JOSTIP

Vol. 6 No. 2 (Dec. 2020)

# Proposed Intellectual Property Policy under Trans-Pacific Partnership Agreement and its Impact on Innovation Activities in Malaysia

Nor Ashikin Mohamed Yusof[a*]

[a]*Perdana School of Science, Technology and Innovation Policy, UTM*

*Corresponding author: ashikin.kl@utm.my

**Abstract**

After five tough years of negotiation, the Trans-Pacific Partnership Agreement (TPPA) was finally concluded. Malaysia is among the twelve participating countries in the TPPA. Despite its heavy publicity, very little is known about the actual content and exact provisions of the TPPA. To date, what is known about the TPPA is obtained through leaked information by unknown Samaritans, or concerned 'whistle blowers'. The proponents of the TPPA wanted member countries to, inter alia, strengthen their existing legal protection for intellectual properties, particularly patents beyond the legal mandate of the World Trade Organization and the Treaty on Intellectual Property Rights Trade Related Agreement, where Malaysia is also a signatory. This writing assesses the impacts of such a request on innovation activities in Malaysia, a developing country and generally a technology user nation. The assessment is based on the three theories of patents, and shows how the strengthening of patent protection would eventually promote (or hinder) innovation activities in thecountry.

*Keywords:* TPPA; IP protection; gold standard IP; patent; innovation; IP Strength



## ■ 1.0 INTRODUCTION

The Trans-Pacific Partnership Agreement (TPPA) is a trade agreement between twelve Pacific Rim countries concerning a variety of matters related to economic policies. After a five year period involving negotiations, the twelve countries finally "agreed" to all negotiated terms, and concluded the negotiation on the 5th of October, 2015. Generally, the TPPA is a mirror agreement to another agreement known as the Transatlantic Trade and Investment Partnership (TTIP), between the United States and the European Union member countries(Schott et al., 2013).

The globalization waves as promoted by the World Trade Organization (WTO) of 1997 have two main mandates (Stiglizt, 1998). Member countries are expected to liberalize their trades in order to expand their trade markets globally for the purposes of economic, societal and political well-being (WTO Report, 1998; Stiglizt, 1998). The WTO strongly advised member countries to open up their domestic markets, promote technology transfer, disseminate technological knowledge, reduce or eliminate trade barriers, and introduce a standardized and harmonized intellectual property (IP) protection, as strategies in strengthening financial income and domestic economic growth (August, 1998). In this context, the TPPA is perfectly 'singing in total harmonization' with the WTO.

The TPPA seeks, inter alia, to further eliminate tariffs on trade among the 12 participating nations. This aim has been set for several reasons, namely, to (i) lower or remove the barriers to trade in services; (ii) open up more investment opportunities to venture capital and investors; (iii) increase and strengthen IP protection; (iv) enforce standards for labour and environmental laws; and (v) establish an investor- state dispute settlement mechanism and management of small and medium size enterprises (SMEs) (Stiglitz, 2014).

According to the US, the leading proponent of the TPPA, the treaty would enable members to "enhance trade and investment among the TPP partner countries, promote innovation, economic growth and development, and support the creation and retention of jobs" (Hookway & Brereton-Fukui, 2013). For example, through TPPA's movement in reducing trade barriers, Malaysia would enjoy a wider business access to international markets. After all, the TPPA is the first ever Free-Trade Agreement (FTA) between Malaysia and the US, Canada, Mexico and Peru. The TPPA shall directly provide local businesses additional or enhanced access to eight other markets. For example, the 12 TPPA members make up 40% of global GDP, and approximately a third of world trade (World Bank, 2014). These figures collectively represent a population in excess of 750 million people (World Bank, 2014).

It is believed that some sectors or local industries such as textiles, apparel, commodities and electronics, to name a few, would directly and quickly benefit from the conclusion of the TPPA (US Trade Chambers, 2015). Currently, Malaysia is the third largest recipient of foreign direct investment (FDI) in ASEAN (SMEDEC, 2012). In that sense, the TPPA currently assists Malaysia in creating a competitive edge in trade and investment among and over other ASEAN countries that are yet to ratify the TPPA. According to the HSBC Small Business Confidence Monitor Survey 2014 (HSBC, 2014), 42% of Malaysian SMEs are involved in cross-border and international trade. However, most SMEs were established with the domestic market in mind (US Trade Chambers, 2015). They only seek opportunities to expand their footprint across the region once they are more stable financially or economically (US Trade Chambers, 2015). With the TPPA, Malaysian SMEs will have better opportunities in penetrating foreign markets, and accelerate growth in opportunities along the way, as the treaty will enable improved uniformity for selected regulations and harmonisation of standards in several areas (US Trade Chambers, 2015).

