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# On the Establishment of Patent Infringement Offense: A Perspective on the Expansion of Patent Rights

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**Abstract**

The advancement of science and technology has spurned an expansion in patent entitlements, particularly evident in the extension of the object, content, and term of these rights. Currently, the world's criminal legislation is in the trend of criminalization, the expansion of patent rights further promotes the criminalization of patent protection and is embodied in the change process of the patent legal system. To comply with the trend of criminalization of patent protection, it is necessary to establish the offense of patent infringement. This is not only an effective way for criminal law to play its role as the ultimate safeguard, but also an important system for encouraging market competition and promoting economic development.

**Keywords:** Patent Infringement, Patent Rights, Expansion, Criminalization

## Introduction

The primary purpose of the patent system is to foster creativity and facilitate technical advancement. The safeguarding of patent rights is a fundamental aspect of achieving the objectives of the patent system, and it is imperative to underscore and enhance this role (Chien, 2015). However, at present, both China and Pakistan have decriminalized patent infringement, resulting in more group infringement and repeated infringement in the patent field, which is difficult to be effectively curbed. Whether to criminalize patent infringement has been a controversial issue. In the author's view, the discussion of this issue cannot ignore an important object of study - patent rights, which is the object of patent infringement.

With the continuous breakthrough of human society in scientific and technological research, modern biotechnology, information technology, and microelectronics have become three major fields of science and technology affecting the development of modern economy and civilization (Moiseev & Frolov, 1985). The creation and development of these high and new technologies have also

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gradually broken through the original legal order, posing a serious challenge to the traditional intellectual property rights legal system. In the field of patents, scientific and technological progress has led to the inclusion of more biological patents, gene patents, and even business method patents in the scope of patent protection. This has resulted in an unprecedented expansion of the coverage of patent rights. What impact will this expansion of patent rights have on criminal protection? The author will take this as a perspective and conduct an in-depth study on the necessity of adding the offense of patent infringement.

**Trends of Expansion of Patent Rights**

With the help of the historical research method and comparative research method, we respectively sperspective andzed, and summarized the evolution of the object of patent rights, the content of patent rights, and the term of patent rights in legal practice under the international perspective, and came up with the three manifestations of the tendency of the expansion of patent right, i.e., the expansion of the object of patent right, the expansion of the content of patent right and the expansion of the term of patent right.

**A. Expansion of the Object of Patent Rights**

First, the definition of patent rights object is open-ended and new elements can be added continuously. The history of the object system of property rights tells us that property law should be an open institutional system (Zhang, 2010). A patent right is a property right with a wide scope. Patents may be granted for any inventions, whether products or processes, in all fields of technology, according to Article 27 of the TRIPS Agreement. Whenever science and technology take a step forward and open up new fields of technology, the inventions in these fields will automatically become the content under the meaning of the object of the patent, thus continuing to enrich the scope of the object of the patent without stopping. For example, in the U.S., the subject matter of patent rights has gradually expanded from the earliest traditional inventions such as arts, manufactures, engines, machines, and devices to include designs and plant varieties. Japan has expanded the earliest patentable objects from product inventions such as “machines, devices, textiles, and weapons” to cover method inventions, and since the Patent Law of 1959 set five exclusions for patentable objects, it has been amended several times, and now only retains the requirement of public order and morality. Korea is similar to Japan in that the five exclusions for patentable objects in the Patent Act of 1961 have been gradually deleted, leaving only the requirement of public order and morals.

Secondly, modern science and technology have led to many inventions in emerging fields. Biotechnology, information technology, network technology, and other high-tech rapid development, with the birth of many unprecedented inventions (Ren & Zhai, 2013). They need the protection and incentives of the patent system, which has led to the enrichment of the types of objects for which patents can be granted.

Again, some of the excluded inventions usually represent a very small part of the field of technology to which they belong. For example, although the 2016 Implementing Regulations to the Convention on the Grant of European Patents explicitly excludes inventions such as "processes for cloning human beings" and "processes for modifying the germ line genetic identity of human beings", these excluded inventions are only a very small part of the technical branch of the field of bioengineering, far less than the number of inventions brought about by the development of the technical field. Moreover, since the 1963 Strasbourg Convention, the exclusion of "not contrary to public order or morality" has been consistent throughout many international norms, including TRIPS, and the excluded inventions are contrary to human or animal ethics and violate the good morals of the society, so they should have been included in the list of opposed inventions.

In short, the high-tech development continues to develop and enrich the patent object, so that the scope of the patent object shows the trend of expansion.

**B. Expansion of the Content of Patent Rights**

Before TRIPS, few international treaties defined the content of patent rights, which were typically recognized by domestic laws of member states, such as the 1973 European Patent Convention. After Article 28 of TRIPS defines the content of patent rights, successive regional multilateral and bilateral treaties have been added to the text, which include relevant provisions defining the content of patent rights. For example, the text of NAFTA at the end of 1993. The Eurasian Patent Convention and its Implementing Regulations of 1994, the EU Design Protection Regulation of 2002, and other regional multilateral treaties, as well as bilateral agreements such as the China-Korea Free Trade Agreement, the US-Australia Free Trade Agreement, the Japan-Sweden Free Trade Agreement, the Japan-Thailand Free Trade Agreement and others. TRIPS has established the standard for patent rights content, and subsequent regional, multilateral, and bilateral treaties have generally adopted or expanded upon it, with a consistent trend of growth. For instance, the Bangui Agreement introduced exclusivity for 'storage', the Eurasian Patent Convention introduced exclusivity for 'marketing', and the Japan-Sweden Free Trade Agreement introduced exclusivity for 'export', among others.

