USPTO* (Oct. 31, 2008), available at <http://www.uspto.gov/web/offices/com/speeches/08-38.htm>; *Joint Statement of the IP5 Offices: Better Services for Users and the Public*, FIVE IP OFFICES, [www.fiveipoffices.org/industry-consultation/may2015/jointstatement.pdf](http://www.fiveipoffices.org/industry-consultation/may2015/jointstatement.pdf) (last visited Aug. 25, 2016).

<sup>431</sup> Press Release, EPO, *The European Patent Office and Google remove language barriers from patent documentation* (Feb. 29, 2012), available at <http://www.epo.org/news-issues/press/releases/archive/2012/20120229.html>.

<sup>432</sup> There are concerns that using a machine translation would cause the loss of inventive step and the translation error on claim scope. See, e.g., Chun, *supra* note 52, at 157; Donald S. Chisum & Stacey J. Farmer, *Lost in Translation: The Legal Impact of Patent Translation Errors on Claim Scope*, in *PATENT LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH*, *supra* note 75, at 289.

cooperation with translation service providers, universities, or institutions to offer the translation service for patentee at a lower price or for free for individuals and SMEs. Even though this approach might not entirely remove translation cost, the reduction in costs would decrease Patent Offices' and patentees' burdens and potentially encourage patentees to designate and validate the patent issued by the regional Patent Office in more ASEAN countries.

To conclude, it cannot be denied that the dominance of English language significantly grows and English slowly becomes the language of innovation and patent. It is, therefore, necessary for ASEAN to adopt English as an operational language of the regional Patent Office. This is especially the case when ASEAN wishes to welcome more foreign technology-transfer and investment into the region. However, non-English speaking ASEAN countries should not keep imposing the translation requirement upon patent holders. They strongly need to adjust their systems and capacities to overcome language barrier and reduce the translation requirement. The improvement would not only reduce costs of all parties, but also increasingly harmonize ASEAN patent system, thereby making it more attractive internationally in the long run.

### **1.5 Costs of Operation**

While it might be necessary for Member States to contribute their financial and essential resources in order to establish the regional Patent Office, the Member States might not receive equal returns from the establishment of this system equally. Nevertheless, this does not mean that Member States would not obtain any return or would undergo the losses endlessly. In the ARIPO and the EPO systems, no clear evidence has been shown to prove that Member States have difficulties after acceding to these systems. Even though smaller countries are generally less attractive, as a part of the regional system, they could get more attention and opportunity from applicants who can use the service of regional Office to obtain patent protection and disburse as

many innovations in Member Countries as they can. The progress of the EPO, for example, shows that despite the divergence of market size and development, as illustrated in Chart 3, the number of validations of European patent in smaller Member States has increased over time.<sup>433</sup> There is no any Contracting Country quitting from the EPO and the ARIPO systems or being left behind. Moreover, if the regional Patent Office is successful to the point that it can finance itself, Member States might no longer be required to make a financial contribution.<sup>434</sup> They could even be refunded what they are subsidized or gain more profit from the regional application fees and renewal fees without having to perform the patent work.<sup>435</sup> The continuous increase of Member States within the EPO and the ARIPO regimes serve as a proof of their success. States are willing to participate to obtain the same benefits even though they would have costs in participating. The experiences of these existing regional systems, as a result, can certify that although Member States have to finance the regional Offices' development, the level of difficulties experienced by Member States, no matter what size they are, might not be too great. At least, the regional Patent Office could reduce their work and pay something back to all Member States even if this might take time.

However, to avoid imposing great burdens upon Member States and ensure that Member States would meet the break-even point in a timely manner, ASEAN and Member States have to properly assess the needs, forecast the performance of the regional Patent Office, and craft the regional strategy that can approach the financial issues and weaknesses of Member States. ASEAN needs to determine how the revenue of the regional Patent Office would be generated from application process and to what extent Member States have to finance the regional Patent

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<sup>433</sup> Dietmar Harhoff et al., *supra* note 363, at 1427.

<sup>434</sup> See GRISET, *supra* note 76, at 97 (noting that Member States of the EPO no longer had to contribute to the budget and were refunded the sums they had advanced within two years).

<sup>435</sup> *Id.* EPC, *supra* note 77, art. 37. ARIPO Regulations for Implementing the Harare Protocol, *supra* note 123; rule 12.

Office. It then would be a great task for ASEAN to proportionately allocate the costs to ASEAN members in a way that all Member States can afford. ASEAN needs to conduct an intensive assessment and find the formula that suits the conditions of the region and the Member States.<sup>436</sup> In addition to the regional strategy, each Member State, especially small Member States, needs to adopt the national policy and strategy to adjust its financial capacity to support the regional system. It is also required to determine its own weakness and modify policy and market environment to increasingly attract the validation of patent and technology transfer.<sup>437</sup> The cooperation of both regional and national levels would enable ASEAN countries to effectively overcome burdens derived from high costs of establishing and operating the regional Patent Office in a timely manner.

### **1.6 The Lack of Skilled Patent Practitioners**

It is clear that patent attorney's expertise in ASEAN countries is very scarce. Even though there have been attempts to increase and develop the patent practitioners in ASEAN members, the progress is slow and cannot assure that the skills of practitioners would be sufficient for processing the regional applications. To minimize this problem, ASEAN firstly needs to standardize the qualification of regional patent practitioners for all Member States. It must determine and identify qualifications necessarily required for working as a patent practitioner in the region. Those requirements should emphasize not only their knowledge of patent laws, procedural rules, and guidelines, but also skills to work in one or more technical fields that would help clients define the inventions and draft the claims effectively.<sup>438</sup>

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<sup>436</sup> EPC, for example, sets up the scale of initial contribution from States which ratify or accede to the Convention. *See EPC*, *supra* note 77, art. 170.

<sup>437</sup> *See Harhoff et al.*, *supra* note 363, at 1427 (suggesting that a major factor affecting the validation behavior are the size and the wealth (GDP per capita) of the targeted countries).

<sup>438</sup> Because patent is primarily technical subject matter, the technical background of patent practitioners is important. In many countries, e.g. Germany, most patent attorneys have technical degree and legal training. Interview with European patent attorneys, *supra* note 198; Interview with experts and patent lawyers, *supra* note 362.

Additionally, as patent practitioners have to represent clients in English languages, the language skill must be necessarily required.

Another important issue is the qualifying examination or the regional patent bar exam. Even though it is true that the different legal systems would cause some difficulties for ASEAN to find the mutual approach, this challenge could be potentially reduced if ASEAN can set up the regional center in charge of the training and examination. During the transitional period, the regional center should provide the trainings for candidates as well as, if any, national institutions that will be responsible for authorizing patent practitioners. At this stage, Member States should also adjust their policies and training systems in order to support regional needs and enhance the capacity of their local practitioners to work internationally. This mechanism then would help candidates prepare for the examination and enable ASEAN to standardize the qualification, knowledge, and practice of professional patent practitioners in the region. Moreover, the regional center could also have an important role in maintaining relations between the regional Patent Office and regional patent practitioners. It could be the center that keeps communicating with regional patent practitioners about the development of patent process in the region and, at the same time, create the practitioner network that would make the regional patent system more effective and responsive to the applicants' needs in the long run.

With respect to the resources and costs of operation, it is necessary and worth investing for ASEAN. Despite the high costs, qualifying examination would warrant the efficiency of patent work of the regional Patent Office. The examination would prevent the higher costs and difficulties that the regional Patent Office and applicants would have from the unprofessional practice of patent practitioners. In addition, the costs could be reduced if the regional center can generate the revenue from training and examination fees. In this regard, ASEAN might also

consider consulting existing programs of other regional Offices such as the EPO, which launches the European Patent Academy<sup>439</sup> and conducts European qualifying examination (EQE),<sup>440</sup> for training and technical assistances. This would also provide ASEAN with the opportunity to share perspectives and learn from other system in order to properly apply to ASEAN context in a timely manner.

From the all above points, it can be concluded that even though the creation of regional Patent Office would challenge ASEAN in various aspects, its impacts upon ASEAN today might not be so significant due to the change of ASEAN circumstances and attitude, as well as global needs that could drive ASEAN to overcome such challenges. Moreover, the impacts and challenges could be reduced if ASEAN countries understand the objectives and functions of the regional Patent Office, and properly prioritize and adjust national and regional strategies to remove or minimize such barriers. In consequence, at this point, the potential negative impacts of the regional Patent Office on Member States' national interests might not outweigh the benefits that ASEAN would receive in establishing the regional Patent Office.