In terms of IP, TPPA aims for member countries to strengthen their IP protection by introducing and enforcing a gold standard IP, especially with regards to patent protection. This is meant to protect, address and prepare them in facing the unique challenges and priorities of the 21st century, which focus mostly on the creation of new jobs, promotion of innovation, sustainable competitiveness, economic growth and the preservation of the critical role of IP standards (Lichtman, 1997). The reason for this is that international trade is different today than it was a generation ago, where innovation and IP have dominated the world economy. The demand is applicable to all members, regardless of the fact of whether they are member countries of the WTO, TRIPS, TPPA or other FTAs (Lichtman, 1997).

A stronger IP protection would deliver three key benefits (US Trade Chambers, 2012). Firstly, Malaysia will be regarded as a more attractive investment destination by the most sought-after global industries, including life sciences, high-tech and creative content. Secondly, Malaysia will be a country to first receive early access to innovative products such as life-saving medicine and increased research and development (R&D) attention to treatment needs that are most relevant to the country's health care requirements. This is made possible through patent disclosure and written requirement respectively (Article 31 of TRIPS and Section 28 of Patent Act 1983). Such a reputation is important to a country that is keen in becoming a strong contender and provider of technology production and commercialization. Thirdly, Malaysia will equip the domestic innovators with the legal tools to develop ideas, secure financing and bring innovative products successfully, thus fulfilling the objectives of the National Intellectual Property Policy 2005 (NIPP).

Regardless of the public outcry against this agreement, the TPPA is here to stay. In fact, the TPPA shall continue to expand its domination and influence. The TPPA will most probably take unprepared countries by surprise, and isolate those who oppose the agreement in the process. Taking the above into consideration, this writing discusses whether IP policies of TPPA would affect the innovation activities in Malaysia, a developing country, and in many instances a technology user country. This assessment is made based on the three theories of patents. The input is useful for decision and policy makers in formulating and designing appropriate IP strategies for Malaysia in order to remain competitive on a global scale.

### 1.1 Background Facts

Historically, the TPP is an expansion of the Trans-Pacific Strategic Economic Partnership Agreement (TPSEP; P4-US Trade Chambers, 2008). The original signatory countries to TPSEP were Brunei, Chile, New Zealand, and Singapore, in 2005. Later in 2008, several other countries including Australia, Canada, Japan, Malaysia, Mexico, Peru, the United States, and Vietnam, decided to join the discussion for a broader agreement, bringing the total number of participating countries in the negotiations to twelve. This is part of the national economic strategy of the countries. Such a strategy is common and not totally unknown to countries worldwide. Tactically, all pioneering countries to a treaty have better leverage, negotiation and bargaining powers than countries who assent to the treaty at a later stage, particularly after it is concluded (Clarkson & Hill, 1997).

For example, as a pioneering member of TPPA, Malaysia is able to negotiate for rights and concession on specific issues such as Bumiputera status, state-owned enterprises, government pharmaceutical procurement process, Halal requirements, Halal certification, importation and exportation of food stuffs, or other national interest issues, during those negotiating periods. By agreeing to waive or minimize certain duties on agreed subject matters, Malaysia will have the preferred access to the other partners' markets, namely, the US, Canada, Japan, Mexico, Peru, and others, giving Malaysian businesses a more competitive advantage when exporting their products to these partner countries. Similarly, the number of duty-free products being exported to these countries is estimated to be increased. Comparatively, acceding countries of the TPPA have less or no bargaining power at all. They could only accept the negotiated and agreed-upon terms and conditions of the TPPA, regardless if it is to their predicaments or not. Principally, this is because the agreement is concluded where the terms and conditions of the treaty are already agreed-upon.

The negotiations between the twelve nations were supposed to conclude in 2012. However due to several unresolved issues on agriculture, IP, services and investments, the countries were forced to return to the negotiation table. Between 2005 and 2015, these nations have hosted in a total 19 rounds of official trade negotiations. The negotiations were finally concluded on the 5th of October, 2015. It was hailed as one of the landmark trade agendas of the Obama Administration (BBC news, 2015). On the same day, Canadian Prime Minister Stephen Harper expected "the full text of the agreement to be released in the next few days, with a signatures on the finalized text and deal early in the New Year, and ratification over the next two years"(BBC news, 2015). Despite the opposition against the negotiation and the unnecessity to seek sanction from Parliament, the government has decided to table the motion on the TPPA nonetheless. On the 16th of January, 2016, the Malaysian Parliament has ratified the TPPA with 126 votes in favour out of the total 222 Parliamentary representatives (Hansard Report, 2016).

However, to date, there remains no public release of the TPPA 2016 for further perusal. Despite the in-assessibility to the content of the TPPA, Wikileaks has published several leaked documents since 2013. Among the leaked information was on intellectual property rights (IPR). The leaked TPPA proposed a minimum level of protection signatory countries must enforce for various types of IP inclusive patents. Apparently, there exist some truths in the leaked information. In an interview by a national newspaper with Kilbride, CEO of Global Intellectual Property Center (GIPC) of the US Chamber of Commerce (2015), he strongly defended the US push for the TPPA, and subsequently a stronger IP protection.

According to Kilbride, the TPPA is highly timely for Malaysia, since it provides an opportunity for Malaysia to enhance its reputation as a country that values innovation. This is achieved by providing the IP infrastructure that speeds ideas to the market as successful commercial products. If the IP infrastructure is already available, Malaysia should push for stronger IP protection, substantially beyond WTO rules, and the current practice of TRIPS. Such a move would expedite the economic growth and boast the position of Malaysia in global competitiveness. He believes the enhanced protection for patents will strengthen Malaysia's appeal as a destination for high-tech manufacturing, increasing foreign investment and creating jobs. Through this route Malaysia would be able to attract pharmaceutical manufacturers to Malaysia, and become the new hub for drug manufacturing. Furthermore, research and development always leads to the discovery of future life-changing and life-saving medicine. After patents expire, the generic versions of innovative or pioneer drugs would continue to be widely available and used for decades, generating enormous health benefits for consumers. All of the above are in line with the objectives of the NIPP. In the long run, Malaysia stands to benefit through increased investment from multinational companies in the areas of research and development and clinical trials, potentially helping to build a local industrial base, and encourage the entry of more innovative products to the domestic market.

The gold standard IP protection, particularly patents, as proposed by the TPPA, refers to a standardized high IP standard (Schott, Kotschwar & Muir 2013). In the context of the TPPA, all member countries must agree to use USA IP standards and laws as a benchmark. For example, under the Hatch-Waxman Act 1984 (formally referred to as the Drug Price Competition and Patent Term Restoration Act 1984 - Public Law 98-417), the US government is willing to grant marketing rights for a new approval process. Often, the regulatory and approval process of the US Trade and Patent Office (USTPO) and Food and Drugs Administration (FDA) to market and sell a new drug in the USA is lengthy, costly and hard. In solving the mentioned obstacles, the Act provides a period of exclusivity for New Molecular Entity (NME). Once a pioneer NME is approved, there shall be no approval for a generic version of the NME in the next five years. The Act also calls for a three-year data exclusivity period for supplements requiring clinical trials. The exclusive owner of the data can then financially charge any interested parties for the use of his data in their research. The Act would issue several certificates when someone files for an Abbreviated New Drug Application (ANDA), as found in Section 505(j) of the Act, codified as 21 U.S.C. § 355(j) paragraph I, II, III, and IV certifications. The first applies when the drug associated with the ANDA is not patented. The second is in the context of an expired patent for the pioneer version. The third certification is a sanction not to market the generic drugs unless the patent for the pioneer drug has expired. Lastly, the applicant believes that the patent for the pioneer drug has not been infringed or is proven invalid. Putting the legal complexity aside, the exclusivity period of the Act is actually granting the applicant with additional monopoly rights on top of the existing 20 years patent protection tenure. Mathematically, a patentee in US would enjoy at least a minimum 25 to 28 years patent protection, five or eight years longer than their counterparts elsewhere.

The same ruling is applicable for biologics compounds applications. Biologic compounds of biotechnology are important to the future of the industry, as well as to the pharmaceutical and medicinal drugs industry. However, the size and complexity of biologic compounds make them inherently difficult to pass the patentability requirements and become eligible for IP protection. They cannot be protected with patents as molecular formulas, since patents only protect technological inventions and not formulas (Article 27 of TRIPS, section 11, section 12, section 13 of Patent Act 1983). This is despite the fact that data exclusivity and data protection are critical for biologics. For this reason, the Act above provides 12-years of data exclusivity for biologics in order to spur research and development in the relevant industry for national economic growth.

How do the two examples above relate to the TPPA and Malaysia? All participating and member countries of the TPPA shall use US laws and IP standards as shown above as a benchmark. Briefly, all signatory countries to the TPPA must match the US IP standards and grant the same protection as granted by US law. These standards would ensure that all parties could equally compete with their foreign competitors on a level playing field, and remain economically competitive in the global marketplace (US Trade, 2012). If participating countries are currently adopting a lower standard of IP, they must raise it up to be at par with US patent standards. If they are already exercising the same high standards, they need to maintain them, but pay attention and address the pharmaceutical issues mentioned above. In this case, Malaysia falls under the latter category.

What seems to be the problem? The above expectation is against the very basics of public international law and patent law principles. Under the Sovereignty Rule, all countries must respect the laws of others, regardless of the level they dislike them. Patent laws have always remained under the jurisdiction of domestic laws. Under the Principles of Independence and Territorial respectively, patent laws should be independent and territorial in nature; independent of the patent laws of others; and valid within the jurisdiction and territorial land of the target country. They have no transborder effect. As such, the one-size-fits-all demands of TPPA are seemingly putting an end to centuries old legal norms. For so long, countries are free to design their patent laws and set suitable patent standards accordingly. The TPPA's demand would affect a country's freedom in designing its innovation strategies and developmental plans. Standardized patent law policies may not necessarily be workable for all countries.