## **2. Considerations and Recommendations to Maximize Benefits of the Regional Patent Office in ASEAN**

Not only minimizing the challenging respect of the regional Patent Office, ASEAN also has to take into account following key considerations to maximize the benefits that ASEAN would obtain from the regional Patent Office.

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<sup>439</sup> The European Patent Academy offers online training for the European qualifying examination. *See Training for the European qualifying examination*, EPO, <http://m.epo.org/eqe/eqe-training> (last visited Aug. 30, 2016).

<sup>440</sup> The EQE is organized by a Supervisory Board, an Examination Board, Examination Committees, and an Examination Secretariat. It was established to test candidates' knowledge and aptitude to represent applicants before the EPO. *See European qualifying examination*, EPO, <http://m.epo.org/eqe.html> (last visited Aug 30, 2016).

## **2.1 The Organizational Structure and Policy**

Since the regional Patent Office, as an international organization, has the necessary power to regulate and make the decisions to drive regional works, the first condition that ASEAN needs to address in operating the regional Office is the organizational structure, including the decision-making process. ASEAN needs to ensure that the President, Councils, or other administrative bodies of the regional Office are empowered adequately to regulate, manage, monitor, and evaluate the operation of the regional Patent Office, as well as the cooperation of Member States. More importantly, ASEAN has to shift away from the consensus approach in the decision-making process as the consensus requirement would impede the pace of the regional Office and would make the regional Office difficult to develop well enough to meet the new needs and rapid change of innovative world. ASEAN, therefore, should consider applying other decision-making mechanism such as the majority vote or individual decision-making. Nonetheless, the scope and proceeding of the selected approach need to be defined to assure the efficiency and transparency. It should also be flexible enough to enable the regional Office to adapt to different contexts and frameworks.

Apart from the clear organizational structure and decision-making processes, ASEAN must also clarify specific policies and measures similar to the EPC and the Harare Protocol. Details and not merely the broad framework, like what ASEAN traditionally did in many ASEAN agreements, would be required. The specific details would not only affirm objectives and actions that Member States are required to take, but would also inform the public of policy and regulations under the ASEAN regional system. This would then enhance the certainty and ensure that the operation of the regional Patent Office would meet ASEAN and applicants' expectation. However, as ASEAN lacks experiences in spelling out specific measures, this

condition would be a great task which requires ASEAN and its working group to find the strategies in order to reach the regional agreement.

With respect to the policy, ASEAN should design the regional Patent Office in a way that it can support other regional policies and activities. The models of the ARIPO and the EPO show that the roles of the central office are not merely limited to facilitating the patent service. Their policies and activities are continuously extended to strengthen the IP protection and promote the development of Member States. ASEAN, as a policymaker, therefore, should consider how to utilize the regional system to support the underlying objectives of ASEAN. For example, ASEAN should design the system that strikes the right balance between the interests of patent holders and the interests of domestic community with regard to the concerned issues, such as the rights over traditional knowledge, plant varieties, and medicines. More importantly, the policy of ASEAN regional Office should not only welcome foreign direct investment (FDI) and technology but also promote ASEAN local production. A way that ASEAN might consider, apart from offering the trainings or assistances to local creators, SMEs, and users, is to offer the protection of utility model or petty patent.<sup>441</sup> Despite the shorter term of protection, the requirements for acquiring a utility model are less stringent and the process is significantly simpler, faster, and cheaper than patents. As a result, the utility model can be responsive to the needs of SMEs and inventors who make minor adaptation of products and want a low-cost entrance into IP system.<sup>442</sup> Also, in many countries, utility models are much more utilized by

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<sup>441</sup> The utility model is an IP right that protects inventions similar to patents. However, the general criteria for acquiring a utility model are only novelty and industrial applicability. The term of protection is generally shorter than patents (between 7-12 years). The utility patent might be called differently such as simple patent (Indonesia), utility innovation certificate (Malaysia), and utility solution patent (Vietnam).

<sup>442</sup> See *Protecting Innovations by Utility Models*, WIPO, [www.wipo.int/sme/en/ip\\_business/utility\\_models/utility\\_models.htm](http://www.wipo.int/sme/en/ip_business/utility_models/utility_models.htm) (last visited Nov. 15, 2016); see also *How can Your SME Acquire and Maintain Intellectual Property Protection*, WIPO, [www.wipo.int/sme/en/ip\\_business/acquire\\_protection.htm](http://www.wipo.int/sme/en/ip_business/acquire_protection.htm) (last visited Nov. 15, 2016).

local residents due to the lower costs than patents.<sup>443</sup> These benefits of the utility model have been recognized by many countries, including the ARIPO, which have endorsed the utility model as an intellectual property right provided by the Office.<sup>444</sup> ASEAN countries, many of which have already provided the utility models protection<sup>445</sup>, should consider offering the utility model protection through the regional Office. This would not only serve as a mechanism to promote local industry and SMEs in the ASEAN region, but also help Member States reduce the workload stemming from continuingly high volume of utility model applications.

Another important point is that ASEAN should take into account the reality and needs of ASEAN's Member States, and the general industry to expand their innovation market to the non-ASEAN Members countries. Not only should ASEAN provide the opportunity for countries in the nearby region to become a member<sup>446</sup>, ASEAN should enable the regional Patent Office to develop the cooperation with neighboring countries, which are significant market for ASEAN industry such as China and India. This policy then would maximize ASEAN market as well as benefits for ASEAN local industry.

Next, to make the regional system effective, ASEAN Member States must give precedents to the implementation. They should modify national regulations and systems in accordance with the ASEAN policy and agreement in creating the regional Office. However, an important challenge of ASEAN is that ASEAN Member States have not implemented or rather have delayed the implementation of many agreements they signed. This is simply due to

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<sup>443</sup> *WIPO IP Statistics Data Center*, *supra* note 233; John Richards, *Utility Model Protection Throughout the World* (2010), [https://www.ipo.org/wp-content/uploads/2013/03/Utility\\_Model\\_protection.pdf](https://www.ipo.org/wp-content/uploads/2013/03/Utility_Model_protection.pdf) (last visited Oct. 30, 2016).

<sup>444</sup> *See Harare Protocol*, *supra* note 112, § 3ter.

<sup>445</sup> Currently, most ASEAN countries, except Brunei, Myanmar, and Singapore, offer the utility model protection.

<sup>446</sup> Papua New Guinea and Timor Leste have been ASEAN observer countries and have been expected to be ASEAN Members in the near future.

domestic legal, regulatory and political constraints.<sup>447</sup> This problem has obstructed the regional policy and many activities of ASEAN. It then would potentially cause difficulty for ASEAN in harmonizing the regional patent procedure.<sup>448</sup> To avoid this problem, ASEAN needs to emphasize the engagement of ASEAN members in establishing the regional patent scheme whereas each Member State needs to identify its actual environments and needs. It has to clearly study its potential constraints and address the legislative, regulatory, and other limitations to guarantee that the regional framework can be incorporated into the national agenda without any obstacle and delay. At this point, ASEAN might have a role in monitoring the compliance and problems of Member States. It might also provide necessary assistance to Member States upon their requests.

Lastly, ASEAN countries must keep in mind that the regional Patent office would merely provide the patent service and be only one mechanism to promote the patent, economic, and technological development of Member States. The regional Patent Office and the patent system are not only key factors that attract the FDI and technology transfer to ASEAN Member States. There are also other influences; namely, national and regional investment policies, market sizes, trade costs, and other advantages, such as tax exemption, that ASEAN Member States offer. As a result, ASEAN countries need to additionally determine and adjust their relevant policies and market conditions to suit business interests and inventors' needs for investment, transfer of technology, and patent protection. The regional Patent Office would be a complementary

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<sup>447</sup> Bernard K.M. Tai, *Can We Do Anything about the Unimplemented ASEAN Agreements?*, in ASEAN MATTERS! REFLECTING ON THE ASSOCIATION OF SOUTHEAST ASIAN NATIONS, *supra* note 23, at 23, 24 (arguing that domestic political resistance, change in political leadership, and institutional deficient can also delay the ratification process).