## ■ 2.0 POLARIZED PATENT POLICY

Conflicting interests and needs have driven countries to introduce a polarized patent policy or strength. This is usually determined and influenced by their level of physical and technological development (Sabeteli, 1995). Most countries are currently either developed or developing countries. The former comprise technology producers and exporters to the international market. The latter comprise, by majority, user countries and importers of foreign technologies, mostly from the former, making them heavily dependent on the former for technological innovation, ranging from their needs for daily use, to developmental progression. This usually gives technology producer-developed countries the upper hand against the latter.

### 2.1 Developed Nations and their Preferences

In international trade and economy, technology producers and exporters value the protected information or technology integrated in their products or processes, more than the product per se (Eisenberg, 2001). The technology and technical information are protected with various IP protections, ranging from patents, copyrights, trademarks, business formulas and industrial designs. Occasionally a product or service could be protected with more than one type of IP protection. The most preferred IP protection involves patents. Patents represent their livelihood or future, supplying them and their government with new sources of income in the form of licensing fees or royalty tax, exports and foreign trade, leading to local and national economic growth. It is perfectly understood when they prefer a strong patent protection in their home country and in every market where their products are sold.

### 2.2 User Countries Preferences

Most user countries generally strongly prefer the opposite policy. As a country is in the process of developing physically and technologically, they have very little motivation or economic incentives to standardize or introduce strong patent law protection, hence witness no urgency in applying a stringent patent protection policy (Vaitsos, 1972). They comparatively lack technology, skilled human capital and resources to effectively compete with foreign multinationals in R&D programs, or produce products that are necessary for the welfare of the public.

As far as user countries are concerned, it is better not to have intellectual property protection at all, and if they must, it should be only to introduce weak IP protection. For example, an act of imitation, reverse engineering or piracy of IP is not illegal in a country with a narrow scope of IP protection, or with no IP laws. The act would in fact assist the country to obtain maximum access to the latest protected technology for the purpose of promoting technological advancement at a cheaper and faster rate, hence, provides solutions to the underdevelopment and growth of the local economy (Kruger, 2001). The above argument is based on the historical practice of developed nations. They took the same route during the process to industrialization. The reverse engineering techniques save local inventors from spending massive amounts of funding for R&D to develop new inventions, and for the high costs of imports or licensing rights. By copying successful “ready-made” products, local inventors avoid the risk of market failure, and at the same time, meet local demands (Eisenberg, 1997).

The presence of IP protection such as patents, would, in many ways, deny the locals from having access to important technological information, processes or imported goods. Access to them is through the purchase of genuine patented products, process or services, which may be beyond their means. In terms of access to the embedded and protected technology for technology-knowledge transfer and research tool purposes, the same is only possible by way of licensing fees and royalty, an option that may be financially burdensome for many (Afifi, 1993). The payment would inadvertently push the price for technology transfer higher, and consequently increase their production costs. This complicates their chances of using technology as a tool for development, and diminishes their ability to improve or create new innovations (Kruger, 2001). In the long term, this could stifle development of new local industries and economic growth, and deter them from participating in the global economy.

The above explains the general attitude and ongoing tension among these blocks of countries in respect to patent law protection. User countries have jaundiced views towards any attempts made or led by developed nations to strengthen patent law protection internationally.

## ■ 3.0 PATENT POLICY OF MALAYSIA

It is important for Malaysia to set the most optimum, if not appropriate, patent policies to promote technological advances at the local level. There are various IP protection laws already set in place. The government has introduced intellectual property laws in stages, namely, the Trademark Act in 1976, the Patent Act in 1983, the Copyright Act in 1987, the Industrial Design Act in 1996, and finally, the Plant Varieties Protection Act in 2012. As a developed-developing country, Malaysia is a sandwich between the two preferences above. To date, Malaysia is applying for a strong IP patent protection (Nor Ashikin, 2007). Apart from fulfilling Malaysian legal obligations under international treaties, it is necessary for the government to protect the legal and economic interests of inventors or patentees in order to provide them with the necessary economic incentive to innovate further, particularly since Malaysia has started to produce patented inventions in several sectors and fields of technology.

The above policy approach works well for Malaysia (Nor Ashikin, 2007). However, this could be under threat due to the demands of the TPPA for stronger patent law protection and gold standard IP patent protection. It is feared that the same would leave a negative impact

on innovation activities in the country. The statement is made in view of the following theories of patents, as well as the local circumstances.

## ■ 4.0 INCENTIVE TO INVENT THEORY

This theory was first introduced by Adam Smith in 1776 (Kieft, 2014), and postulates the importance to reward inventors with economic and financial benefits in order to convince the society that research is indeed a rewarding and fruitful activity. The theory acknowledges the need to reward inventors for investing effort, times and money in lengthy and costly R&D. This shall motivate the researcher to carry out further R&D to develop new inventions, as well as to lure new players to join the research activities. Investors and owners of IP yearn for such incentives, typically when intensive research is involved. This becomes very useful in the absence of government subsidies or other forms of monetary grants.

The financial and economic rewards usually come in the form of the sale price of the patented product, licensing fees and royalty. IP owners could unilaterally and arbitrarily fix the selling price, which will reflect the value of the invention to the society. It is also inclusive of R&D costs. As a matter of strategy, the researcher can decrease the supply of the same in forcing a higher selling price, and could allow others to commercially exploit his invention by way of licensing agreement or consent, where he would receive payment nevertheless. The patent rights could include new improvement, modification and development of the original invention, or use of the patented product, even if it is unknown to him. An example is the case one independently discovers a new use of a patented invention. As such, the scope of his patent protection would be limited to the new use only. At the same time, he still needs to pay royalty of sale to the original patentee, since his patent stems from the first, original or pioneer patented invention.

The 20 years monopoly term provides IP owners with a breathing space, since they could legally exclude others from dealing with the patented invention in whatsoever manner. It is assumed that during the life span of the patent, the patentee will be able to recoup his R&D, as well as generate enough profits, thus increase his incentives to further invent and engage in R&D. This also gives him a sense of security and feel-good factors amongst innovators and investors, knowing that their investment and inventions are fully protected. In total absence of competition, they could fully concentrate on improving the existing invention, develop a new invention, or formulate business strategies to exploit the inventions commercially to their best advantages. An example is by focussing more on the effort to expand his business, penetrate new markets, and determining the amount to supply and the selling price at any point he desires.

### 4.1 Incentive to Disclose

At times it is good to protect valuable technological information as trade secrets where a selected and trusted few could have access to the same on a need-to-know basis, only through a confidential and non-disclosure agreement. It could effectively prevent free riding by competitors, and would also bar unrelated parties from infringing and exploiting such information to their advantage for free (Arup, 1993). However, such an approach has its weaknesses. It is costly to maintain secrecy. Employers may need to pay a great sum of money to retain the employment of his trusted few employees. Secondly, there is a constant threat of industrial espionage. At any time, employees could potentially sell the trade secret to the highest bidder. If in any event the secret is leaked and made known to the public, the owner is left with no economic or financial leverage. The next best thing he could do is to initiate a personal legal suit against the suspect in courts of law, a legal exercise which is costly and time consuming.

Secrecy in an open economy is likely to yield less benefits to both the owner and the public. Though the secrecy enables an inventor to protect his investment or potential profits and remain ahead of the technological game than his closest rival, he might face difficulty in selling or licensing out his invention. It is difficult to persuade someone to buy or license an invention without telling them the technological details of his invention. If the patentee chooses to reveal everything, as mentioned earlier, he has nothing worthy to sell in the future. As far as consumers are concerned, secrecy deprives the public from extracting valuable technological information and the full benefits of new knowledge. It is not economic, and is wasteful of scarce valuable resources, if the public is forced to carry out multiple and independent research, in attempts to invent the same concealed technology.

The incentive to disclose theory of John Locke attempts to balance and correct the above predicament. The theory discourages secrecy, since the patentee could not keep his technological information in total secrecy forever (Kieft, 2014). It facilitates the disclosure of technological information instead, and is part of his social responsibility towards the state, in exchange of the exclusive rights of the patent accorded to him. Although the technological information about the invention is now disclosed and would remain in the public domain, his economic value remains intact. Interested parties could always have access to the protected technological information by way of payment. If everyone follows the rules, it would lead to an efficient and orderly disclosure of valuable technological information at the post patent grant stage. The patentee still enjoys the upper hand in his patented area of technology. He can choose to sit on his invention to fend off any competitors. Tentatively, he possesses the liberty to allow others to undertake the activities of commercializing the invention with his approval. Furthermore, he has the right to choose who shall get the licensing rights of which part of his invention. As a matter of business and IP strategies, he does need not to reveal everything about his patented invention to one licensee. He can license different parts of the inventions to several licenses, preferably to the highest bidder, and uses the financial benefits to invest and innovate further. As far as third parties are concerned, they could use the patent disclosure to circumvent, improve, and modify the pioneer patent, or develop another new pioneer technology. All in all, the above would create a healthy ecosystem for continuous research activities, which in turn contributes to the industrial development and stimulation of economic growth at a faster speed.

### 4.2 The Prospect Theory

In the absence of a patent, potential inventors will work independently from each other. Each would not disclose their work to the other inventors. Assuming all of them are working on the same subject matter, such actions are wasteful. There is a tendency that they are duplicative. Subsequently, the public does not utilize the limited resources in the most optimal manner.

Kitch (1997) believes that patent protection could remedy the above. His theory encourages researchers to work together. The government could still grant all of them economic incentives by awarding them with patent protection for different parts of the technology in question. For example, there are numerous parts and components of different technologies and inventions in building an aeroplane engine. By so doing, none would be carrying out duplicative or overlapping research with others. There is no issue of infringement either, since each of them is awarded with different parts of the technology. In the end, each can potentially take up new research in related fields, and would thus contribute more towards industrial development.