<sup>448</sup> This is also a critical problem in the ARIPO system. See NCUBE, *supra* note 106, at 68 (explaining that the IP systems of ARIPO members are still fragmented due to the fact that the domestication of ARIPO Protocols is uneven across the membership).

mechanism that will facilitate the patent process to the greater benefit of applicants and Member States.

## **2.2 The Legal Framework**

A significant investment of Member States in establishing the regional Patent Office is formulating standardized formalities, examination, review procedures, and relevant substantive rules such as the patent eligibility. In effect, the key consideration that ASEAN needs to take into account is that to what level the harmonization should take place in a way that makes the regional system work effectively for all Member States and inventors. Due to the diversity and variety of needs of ASEAN nations, ASEAN may firstly take into consideration the common respects of Member States and develop them to be the common minimum framework for all. For example, most ASEAN members have already participated in the ASPEC program. ASEAN then might develop the uniform and scope of application filed through regional Patent Office by using the ASPEC pattern. In regard to the substantive law, even though there still are different provisions especially regarding the patent subject matter, the TRIPs Agreement has relatively reduced the disharmony of laws and standards in ASEAN countries. The regional rules consequently might be initially formulated from the common provisions and therefore avoid highly debated areas, e.g. computer programs, business methods, biotechnology, etc., unless Member States can reach the agreement. This approach would minimize the effect upon Member States' interests and sensitivities, and enable them to adjust their laws and systems to accommodate the regional Office system with less difficulty.

ASEAN must clearly define the scope of the regional Office's authority and the power of Member States in the regional process. The ARIPO, for example, is a model that empowers Contracting States to reject the ARIPO's decision to grant a patent. This system would enable

designated Member States to check whether the regional Office's decision was correctly made and satisfied national requirements.<sup>449</sup> It also balances the power between the regional Office and Member States in granting a patent, which would be effective in designated Member Countries. However, the involvement of Member States during the patent process would not only cause difficulty for the regional Office but also cause burdens for Member States which might not have sufficient resources and capacity to review the decisions of regional Office within a short period. In addition, the need to review by each designated Member State would cause the delay and uncertainty for applicants in obtaining patent protection, especially when the laws and requirements of those Member States are still different. These conditions would potentially make the regional Patent Office inefficiently work for Member States and applicants. ASEAN, therefore, should adopt the regional model similar to the EPO in which Member States will not interrupt the examination and decision-making process of the regional Office. As ASEAN aims to create the regional Office to service Member States, Member States should only have a power to direct the policy and standard of the system and entrust the patent work to the regional Office. If the patent granted by the regional Office is not satisfied, it may be reviewed and invalidated by national proceedings. This system would enable the regional Patent Office to work truly to the benefit of Member States. It would also reduce the delay and uncertainty of the patent process in accordance with the aim of ASEAN to establish the regional Patent Office.

The regional rules should also clarify to what extent the regional Patent Office could regulate Member States. Because the conventions or rules only harmonize the legal floor, Member States, in principle, have a room to design their national legal systems and experiment legal innovation to serve the national policy and interests. ASEAN, therefore, should define the

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<sup>449</sup> The rejection of ARIPO patent is rare. It mostly happened when the application contains method of treatment claims which does not conform to the national laws. Email from ARIPO official to author, *supra* note 299.

regional Office's power to monitor and require Member States to comply with the regional rules. It should also identify the scope of rules and standards that Member States have to follow, how far the national patent process can be different from the regional system, and which rules should prevail if there is a conflict between regional rules and national rules. The precision would enable the patent process in ASEAN systematically run and prevent the dispute potentially occurred from the conflict.

Another one important point that ASEAN needs to address is the interpretation of the regional rules and standards. ASEAN should provide the guidance on how national Patent Offices and judicial institutions should interpret and apply the regional rules and standards. Also, if Member States interpret the regional provisions differently, how such differences can be settled. One way that ASEAN should offer is to allow national institutions to refer questions to regional bodies.<sup>450</sup> These procedures would prevent and resolve the differences of interpretation among Member States and consequently enhance not only the harmonization of the regional system but also the certainty for users and the public.

### **2.3 The Enforcement**

Even though the EPO and the ARIPO models reflect that the enforcement is not necessarily linked to the patent process of central Offices and be remain territorial jurisdiction, the separation may cause another problem. Similar to what happen in European patent system, the patent owner has to enforce the European patent on the same invention in a number of different national courts throughout Europe. Although the EPC and its Protocol on the Interpretation of Article 69 provide the guidance for the judicial interpretation, there still have

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<sup>450</sup> An example of solutions can be seen from the ASEAN Agreement to establish the Common External Preferential Tariff (CEPT). Article 8(3) states that “ Any differences between the Member States concerning the interpretation or application of this Agreement shall, as far as possible, be settled amicably between the parties. If such differences cannot be settled amicably, it shall be submitted to the AFTA Ministerial Council and, if necessary to the ASEAN Economic Ministers.”

been several cases where identical patents were interpreted differently in different countries.<sup>451</sup> This situation creates not only the unnecessary costs and forum shopping, but also the legal uncertainty that would finally result in the lack of confidence upon the regional patent process.

ASEAN, therefore, needs to provide the patent holders with an assurance that their patent rights granted by the regional Office will be respected in all Member States. The strongest model that has been proposed and discussed, especially in Europe, is to centralize the judicial role by establishing a unified patent court.<sup>452</sup> The central court would harmonize the enforcement procedure and enable a single case to order validity, infringement, or revocation to have effect in all the Contracting States. This would enhance the predictability, certainty, and cost-savings for patent owners. Additionally, it would reduce the difficulty of many ASEAN Member States where the judges have not been familiar with patent matters.<sup>453</sup>

However, unlike Europe, ASEAN has no experience in establishing the regional judicial institution due to the ASEAN Way. It thus would be difficult for ASEAN to create the regional patent court or to centralize the enforcement procedure, especially when the patent still closely relates to the national policy and interests. An option that ASEAN may consider adopting is to create a periodic patent court. The periodic court would provide the opportunity not only for ASEAN to test the regional enforcement procedure but also for judges and experts from across region to extend and share their expertise regionally for a brief period. This system then would

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<sup>451</sup> *EPC*, *supra* note 77, art. 69 (1); *see also* The Protocol on the Interpretation of Article 69 EPC, Nov. 29, 2000, available at <https://www.epo.org/law-practice/legal-texts/html/epc/2016/e/ma2a.html>; STACK, *supra* note 57, at 94-95.

<sup>452</sup> *See* THUMM, *supra* note 58, at 148. In Europe, the Agreement on the Unified Patent Court was signed on 19 February 2013 and will enter into force once it is ratified by 13 states, including France, Germany and the U.K. The Agreement aims to resolve the problems caused by the fragmented standards in determining the validity and infringement of the European patents. *See Unified Patent Court*, EPO, <http://m.epo.org/law-practice/unitary/patent-court.html> (last visited Sept. 9, 2016).

<sup>453</sup> *See, e.g.*, The South-East Asia IPR SME Helpdesk, *IP Factsheet: Indonesia* (Aug. 2016), available at [http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/Indonesia\\_factsheet.pdf](http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/Indonesia_factsheet.pdf) (last visited Sept. 28, 2016) (noting that judges in Indonesia are still not familiar with patent matters and rely heavily upon the opinion from the Patent Office as well as results of oversea litigations on the same patent).

gradually develop the standards of practice for judges in the region. In this regard, once the system is work for ASEAN, ASEAN might consider further developing the periodic court to be a regional permanent court in the long run.

Another way that ASEAN might adopt is to harmonize the enforcement standards, especially the standards for determining the validity of patents and enforcing patents against infringers.<sup>454</sup> There should also be a regional body that allows Member States refer questions regarding regional standards and interpretation or ask for the guidance. However, the harmonized system would be effective only if ASEAN countries comply with the standards issued by regional Office. The experience of the European patent system, which still has difficulty in establishing regional adjudicatory bodies or even harmonizing the way Member States apply the regional law, suggests that this is not an easy task. This condition then becomes a challenging point that ASEAN community, with its different legal frameworks, need to emphasize and address.