Under this theory, the patentee acts as a coordinator, where he can determine and control access to his invention without losing his exclusive rights in doing so. He could easily determine the latest plans of his nearest rivals through the licensing application and negotiations. The same acts as a notification for him of the latest technological trends or development. He can strategize and decide which parties are to obtain what right in developing or improving his pioneer invention. Such insights will always ensure the patentee remains ahead of the rest by carrying further research on the same technology, or work on other matters. He could do this in an environment that is free of fear or risk of imitation, or industrial espionage.

## ■ 5.0 OBSERVATIONS

The three theories above promise a better economic future on the assumption that placement or improvement of patent laws could and would fire up research and innovation activities domestically. The same also assumes technology transfers could occur and developmental progress would naturally follow by simply strengthening patent protection with a broader scope of protection. A broad scope of protection in turn enables patentees to enjoy more rights, opportunities and control any subsequent refinements of their initial or pioneer invention. Theoretically, foreign investors might be interested to invest in host countries such as Malaysia when the country provides the legal infrastructure to protect their legal and economic interests.

The above theories are proven to work better for technology producing nations, especially since patent protections are strong and broad (Nor Ashikin, 2007). Malaysia could equally enjoy the same economic incentives and financial rewards if there are many Malaysian inventions patented nationally or internationally. Malaysia could enjoy an even larger economic cake if international consumers rely on patented products or processes by Malaysia for their daily use. Data on patents filed or granted from the Malaysian Intellectual Property Office (MYIPO) is a useful indicator of whether Malaysia has finally joined the technology producing nations, or is remains to play a technological ‘catch-up game’.

As of June, 2015, the MYIPO has accorded 14,715 patent protections among 28,788 patents filed, 88% of which are foreign inventions. 76.8% of these foreign inventions are pioneer inventions. Over 60% of these pioneer inventions are also patented under the Patent Cooperation Treaty 1970 (PCT) in more than 100 countries and jurisdictions, and the remaining are waiting for PCT approval. The local patents make up the remaining 12%, a relatively small number, filed by large corporations, Government Linked Companies (GLC) or medium and large enterprises. Only 1.4% of them are pioneer inventions and protected under patent protection. The remaining 7.6% are improved inventions, and given utility patent protection instead. Although utility patents enjoy the same exclusive rights as patents, the patentability requirements standard for utility patents is much lower than the former, indicating a lower quality of technological knowledge. These small facts are important. This indicates the local technological and know-how capability in relevant areas or sectors, as well as the fact that Malaysia is generally playing the technological catch-up game with already advanced technology producing nations.

As such, the theories only work partially for Malaysia. The benefits and privileges obtainable are numerous, and soon, the even stronger patent protection under the TPPA is not widespread. It is limited and could be enjoyed by a handful Malaysian inventors or patentees. Based on the data from the MYIPO above, that number and volume is significantly small. It is verily believed that those numbers are not yet able to push Malaysia to a technology producer status. It remains to be questioned as to whether the market is interested in exploiting and using the protected technology from Malaysia. If none, they shall sit on the shelf until the remaining duration of patent protection is over, generating a zero income for the local inventors and patentees. These facts influence whether the volume of financial income generated from patent commercialization is higher than the outflow of funds out of Malaysia for licensing fees. If the outflow is larger, it also determines the speed of technology transfer in Malaysia.

The stronger IP protection has the tendency of protecting less quality of technological information. This is socially unjustifiable, since technology users are still subject to licensing fees and royalty, regardless of the quality of the technological information. It must be noted that patent disclosure is the most salient and fundamental part of any patent system. In lieu of the 20 year quasi monopoly and financial payment, patentees must disclose and share their technological information with the public. The quality and quantity of technological information disclosed to the public must be sufficient and adequate to enable any interested party to independently develop the same invention without further reference to the patentee, or the need to conduct further research for the purpose of creating newer generations of researchers and innovators (Article 29 of TRIPS; Nor Ashikin, 2007).

If the mentioned approach is practised in every case, regardless of the social value of the invention, it could inadvertently lead to over-investment in low grade inventions, an important consideration for technology users, especially when their financial resources are scarce. As a result of that policy approach, only banal technological knowledge would remain for the public domain. The banal technological information is usually insufficient to push for independent research, and consequently creates new innovations to the extent there is no dissemination of knowledge at all. Independent researchers or technology users are forced to pay licensing fees and royalty before they could use the protected technology. The needs are fundamental, and become more intensified, especially for research-based inventions or patent-intensified inventions such as biotechnology and nanotechnology.

They have to allocate a huge amount of money in their annual budget for the purpose of licensing fees or royalty, causing a higher volume of fund outflow from Malaysia compared to the amount of money received. Even if they could financially afford to pay for the charges, there is no guarantee that they have a sufficient amount of technological information to produce their first invention. Their future is still greatly controlled by technology producers. As seen from the Prospect Theory, patentees could and would decide who shall receive which part of the protected technology, how significant or little to give away of the technology and at what price. They could also refuse to license out, but choose to sit on their invention as an alternative. As previously mentioned, this is part of the IP strategy to fend off business competitors or kill their business. Failure to access the protected technology means no technology transfer, hence, this would force them to start over. Technological advancement would occur at a much slower pace than anticipated. The issue to reverse engineering imitate or pirate the original technology is simply out of question under the strong IP protection regime of the WTO and TRIPS. Similar to the stronger IP- patent protection of the TPPA, the pace for technology transfer would be further constricted, forcing the public and any interested parties to start over.