The last alternative, somewhat mild by its nature, that ASEAN should consider is to create a platform where judges and experts of Member States can share and discuss about their perspectives and experiences about the patent law and enforcement. The EPO, for example, has launched the biennial European Patent Judges' Symposium as a stage for judges specialized in patent law and patent litigation to exchange their views on patent law.<sup>455</sup> This Symposium is also the place where patent judges from Member States address the problems of harmonizing the differences in the interpretation of patent law.<sup>456</sup> It led to the practices developed to reduce the

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<sup>454</sup> Berholtz et al., *supra* note 56, at 247-248; STACK, *supra* note 57, at 94-95 (addressing the problems of the European patent system which does not have unified post-grant and enforcement proceedings and suggesting that the harmonized standards will reduce the problems of unpredictability and will provide the rights owner the protection in all States).

<sup>455</sup> *Court Practices*, EPO, <https://www.epo.org/law-practice/judiciary.html> (last visited Sept. 11, 2016).

<sup>456</sup> Interview with Stefan Luginbuhl, *supra* note 288.

disharmony, especially the practice of the judges that increasingly take into account and try to follow the decisions made by other courts of Member States and the EPO Boards of Appeal.<sup>457</sup> ASEAN thus should consider providing judges and experts with this kind of opportunity at the early stage of creating the regional Patent Office. The discussion from judges and people practicing in the area of patent law would directly address the current limits, difficulties, and concerns of their judiciary systems, and find the best and proper way to harmonize the standards or develop measures to ensure that the patent holders' post-grant rights will be protected throughout ASEAN countries.

## **2.4 The Services and Fees**

If ASEAN wishes to use the regional Patent Office as a mechanism to promote the innovative growth in the region, it necessarily takes into account the culture and needs of innovators, and provides the reliable services in accordance with those needs. First, not merely awarding patents to inventors as many as possible, the goal of regional Patent Office must underline the quality of innovation. It needs to ensure that the standards in terms of patentability requirements are met. The quality assurance would not only benefit the public but also ensure the enforceability of patents and reduce the risk to be sued.<sup>458</sup> The second aspect that businesses and inventors value is the speed of the process. The quick process, especially in delivering the search report, is very important because it enables businesses and inventors to plan their marketing strategies earlier and have more time to exclusively commercialize their products.<sup>459</sup> Moreover, the creditability of the regional Office would be greater if it participates in the PCT and acts as

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<sup>457</sup> *Id.*

<sup>458</sup> KENAN INST. ASIA ET AL., *supra* note 46, at 7.

<sup>459</sup> Interview with European patent attorneys, *supra* note 198. Interview with experts and patent lawyers, *supra* note 362.

an International Searching Authority (ISA). Being as the PCT ISA would give the applicants an assurance of standard of the search reports that can be referred to other PCT States.

To satisfy the quality and speed requirements, ASEAN needs to prioritize the quality and quantity of resources of the regional Patent Office. Specifically, it needs the effective strategies in recruiting skilled staffs, increasing productivity, and generating and managing budget that would enable the regional Office to efficiently deal with the growth of patent filings. Otherwise, there would be problems of delay and backlog as the EPO, the ARIPO, and many Offices have experienced. In addition, ASEAN must be aware of impacts of the PCT since the PCT applications have caused the delays and backlogs in many ASEAN countries as well as the EPO.<sup>460</sup> It then might also cause the same problems in the regional Patent Office's process if the ASEAN regional Patent Office acts as a PCT receiving Office and the ISA.

However, the higher capacity of the regional Patent Office in maintaining the quality and speed of examination usually means the higher costs of the Office.<sup>461</sup> Moreover, as an international organization, the costs could be much greater due to elements of salary of employees with 'international' status and the standard of service if the patent process of the regional Office requires more staffs and resources to proceed each application.<sup>462</sup> This is a significant issue in which ASEAN needs to balance and also adopt financial strategies to make the service cost-effective. It also needs to consider how the costs will be funded because it would not only impose financial burdens upon ASEAN and Member States but also potentially affect the patent fees charged to the applicants.

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<sup>460</sup> See DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 129 (discussing the delay in the substantive examination of European patent applications caused by administering the PCT procedures).

<sup>461</sup> STACK, *supra* note 57, at 17.

<sup>462</sup> See LEITH, *supra* note 196, at 128 (noting that since the EPO aims to require more individuals to be involved in each application, its system tends to increase the cost).

The patent fee is also a factor that inventors take into account in patent filing strategies. A number of studies show that the increase and the reduction of the fee can influence the incentive of applicants to file patent applications.<sup>463</sup> The fee structure of the regional Patent Office, therefore, is highly important. ASEAN should carefully design the fee structure and use it as an instrument to influence the volume of applications filed through the regional Patent Office. However, the first significant point that ASEAN needs to address is that the fees of obtaining a patent through the regional Patent Office should not exceed the total costs of seeking patent protection in all ASEAN national Patent Offices. The fee structure should also be competitive to the PCT. Otherwise, the PCT route would probably be more attractive since it includes non-ASEAN countries. Moreover, ASEAN has to determine what amount of the fees that would benefit targeted inventors and the policy of ASEAN. For example, the break-even point of the EPO patent fees is around four or five countries, depending upon which countries are designated.<sup>464</sup> This fee structure, therefore, is more cost-effective to inventors, especially the large business, who intend to secure patent protection in more than three countries.<sup>465</sup> For ASEAN, if ASEAN aims to encourage SMEs to file patent applications via the regional Patent Office route, it should consider lowering fees and find the break-even point that meets the SMEs' needs. Nonetheless, the fees should not be too cheap as it might make the regional Office become flooded with low-quality patent applications. This situation would impose the financial and administrative burdens on the regional Office that would consequently effect on the quality

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<sup>463</sup> See, e.g. DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, supra note 59, at 107 (discussing the role of fees in effecting the level of patenting); Jonathan Eaton et al., *International Patenting and the European Patent Office: A Quantitative Assessment*, in *PATENTS, INNOVATION AND ECONOMIC PERFORMANCE: OECD CONFERENCE PROCEEDINGS* 27, 50 (Organization for Economic Co-operation and Development(OECD) ed., 2004) (discussing the effect of fee structure on the level of European patenting); Harhoff et al., supra note 363 (addressing that not only the post-grant fees, but also the application and examination fees of European patent could influence the patenting behavior of firms).

<sup>464</sup> Adams, supra note 71, at 93; GRISET, supra note 76, at 153; Connor & Yasong, supra note 78, at 174, 176; Deng, supra note 152, at 125. Interview with European patent attorneys, supra note 198.

<sup>465</sup> LEITH, supra note 196, at 169.

of patents. ASEAN then might consider adopting the higher fee structure in a way that it does not adversely impact on the Office.

Another important consideration that ASEAN and Member States should take into account is the post-grant fees. In the European patent system, the patent holders have to validate and maintain patents issued by the EPO in each designated State. This condition requires a huge amount of costs which include the validation and renewal fees, translation fee, and attorney fee for validating a European patent in each country. These costs, especially validation and renewal fees, are burdensome and can have negative impact upon the validation behavior of patent applicants.<sup>466</sup> ASEAN then should adopt a mean that can reduce the patent holders' burden. It may consider centralizing the renewal procedure, like the ARIPO system, and subsequently share the fees to designated Member States. In addition, ASEAN should consider the currency to be used for the regional Patent Office's business. Unlike European community, ASEAN countries do not have a common currency. The ASEAN regional Patent Office then might use the currency of the State where the Office is located or, like the ARIPO, might use the U.S. dollars, which is the currency commonly used in international transactions.

## **2.5 Location**

As the regional Patent Office would be the patent center of ASEAN, the selection of its location is important. While some might suggest that the Office should be located in Jakarta, Indonesia because being near the ASEAN Secretariat would be more convenient, some expect that Singapore should be the best location because it is the most developed ASEAN country and has the most advanced patent system in the region. These places are possible as locations for the

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<sup>466</sup> Harhoff et al., *supra* note 363, at 1433; see also Matthew Parker, *Giving Teeth to European Patent Reform: Overcoming Recent Legal Challenges*, 26 EMORY INT'L L. REV. 1079, 1080 (2012).

regional Patent Office. Nonetheless, ASEAN should take into account the following elements in order to choose the best location.

First, the location of the regional Patent Office must be easy to travel to and access to. It should not incur too expensive costs of travel and communication for applicants and attorneys. However, this point might not be significant if ASEAN provides an online service that would save costs and time for both applicants and the Office.<sup>467</sup> Second, although the regional Patent Office is an international organization which provides privileged status and benefits, the location is also an important consideration for people to work for the Office. A cause of the recruitment difficulty of the EPO, for example, is its location in Munich where the living cost is very high. This condition, as a result, is not attractive for people from other European countries to come.<sup>468</sup> For ASEAN, it can happen if the regional Office is located in, for instance, Singapore where the living cost is highest in the region. Despite the very high salary, the living condition and expense might not be very attractive. On the other hand, if the regional Office is located in Indonesia or other States where the salary and living cost are lower than Singapore, it might be more attractive for people to work due to the status of international organization. However, it might be difficult to attract skilled people and experts from Singapore or countries where the industry offers higher salary. ASEAN then should further do the assessment about this issue to ensure that the regional Office's location would have the working and living conditions that can attract skilled people to come and work.

For Member State where the regional Office would be located, its national patent institution should be aware of the worsened recruitment problem. The DPMA, for example, has

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<sup>467</sup> The EPO and the ARIPO now provide applicants with online services that allow patent applicants file patent applications and documents, and communicate with the Offices online. *See Online Filing*, EPO, <https://www.epo.org/applying/online-services/online-filing.html> (last visited Sep 15, 2016); *ARIPO Online*, ARIPO, <https://eservice.aripo.org/pmi/PMIMain.do> (last visited Sept. 15, 2016);

<sup>468</sup> Interview with European patent attorneys, *supra* note 198.

the recruitment difficulty since it is located in Munich next to the EPO of which the international status is more attractive for skilled people to work for. Therefore, the Patent Office the Member State, where the ASEAN regional Patent Office is located, has to prepare and adopt a strategy to prevent the effect of the emergence of the regional Office on the recruitment.

## **2.6 Patent Databases and Human Resources**

A facility that ASEAN should carefully consider is the patent search system, which is utilized in the regional Office's S&E process. ASEAN and Member States should determine whether and how the patent database would be integrated. On the one hand, the separation of database would enable the regional Patent Office and national Patent Offices to maintain their autonomous examination capacity. This then would provide applicants with more opportunities to file patent applications to both regional route and national route in order to obtain patent from either way.<sup>469</sup> On the other hand, the integrated search tools would standardize and assure the quality of examination and patents of both regional Patent Office and national Patent Offices. This respect would be more beneficial for ASEAN, especially when ASEAN wants to reduce the uncertainty stemmed from the divergence of national systems. Moreover, the integration would promote the ASEAN's aim to develop the ASEAN database on IP registration<sup>470</sup> that could also address the problem of lacking efficient information technology and database of Member States.

With respect to human resources, ASEAN requires high investment to recruit and manage specialized personnel. This is a very important issue since even the EPO and the ARIPO

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<sup>469</sup> In European patent system, the DPMA, for example, does not share the search files and reports with the EPO before the applications are published because the findings from the two Offices might be different and the applicants have the opportunity to obtain a patent from either the EPO route or national route. Usually, the applicants do not want the two Offices to have an exchange of the search reports. After publication of a patent application, the search files and reports are available for the public via DPMAregister. Interview with Volker Rüger, *supra* note 336.

<sup>470</sup> *ASEAN IP Framework Agreement*, *supra* note 2, art. 3.

still confront the recruitment difficulty.<sup>471</sup> This in part is due to the fact that the regional Offices have to compete with the industry to recruit high-skilled staffs, especially patent examiners. Particularly, the EPO requires examiners capable of working in more than one language.<sup>472</sup> These factors, therefore, require ASEAN to prepare and find a long-term strategy to prevent the potential difficulty. It must ensure that the regional Office would have sufficient examiners, specifically, with the high-level of technical knowledge and English language proficiency. Since ASEAN countries still have human resource shortage problem, ASEAN might consider recruiting non-ASEAN residents. It might also establish cooperation with scientific and research institutions which can share and develop the expertise, and provide the regional Office with the trainings covering all technical areas.

ASEAN also needs to assure that the standard of patent work performed by examiners, who are from various countries and have different levels of knowledge and background, would be harmonized. This could be a challenging task for ASEAN, especially if examiners have to be transferred from national Patent Offices at the beginning of the operation.<sup>473</sup> There could be different philosophy and culture among examiners that would cause diverged S&E standards and judgment, and would result in the unpredictability of the views of examiners. ASEAN, therefore, needs to reduce the diversity of examiners' culture and practice as much as possible in order ensure that the common interpretation of the standard and practice will follow. One way of doing this is to provide the basic training in S&E for examiners at the very beginning. The regional Office should also publish the S&E guideline and require examiners to keep learning and following the guideline. For more experienced examiners, the regional Office should keep

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<sup>471</sup> See Ibrahim, *supra* note 138; see also DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 316.

<sup>472</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 316.

<sup>473</sup> See LEITH, *supra* note 196, at 78-81, 169-171.

offering the trainings, especially the training in newly emerging technological fields. It should also provide sessions or means for examiners to compare searching, examining, and granting practice across cases within the Office. Even though there could not be anything guaranteeing that the standard would be completely followed, these sample approaches would at least enable examiners to keep learning and practicing in the same standard.

The last significant point that ASEAN needs to address is the recruitment policy and working condition. The work of the regional Office would be smoothly and effectively performed if the regional Office could recruit and retain high-skilled examiners to work for a long term. As in the EPO, the turnover rate is low due to the security and stable flow of income that the EPO job offers.<sup>474</sup> The job policy of the regional Patent office, therefore, should be designed to attract these people. It should provide salary that is competitive with the salary offered by the private sector and offer working condition that could be incentives such as the teleworking system for working at home or premium health insurance. The policy should also clearly indicate what law would regulate their work condition and what mechanism would be used to settle the conflicts between employees and the Office and between employees and employees. These missions greatly require financial support as well as a long-term strategy in which ASEAN has to carefully study about the regional Office and employees' needs. In addition, as the benefits offered by the regional Office might be greater than national Offices, Member States also have to prepare their national strategies to prevent potential impacts of the regional Patent Office on human resources of their national Offices.

## **2.7. Technical Assistance**

Because the establishment and the operation of the regional Office are complicated and might impose great burdens upon ASEAN countries which lack patent expertise and do not have

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<sup>474</sup> FRIEBLE ET AL., *supra* note 384, at 117-118.

any experience in institutionalizing a regional IP Office, the technical assistance from IP organizations or advanced patent offices might be necessary. ASEAN might firstly consider seeking the support from the WIPO whose key role is to provide technical assistance and capacity building program for developing countries.<sup>475</sup> An area of WIPO work is also to address the problem of duplication in patent prosecution.<sup>476</sup> It has provided assistances to many countries including ASEAN countries in various aspects such as legislative advice, training, and human resource and administrative development.<sup>477</sup> More importantly, it has an important role in supporting African countries to develop the ARIPO. The WIPO then could be a meaningful institution that ASEAN should consult and request the support in establishing the regional Patent Office.

In addition to WIPO, ASEAN should consult existing regional Patent Offices or other regional institutions in integrating patent procedural system. As ASEAN has long cooperated with the EPO in supporting ASEAN patent initiatives<sup>478</sup>, ASEAN could further the cooperation process with the EPO in developing the capacity of the regional Patent Office and streamlining the regional patent procedure. Also, ASEAN might extend its cooperation with European Union (EU) under EU – ASEAN cooperation program in the field of Intellectual Property (ECAP) to cover facilitating the patent institutional capacity of ASEAN regional Patent Office.<sup>479</sup> Such

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<sup>475</sup> STACK, *supra* note 57, at 120; Yu, *supra* note 220, at 83.

<sup>476</sup> STACK, *supra* note 57, at 121; Yu, *supra* note 220, at 83.

<sup>477</sup> Yu, *supra* note 220, at 83.