The patent moratorium of 20 years serves as a solution to the stalemate between the need to disclose and in enabling patentees to continuously enjoy the technology and profits advantage without the risk of losing economic value in their patented inventions. The public could have free access to the technological information after the expiry of the patent protection. By agreeing to literally adopt a gold standard IP-patent protection of the TPPA, the tenure would and could be lengthened to between 25 and 28 years. When patents on medications are extended as proposed by the TPPA, pharmaceutical companies would be able to claim additional patents on medications where they discover an alternative use for them, or make a minor modification. This would apply even if the modification were clinically insignificant. It would effectively mean the original product would be withheld from the generic market, even though its patent had expired.

If care is not properly exercised, the above could lead to the ever-greening of patents in the pharmaceutical industry. The four certification processes shown above could be used as delaying or fending-off tactics. By agreeing to adopt the four certification processes, the Malaysian government must take the responsibility to check whether new pharmaceuticals are safe for public consumption. The relevant agency must investigate whether the drugs in question have patents on them. This "patent linkage" exercise could delay the approval of generics, even though drug patenting has nothing to do with drug safety. All in all, large-scale pharmaceutical companies would be able to prevent local generic manufacturers from using original safety testing data for a longer period. Consequently, this would lead to the postponement of registration for generic medicines. By the same accord, the process for R&D and innovation in generic medicine would be slowed as well. With a longer duration of protection, the rate of obsolete-dation of technological information becomes very crucial for certain industries and sectors such as IT, biotechnology and nanotechnology. The technological advancement for these areas is usually very fast. It is meaningless to freely share or give away obsolete technological information.

## ■ 6.0 MOVING FORWARD

The TPPA is inevitable, and is here to stay. The TPPA shall indeed continue to extend its reach and influence. In most probability, the TPPA would take unprepared countries by surprise, and, in the process, isolate those who oppose from trade privileges accorded by the agreement. Rather than complaining about the TPPA, it is better for all parties and stakeholders involved to get started and do the necessary. The TPPA has thrown a new challenge for Malaysia in general, and for local players specifically.

Admittedly, a strong or even stronger IP-patent protection would be a disadvantage to Malaysia. The country needs to change tactics and start to be more proactive in order to reduce the brunt of the TPPA, and decrease any undesirable long term impact. Better still, they could finally eradicate the same by turning the table. For a start, local players need to view the TPPA in a more positive manner, and should regard it as the catalyst in changing their business model or run business. They have no choice anyway. For instance, they must intensively integrate science and technology or standards in their R&D. Otherwise, their products or services may be less preferable to the locals, or worse, unable to penetrate the international market as desired. They must start somewhere, either on individual capacity or with someone locally or abroad, as soon as possible. Otherwise, they shall remain as technology users and subject to requirements of technology producers. The desires of becoming and joining the technology producers' bandwagon remains a dream.

Licensing fees and royalty are not the only option of accessibility to protected technology. Other options are available, such as offsets, joint-ventures, assignments, buy over or compulsory licensing. In the situation of national emergency or extreme urgency, they can use the option of Article 30 in asking the government to issue a compulsory license. By doing so, patentees will have to reveal, share and transfer the technology locally. The same provision also permits the local manufacture of a patented product to use "Rights of Government" to import a patented product from a different source at a lower price, and in turn cheaper know-how of technology and knowledge transfer. Local players cannot afford to be less concerned in protecting their IP rights, or respecting the IP rights of others. Such an attitude in both instances would cause them to lose rather than gain money from their IP rights.

Malaysia could still avoid the ever-greening of patents phenomenon, a side effect of any attempt to prolong and extend the patent duration. This is important in promoting R&D activities, easy access to technological information, growth of the local pharmaceutical industry as well as the protection of public's interest, welfare and well-being. As practised globally, the government could impose the pharmaceutical test data at any time within the patent term, and not near the patent expiry. The so called "access window" practise could still meet TPPA expectations in granting the pharmaceutical test data protection, and whenever applicable, avoids prolonging the patent duration and resolves the obsolete-dation issue discussed above. In any worse case scenario, Malaysia could insert and insist to exercise the rights of Articles 3, 7 and 8 of the TRIPS and Doha Declaration. The flexibilities of these Articles allow Malaysia to engage in measures to protect public health, and, in particular, to promote access to medicine for all.

The TPPA may not be as threatening as perceived. In between ratification, signing and implementation of the TPPA, Malaysia has a small window to make full preparation. Policy and decision makers could use the opportunity to review, update, amend or introduce new make policy documents or policy strategies and action plans to accommodate the changes brought by the TPPA. After all, the fluidity of technology, international trade, current trends at an international level and societal needs may affect patent law policies, consequently demanding adjustment from time to time. The same is vital in making the patent law competitive in encouraging and seeding innovations and attracting domestic and foreign investors.