<sup>478</sup> ASEAN and the EPO signed the first regional Memorandum of Cooperation (MOC) on Industrial Property in 2014 to establish an institutional framework for structured cooperation in the field of patents. The cooperation activities intended to support the patent-related initiatives under the ASEAN Intellectual Property Rights Action Plan 2011-2015, such as work-sharing arrangements, patent information, and development of S&E capacities of the ASEAN patent offices. The cooperation will also include training of patent examiners, data exchange, patent classification, machine translation, search tools, and exchange of best practices and technical/policy solutions. *See* Press Release, ASEAN Secretariat, ASEAN and Europe Strengthen Cooperation on Patents (Feb. 27, 2014), <http://asean.org/asean-and-europe-strengthen-cooperation-on-patents/>.

<sup>479</sup> The ECAP III or the EU-ASEAN Project on the Protection of IPRs was signed in 2009. The cooperation primarily aims to provide further support for ASEAN IPR Cooperation and integration as a mean to enhance economic competitiveness and development. In Phase II, the project focuses on developing a common approach within the

assistances would not only ensure the administrative and examination capacity of the regional Patent Office but also would enable the regional Office to be capable of meaningfully participate in the international patent regime.

However, ASEAN should be aware of the impacts of the assistance upon the ASEAN needs and culture. There are a number of critics suggesting that the assistances, e.g. the exchange or training of examiners, possibly influence the regulation and practice of the Patent Office of receiving State in a way that undermines the autonomy of the State to adjust the patent system to meet its needs and conditions.<sup>480</sup> In ASEAN countries, this concern has also been raised when the EPO offered technical trainings to examiners. Because a number of patent filings in ASEAN countries have been originated in Europe, there were concerns that there could be European economic interests in mind when the EPO fostered technocratic trust through technical assistance.<sup>481</sup> As a result, while Member States could gain benefit from following the standards that were instructed by the EPO or other developed countries' Patent Offices, such approaches of following these standards have been questioned, especially in the area of pharmaceutical patent quality, on the ground that they may not truly meet ASEAN countries' needs but rather promote the interests of industry in developed countries.<sup>482</sup> To address this issue, the ASEAN regional Patent Office should clearly define its expected standard and system in accordance with ASEAN' s needs and conditions. Then, it has to carefully conceptualize the assistance from the

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ASEAN region in the areas of trademarks, industrial designs, geographical indications and IP enforcement with the emphasis on regional cooperation, coordination and harmonization among the ASEAN Member States within the framework of the ASEAN Economic Community Blueprint. The project also enhances ASEAN Secretariat capacity to support and co-ordinate ASEAN regional IP policies and work streams, including training course, workshops, awareness-raising activities, etc. *See About ECAP, EU-ASEAN PROJECT ON THE PROTECTION OF INTELL. PROP. RIGHTS (ECAPIII)*, <http://www.ecap-project.org> (last visited Sept. 20, 2016).

<sup>480</sup> *See, e.g.,* DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 140-141; NCUBE, *supra* note 106, at 4 (noting that the revision of IP laws of African states which has relied upon technical assistance from WIPO, WTO, and other specialized agencies led to concerns about whether those institutions shared common developmental approaches).

<sup>481</sup> DRAHOS, *THE GLOBAL GOVERNANCE OF KNOWLEDGE*, *supra* note 59, at 140-141.

<sup>482</sup> *Id.* at 295.

outside and follow the quality standard that could be used and developed to promote ASEAN countries' interests.

## **2.8 The national Patent Office and the cooperation with the regional Patent Office**

Although an aim of the regional Patent Office is to provide the patent service for Member States, it does not necessarily mean that the regional Office would replace the national Patent Offices of Member States. For ASEAN countries, maintaining the capacity of their national Offices might be necessary and probably be able to generate more benefits in many circumstances.

First, the national Patent Office is a necessary alternative that may be more economical to individual inventors, small entities, and applicants who wish to secure protection in their home countries or only few countries. Also, it could still be an important option for locals and some industries that do not need the protection in many countries but rather need protection in some countries which are important market of their products. Second, the national Patent Office could be a mechanism to promote the SMEs' activities. As in the European patent system, despite the establishment of the EPO, the role of national Patent Office is still significantly recognized since its service can better meet the needs of SMEs.<sup>483</sup> The national system not only offers more affordable fees for SMEs which might not be ready to secure patent protection in many countries but also helps SMEs and applicants, who lack English language proficiency, to reduce language burden.<sup>484</sup> ASEAN Member States thus should maintain and utilize the national Patent Office as a tool to support their policy to promote the local SMEs. Since a part of their workload would be transferred to the regional Patent Office, they should design the national Patent Office's strategy and service that increasingly focus upon the needs of SMEs. The locality would enable the

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<sup>483</sup> See GRISET, *supra* note 76, at 256; THUMM, *supra* note 58, at 120.

<sup>484</sup> LEITH, *supra* note 196, at 137.

national Offices to effectively communicate with the SMEs and assist them to overcome burdens in obtaining patent protection domestically and internationally.

Third, the co-existence of the national Office and the regional Patent Office would offer alternatives to patent applicants. They enhance the opportunity of patent applicants to obtain patents in Member States by filing applications through either the regional route or national route, or both. Moreover, the different patent route could offer different advantages. Since the regional Patent Office only centralizes the minimum standards, the national patent system might have some differences, such as allowing more patentable subject matters, or using different means of examination, that can benefit particular inventors and industries. This diversity of the patenting system, as a result, could provide an element of choice. It would also create the competitive environment that would push the regional Patent Office to keep developing and running the system more efficiently for the benefit of ASEAN and patent applicants.<sup>485</sup>

The next significance of the national Patent Office is that it could act as a gatekeeper. The locality of the national Office would enable them to carry out and control the patent work in a way that suits their national patent policies and local circumstances. This also means that the national Office can possibly review and challenge the grant of the regional patent designated to its State by the Court proceedings.<sup>486</sup> Moreover, even though the patent work of the national Patent Office might be reduced due to the emergence of the regional Patent Office, the national Patent Office still necessarily acts as a regulatory authority. It should be the center that passes the national and regional patent policy information to the national industrial community, officials

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<sup>485</sup> *See id.* at 159; THUMM, *supra* note 58, at 120

<sup>486</sup> In the European patent system, for example, the European patent can be validated in the nullity proceedings. Even though the national Patent Office cannot involve the process of the EPO, it possibly challenges the grant of the their States' part of a European bundle patent at the Court in nullity proceedings. Interview with European patent attorneys, *supra* note 198.

working in relevant government departments, and judges. This would help ASEAN patent system become more recognized and, hence, increasingly integrated into the national system.

Last, the capacity of local sectors involved in the patent system could be developed properly by the strong expertise of national Office. The national Patent Office is only a place where local sectors can find the patent information, including the patent requirements and registration process. The national Office is, therefore, an important institution that pools technical expertise and experience in patent registration system.<sup>487</sup> If the national Patent Office were to disappear, ASEAN countries would lose a lot of experiences about patent system. It would also be more difficult to find local experienced experts and develop expertise in industrial property rights. This situation then would cause difficulty for local sectors as well as the ASEAN countries to develop national and regional patent systems in the long run. In consequence, ASEAN countries should maintain their national Patent Offices and utilize them as centers that build up expertise and experience regarding the patent system.

All above points do not suggest that ASEAN countries, which have undergone patent examination and administrative difficulties, must keep their national Patent Offices. But each ASEAN country should take into account these benefits and do an intensive study to determine its capacity, needs, and worthiness to maintain the national Patent Office. If possible, it might adjust the national Office, for instance, by shrinking its size, or changing its roles like many national Patent Offices of EPC Member States have done such as to support the local inventors and SMEs, to disseminate patent information, etc.

In addition, ASEAN, led by the Council of regional Patent Office which generally consists of the Heads of national patent institutions of Member States, might support the co-

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<sup>487</sup> LEITH, *supra* note 196, at 153-154.

existence of the national Patent Offices of Member States by developing the synergy between the regional Patent Office and national Patent Offices. While the regional Patent Office centralizes the patent procedure of the region, the national Patent Offices might have an element of subsidiary that is supported by the regional Office's resources, tools and expertise. The national Patent Offices, in return, might exchange the patent information and support the regional patent policy as well as the work of regional Patent Office. The complementary nature of the regional Office and national Offices would not only strengthen the capacity of ASEAN Patent Offices to provide the service domestically and internationally but also enhance communication between institutions that could result in the increasing harmony of ASEAN patent system.

## **2.9 Public Communication**

A problem that ASEAN needs to address is the insufficient communication to the public. The business community and ASEAN citizens have little knowledge and awareness of AEC and ASEAN policies.<sup>488</sup> This situation is not only deprived of benefits that the public would receive but also impedes the achievement of ASEAN because it lacks support from the industry. ASEAN, therefore, should find some means to increase the public awareness about the regional patent system. One necessary approach is that, with the cooperation with national Patent Offices, the regional Patent Office should publish and disseminate regulations and information of the ASEAN patent system in the official languages of Member States even before officially opening the regional Office. Moreover, like the EPO and the ARIPO, ASEAN should launch the ASEAN Patent Academy, the platform where the public can access and learn about the regional patent system. It should also provide periodic trainings about new rules and processes of the regional Office, especially for industrial communities, relevant government departments such as custom, judges, professional representatives, and academic institutions. These approaches would make

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<sup>488</sup> DEGELSEGGER ET AL., *supra* note 47, at 28-31.

the information of the regional Patent Office more accessible and, as a result, enhance the understanding of the public about the patent system in the ASEAN region.

In conclusion, while the concept of regional Patent Office might have some impacts that challenge the condition of ASEAN, those impacts might not be too difficult for ASEAN to overcome if ASEAN countries emphasize the mutual aim to reduce the crisis in national Patent Offices and to develop the patent registration system to facilitate the innovative development in the region. However, the process of developing the regional system might be prolonged and expensive. The harmonization of varying scopes, complexity in the patent procedure, and process of equipping the regional Office with human and other resources would necessarily take time and efforts. The abovementioned points also reflect many issues that ASEAN needs to take into account and take action in order to prevent the deficiency and maximize the benefits of the regional Patent Office system. ASEAN then should provide reasonable length of transitional period before the regional Office becomes operational in order to facilitate a smooth harmonization and administration, and adjust strategies to match the ASEAN's needs and conditions.

## Chapter 6

### Conclusion

A model that this research studies is the regional Patent Office, which is a collaborative model that ASEAN, according to the ASEAN IP Framework Agreement, aims to develop to promote the IP registration system in ASEAN. The goal of the research is to answer the primary question: *does the establishment of the regional Patent Office serves AESAN' s interests?* After studying the concept and impact of regional Patent Office through experiences in respect of the EPO and the ARIPO and applying this to the context of ASEAN, the finding suggests that the regional Patent Office can generate benefits for ASEAN and promote ASEAN interests.

In support of the above key finding, the research further answers the sub-question: *what kind of benefit would the regional Patent Office generate for ASEAN?* The finding in respect of this question is that the regional Patent Office can benefit ASEAN in two main aspects; namely, the administrative aspect and the policy and legal aspect. In terms of the administrative aspect, the consolidation of resources of Member States would empower the ASEAN regional Patent Office to administer patents on behalf of Member States in an efficient and resourceful manner. This would address the problem of limited capacity of national Patent Office of ASEAN Member States, which is due to the shortage of resources, especially patent database and human resource. In addition, the service of regional Patent Office could be an alternative for patent applicants who wish to obtain patent protection in many countries. Therefore, it potentially shares the workload of national Patent Offices, thereby improving process delays and application backlogs which have been the common problems in many ASEAN Patent Offices. In addition, the regional Patent Office could reduce the duplication of patent works that significantly causes a waste of patent offices' time and resources. In this regard, the work of regional Patent Office

could reduce ASEAN Member States' administrative difficulties and costs in patent registration procedure. The resulting improvements in the overall productivity of patent process and administration in ASEAN and Member States would increase the patent quality and capacity of ASEAN to sustainably welcome more patent applications into the region in the long run.

In the context of the ASEAN policy and legal aspect, the centralized patent process, which requires Member States to agree upon the uniform rules and practice, could reduce the divergence of patent procedural laws and standards of ASEAN Member States. Thus, this centralized patent process could promote the objective of ASEAN to remove barriers and facilitate the free flow of goods and service within the ASEAN region. In addition, apart from streamlining the patent procedures by offering centralized patent process, the regional Patent Office could act as a regional center that pools patent expertise and provides assistance and training to develop patent system in both national and regional levels. It then would narrow the gap of Member States and foster ASEAN and Member States to work together in order to enhance their capacity to advance the ASEAN patent system to meet international standards. Furthermore, the regional Office, which pools patent information and patent expertise of ASEAN and Member States, could have a significant role in advancing ASEAN interests. It would be a center that promotes the ASEAN vision and patent protection in ASEAN and Member Countries to the public. The consolidation of resources and information would also enhance ASEAN capacity to deliberate and develop the regional frameworks that address the concerned issues of ASEAN and Member States such as the pharmaceutical patents and the protection of traditional knowledge. The collective operation under the regional Office then would strengthen ASEAN position and empower ASEAN to promote its interests in international arena. Therefore, the

regional Patent Office system would not only enhance the efficiency of ASEAN patent system but also increase the public awareness and competitiveness of the ASEAN region.

Not only would ASEAN members benefit, inventors would also gain benefits from the regional Patent Office as well. The centralized patent process would facilitate the change of innovative society, which increasingly becomes borderless. Patent applicants would no longer need to separately submit applications to different ASEAN national Patent Offices. They could only file a single application and only bargain with a single office in order to obtain patent protection in ASEAN nations. This simplified process, as a result, would reduce labor, time, and costs of inventors who are interested in acquiring patent protection in any or all of the ASEAN countries. Moreover, the increasing harmony of patent filing and granting procedure would greatly reduce the uncertainty and unpredictability of patent that applicants expect to receive. The more that the efficiency of the regional Patent Office would assure the quality of service, the more that inventors would feel confident to seek and enforce patent protection in ASEAN countries. The regional Patent Office, therefore, is an attractive alternative for patent applicants. This is especially the case when the regional system combines with national patent systems, the PCT, and other cooperative program such as the PPH as the consolidation would give applicants more choices. These advantages, as the experiences of EPO and ARIPO have suggested, would increase the applicants' incentives and opportunity to obtain patent protection in ASEAN. This also means more opportunities for ASEAN countries to have more technology transfer and investment that could promote the development of the ASEAN community.

The next sub-question is: *what are the challenges for ASEAN in establishing the regional Patent Office?* This research found that even though the regional Patent Office could benefit ASEAN Member States and inventors, there are some challenges that ASEAN might have to

overcome. First, since the centralized process of the regional Office generally requires the harmonization of law and standard and supranational power over Member States, this would affect national sovereignty rights and limit the power of Member States to experiment legal innovation to protect their national interests. This impact would considerably challenge an important ASEAN regional norm, i.e. the ‘ASEAN Way’, which emphasizes the respect of national sovereignty and territorial integrity of Member States. It would also be a challenge for ASEAN, which Member States have diverse preferences upon the patent regime and adhere to the consensus approach in the decision-making process, to reach the agreement. This, in effect, could impede the regional Patent Office to perform the work and result in the ineffectiveness of the regional patent system.

Second, the emergence of the regional Patent Office could impact human resources and patent activities of Member States’ patent office. The work condition and status of international organization might be more attractive for skilled personnel to work for. However, this would intensify the recruitment problem of many ASEAN national Patent Offices. Also, while the operation of the regional Patent Office could reduce the workload of national Patent Offices, in the long term, it could lead to the loss of patent work, financial ability, and expertise of national offices. This situation would greatly impact inventors who wish to obtain patent protection locally as well as the general public which losses a national patent authority to promote the local interests.

Last, the limited capacity and resources of Member States would create difficulties for ASEAN to establish and run the regional Patent Office. An important issue is the limit in terms of the language used in the Office operation. ASEAN countries have a variety of languages. Despite the facts that English, which is expected to be used in the regional patent system, has

been commonly used in ASEAN activities, the majority of the population in non-English speaking ASEAN countries still has limited English language proficiency. This condition, as a result, would be a burden for local applicants to obtain patent regionally and for applicants to validate their patents in ASEAN countries, if they require the patent to be translated into national language. It could incur not only high costs but also the risk of translation error that could impact the scope of patent and, hence, the rights of patentee and the public use of patent information. In addition to the language problem, the regional Patent Office necessarily requires significant costs and skilled human resources, including patent practitioners, in the operation. However, most ASEAN countries are developing countries and many of them lack financial resources and patent expertise. Such limitation can create difficulties for the regional Patent Office to run the business efficiently. Also, it would cost Member States huge financial burdens to support the regional Office as well as develop the training system, which increase and build up the expertise of officials and patent practitioners to work in the regional system.