## ■ REFERENCES


Afifi, F. (1993). Unifying international patent protection: The world intellectual property organization must coordinate regional patent system. *15 Loyola of Los Angeles International & Comparative Law Journal 453-481*.

Arup, C. (1993). *Innovation, policy and law (Australia & the international high technology economy)*, Cambridge University Press, London.

Audrey, J.M. (1985). Chapter 1. A justification of the patent system. *ed*. Phillips, Jeremy. *Patent in perspective.* Oxford: ESC publishing limited, 1985, pp. 1-9.

August, R. (1998) *International business law*, Prentice Hall, New Jersey.

Article 3, 7, 8, 29, 31 of TRIPS

BBC news, (2015). www.bbcnews/worldnews/finance/05102015.exc.

Clarkson, H.M.V & Hill, J., (1997) *Jeffrey on conflicts of laws*, Butterworth, London

Eisenberg, R. (2001). Chapter 9. Bargaining over the transfer of proprietary research tools: is this market falling or emerging. *In:* ed. Dreyfuss, Rochelle Cooperand , Zimmermann, Diane Leenheer and First, Harry. *Expanding the boundaries of intellectual property*. Oxford: Oxford University press, 2001, pp. 223 – 250

Hansard Report 2016 of Malaysian Parliament ( report no 227/2016)

Hatch-Waxman Act 1984 (Drug Price Competition and Patent Term Restoration Act 1984- Public Law 98-417)

Hookway, James; Brereton-Fukui, Natasha (28 June 2013). *"Trade Is Also Key to Influence in East Asia". Wall Street Journal. Retrieved 14 May 2015.*

HSBC Small Business Confidence Monitor Survey 2014(HSBC, 2014) commissioned by US Trade Chambers, www.ustr.gov. Retrieved 26th August 2015

Kitch, E. (1997). The nature and function of the patent system, *20 Journal of Law & Economy 256-294*

Kieft, S. (2014). Chapter Four. The economics of patent law and policy in *Patent Law and The*ory, edited by Toshiko Takenaka, Edward Elgar Publishing, New Jersey, pg 56-78.

Kilbride, H. (2015). Global Intellectual Property Center (GIPC) of US Chamber of Commerce, 2015, TPPA and way forward for Malaysia. The Sun 8th Oct, 2015. Page 22.

Kruger, M. (2001). Harmonizing TRIPS and the CBD: A proposal from India. *10 Minnesota Journal of World Trade 169-204*

Lichtman, D. G. (1997), 'The Economics of Innovation: Protecting Unpatentable Goods', 81 *Minnesota Law Review*, 693-734

Nor Ashikin Mohamed Yusof (2007). Biotechnological patents in developing countries in the post-TRIPS era. University of Nottingham, etheses.www.notingham.ac.edu

US Trade Chambers, 2008 "Round 7: Lima, Peru" *Office of the United States Trade Representative. www.ustr.gov. Retrieved 28 June 2015.*

US Trade Chambers (2013) *"Round 18: Kota Kinabalu, Malaysia". Office of the United States Trade Representative. www.ustr.gov. Retrieved 28 June 2015.*

US Trade Chambers (2012) *"U.S. Trade Representative Kirk Welcomes Canada as a New Trans-Pacific Partnership Negotiating Partner". www. ustr.gov. 19 June 2012. Retrieved 22 January 2014.*

US Trade Chamber, (2013) *"Round 13: San Diego". Office of the United States Trade Representative.* www.ustr. gov *Retrieved 28 June 2015.*

Sabatelli, A. (1995). Impediments to global patent law harmonization. *22 Northern Kentucky Law Review 579-585*

*Schott, Jeffrey; Kotschwar, Barbara; Muir, Julia (2013). Understanding the Trans-Pacific Partnership. Peterson Institute for International Economics. pp. 17–18. ISBN 978-0-88132-672-7.*

Sections 11, 12, 13, 28 of Patent Act 1983

SMEDEC Report on ease of Licensing In Malaysia for SMEs 2012, unpublished

Stiglitz, J. E.(a) *(15 March 2014). "On the Wrong Side of Globalization". The New York Times. www.newyorktimes.usa. Retrieved 17 March 2014.*

Stiglitz, J. E (b) (1998).*Globalization and its discontent*. New York. Pearson Publication

Vaitsos, C. (1972). "Patents Revisited: Their function in developing countries", *Journal of Development Studies*, 1972, Vol. 9, no.1. p. 17-34

Wikileaks *"The US and the TPP". USTR. November 2011. www.ustc. gov Retrieved 5 December 2012.*

World Bank Annual Report 2014, www.worldbank/report2014/dev.cty. Retrieved 10th Oct 2015

World Trade Organization Report 1998; On Formation and establishment of WTO. www.wto.org/docs