The last research question is: *what policy considerations must take into account in institutional design to maximize the benefits and overcome challenges?* To answer this question, the research first re-evaluates the challenges. The finding was that while it might be true that the regional Patent Office could have impacts upon norms and interests of ASEAN and Member States, the impacts might not too significant for ASEAN to overcome. This is due to the facts that the need to surrender a certain part of sovereignty and national interests is not a new condition for ASEAN. ASEAN countries have repeatedly shifted away from the ASEAN Way and voluntarily surrendered their sovereignty in order to obtain irresistible gains from many cooperative systems. Therefore, if the power of the regional Patent Office is clearly defined and ensures that it can benefit and address problematic issues of ASEAN and ASEAN countries, it

might not be too difficult for ASEAN countries to relinquish parts of their national sovereignty to the patent regime and accept supranational effect of the regional Patent Office. However, ASEAN should also consider alternative ways for Member States to participate in the regional patent system. It might provide ASEAN members with the opportunity to observe and voluntarily participate once they are ready.

Moreover, despite the rich diversity of ASEAN members and the difficulties for integration entailed, it does not mean that it would be impossible for ASEAN to overcome. As it has been in the cases of the EPO and ARIPO in which Member States also have difficulties and variety of conditions, needs, and limits, their successes have revealed that the goal of having a regional patent institution is feasible, given a strong unified vision of Member States. For ASEAN, Member States have consistently worked together and become AEC in order to promote the economic interests of the region. The legislations of ASEAN Member States have been gradually harmonized because they have been engaged very much in ASEAN plans for gap filing. These situations suggest that ASEAN countries, in many circumstances, have surrendered their own interests in order to promote the regional values. The harmonization of the regional Office, consequently, might not be a significant challenge for ASEAN countries if they understand the objectives of the regional Patent Office, and the advantages that they would receive from the regional Office system outweigh their national interest.

In regard to impacts upon Member States' patent office, although the impacts from the emergence of the regional Patent Office upon the national Patent Office's activities are possibly unavoidable, this does not mean that the national Patent Office has to terminate its business. National Patent Office could adjust its strategies to compete or shift its role to promote another area for the national benefits, such as to support domestic inventors and SMEs by providing

advice and searches. Similarly, while the language, costs, and human resource requirements might present burdens for ASEAN countries, there are alternative instruments, assistances, and processes that ASEAN can take into account and adopt to reduce such burdens. Nonetheless, most important is the need for ASEAN and Member States to intensively study their conditions and restraints, and be prepared to adjust both national and regional strategies. This should take place even before the establishment of the regional Patent Office, in order to prevent or reduce the impacts.

The study also suggests considerations that ASEAN should take into account to maximize the benefit of the regional Patent Office. The key recommendations can be concluded as follows. First, in term of the organizational structure and policy, ASEAN needs to have a clear vision and strategy. The authority of the organization must be clearly defined and be concrete sufficiently for the Office to smoothly operate. Moreover, the regional Patent Office should be designed to promote the regional policy and local's interests. Not only should the regional Patent Office focus on simplifying the patent prosecution process, it should seek to develop the connection among regional Patent Office and other international patent systems, such as the PCT and neighboring countries, e.g. China, which would potentially help ASEAN to promote the ASEAN patent system and in turn benefit the applicants in the region. Second, regarding the legal framework, the key consideration is to what extent the harmonization should take place. The harmonization should be set in a way that is acceptable and workable for all ASEAN Member States. It might be formed from the common respects of Member States' laws and practices, and avoid the areas that are still diverge, sensitive, and debatable unless they could reach the agreement. In addition, while the power and rules of the regional Patent Office should prevail over Member States, they should be set as minimum standards and do not replace or limit

the authority of Member States over their national patent system. In this way, Member States should still have the opportunities to shape their national patent granting system in accordance with their national policy and interests as long as it is not contradict to the international and regional obligations. Third, ASEAN should consider harmonizing the post-grant process and enforcement mechanism. The consistency would not only eliminate the costs that applicants could have once the patent granted by the regional Office but also assure the patent holders' rights to be protected throughout ASEAN region. Fourth, the quality and speed of service, fee, and location of the regional Patent Office should be reasonably set in a way that accommodates patent applicants with concrete and more favorable solution. The system that meets the industry's needs would be attractive for inventors and, hence, enhance the ASEAN opportunity to have more patent filings in the region.

In addition to the above considerations upon forming the regional institution, ASEAN itself has to adjust its traditional norms and practices. It needs to change, for example, its consensus approach in the decision-making process and adopt other approaches that are sufficiently flexible and enable ASEAN to drive the regional Patent Office to meet the needs of inventors and innovative world. Also, it needs to emphasize the regional objective, significance and engagement of Member States in establishing the regional Patent Office. Member States need to clarify their restraints and concerns whereas ASEAN needs to take into account these issues and provide the Member States with essential assistances to overcome the difficulties. Moreover, ASEAN and Member States need to address the problems that potentially arise from the emergence of the regional Patent Office. They need strategies to assure the sufficiency and effectiveness in terms of resources, especially, financial and human resources for both regional Office and national Offices system. They might seek advice and technical assistances from the

international organizations such as WIPO and other patent communities such as the EPO in streamlining the patent procedure and administration of the regional Office.

Most importantly, not only the regional actions must be taken, Member States are also required to adjust its national policy, laws, and strategy to support the regional policy and activities. They should appropriately implement and incorporate the regional policy and agreements into the national framework. In addition, they need to transform the environment, such as the roles and capacity of national Patent Office, the education, the expertise of national institutions and practitioners, and the understanding of local industry and inventors upon the new regional patent approach, in order to get full benefits from the regional Patent Office system and promote interests of locals, SMEs, and potential non-ASEAN applicants and investors. As long as Member Countries regard the benefits of regional patent Office as outweighing the costs, the transformation would not be difficult to achieve and assure that Member States can gain through cooperation.

The last point that the research suggests is the need for communication. ASEAN must take more actions in increasing the public awareness about ASEAN patent system. Also, it should create the linkage between the regional Patent Office, national institutions, industry, and people involved in the patent system such as practitioners, judges, customs, etc., and provide them with the opportunity to train and discuss about the ASEAN patent system. The communication would strengthen the cooperation. It would also enable all relevant actors to have more understandings, harmonize their practices, and develop the overall patent system for the benefit of ASEAN effectively.

The research answers, as a result, validate the research hypothesis that *the regional Patent Office benefits ASEAN in improving its capacity in administering patents and could*

*accelerate technological growth in the region.* However, as the research findings suggest, there are several conditions that require ASEAN to consider and take actions to get it right. Even though the process might take an amount of time and resources to proceed, once the regional Patent Office is successfully established in ASEAN, it is highly expected that ASEAN would achieve the same advantages as European and African communities obtain and make a similarly impressive impact on the rest of the world. Also, the regional Patent Office would be a mechanism that would help ASEAN to achieve the harmonization of ASEAN patent system and increasingly foster technology transfer, innovations and, hence, the economic and innovative development of ASEAN community.

It is also worth noting that the harmonized patent procedure of the regional Patent Office could be only one incentive for inventors to obtain patent protection and invest their technology in ASEAN countries. However, it cannot be taken for granted that the regionalization of administering patent system would automatically enhance the economic and technological positions of the ASEAN Member States. ASEAN and Member States, thus, necessarily provide other incentives such as technology-transfer policies and promotion to attract the investment. Furthermore, the harmonization is generally a political process. Many issues, such as the location and States' contribution, have traditionally been a matter of diplomatic negotiations. This is an important challenge for ASEAN since the political reluctance of Member States is still the major obstacle of ASEAN integration. In this regard, ASEAN strongly needs the political attention in developing the regional Patent Office for the benefit of community. But what the factors involved and how to address the political issues in the process are well beyond the scope of this study and necessarily require the further research.

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