At the level of domestic law, the United Kingdom's Patents Act 1977 began to clarify the content of the patent right. It involves the exclusive right to make, sell, offer for sale, use, import, and store, and includes the limitations on indirect infringement, that are still in use today.

The U.S. Patent Act of 1790 has set forth the right to a patent as the freedom to make, construct, use, or sell for use by others, the Patent Act of 1952 extended the right to design and plant patents and included the power to prohibit indirect infringement, and the Patent Act of 2017 further added the right to exclusivity of a "offering for sale".

The German Patent Act of 1877 defines the content of patent rights as the exclusive right to manufacture, place on the market, offer for sale and use, and the Patent Act of 1994 adds the exclusive right to "import" and "store", and adds the right to prohibit indirect infringement.

The patent right is the exclusive right to sell, according to Japan's 1871 Patent Law. This was extended to include the exclusive right to manufacture, use, and sell by the 1888 Patent Ordinance. The 1899 Patent Law added the exclusive right to "place on the market". The 1959 Patent Law deleted the "place on the market", added the exclusive right to "rent", "display", and "import", and extended it to prohibit indirect infringement. The 2016 Patent Law added the exclusive right to "export", categorized the "renting" as "transferring, etc.", and "displaying" as "promising", and greatly expanded the prohibited acts of indirect infringement (Shiroyama, 2018).

Korea's Patent Act of 1961 defines the content of patent rights as the exclusive right to manufacture, use, sell, and distribute. The Patent Act of 1973 adds the exclusive right to "import" and extends the prohibition of indirect infringement. The Patent Act of 1990 adds the exclusive right to "rent" and "display". The Patent Acts of 1995 and 2017 add the exclusive right to "offer for sale" and extend the circumstances of indirect infringement accordingly.

Therefore, the trend of expansion of the content of patent rights has been reflected in the development of international law and domestic law. As a result of the demonstration effect brought by TRIPS, the content of patent rights in most of the current treaties and domestic laws is comparable to it, and to a certain extent, still shows an expansion trend.

### C. Expansion of the Term of Patent Rights

An inclination to prolong the duration of patent rights' protection has existed throughout the patent system's evolution. For example, in the United Kingdom, the term of patent rights has been set at 14 years since the Monopolies Act of 1623, extended to 16 years by the Patents Act of 1949, and further extended to 20 years

by the Patents Act of 1977. In the United States, the term of patent rights has been 14 years since the Patent Act of 1790, extended to 17 years by the Patent Act of 1952, and extended to 20 years by the Patent Act of 1994. In Germany, the term of patent rights has been 15 years since the Patent Law of 1877, extended to 18 years by the Patent Law of 1936, and extended to 20 years by the Patent Law of 1994 (Nard, 2019). In Japan, the term of patent rights is 15 years since the 1871 Patent Law, which was extended to 20 years by the 1959 Patent Law (Röhl, 2005). In Korea, the term of patent rights has been 15 years since the Patent Act of 1961 and extended to 20 years in the Patent Act of 1990 (Kim, 2012).

Not only that, but some specific types of patent terms have also been further extended. For example, in 1987, the United States introduced the Patent Term Extension (PTE) system for pharmaceutical patents in the Hatch-Waxman Act. Japan and South Korea established PTEs for pharmaceutical and pesticide patents in their patent laws in 1987 and 1990, respectively. The United Kingdom and Germany provided supplementary protection for pharmaceutical patents in 1992 under the provisions of the European Economic Community Parliament No. 1768/92. These regimes can extend the term of patent rights by up to five years.

## Trend of Expansion of Patent Rights Contributes to Criminalization of Patent Protection

### a. World Criminal Legislation is in the Flow of Criminalization

In the 1950s and 1960s, under the influence of the wave of judicial reforms the ideas of individualism and the protection of legal interests at that time, the ideology of decriminalization generally emerged in Europe and the United States (Jescheck, 1981). The public's perception of crime has changed, with elements of understanding and tolerance gradually increasing, and many crimes no longer being equated with evil depravity or moral degeneration. This shift is due to the growing popularity of the concept of a tolerant society with pluralistic values and the empirical evidence provided by advances in natural sciences, such as psychology and psychiatry. The majority of these offenses are moral transgressions based on Christian morality or decency, such as prostitution, gambling, adultery, homosexuality, and other offenses.

For example, the United Kingdom decriminalized indecent assault, suicide, abortion, and same-sex sexual intercourse in 1959, 1961, and 1967. Abortion has been universally permitted in all U.S. states, and homosexuality has been legalized in many states (Bodenheimer, 1987). Moreover, since 1963, many states have legalized one or more types of gambling. Germany's 1975 penal code removed the Offenses of adultery, abortion, dueling, and simple indecency between men. Austria also decriminalized same-sex sexual acts and abortion in its 1975 Penal Code. From

the development of criminal law around the world, it can be seen that many traditional crimes have disappeared from the modern penal code, especially those without direct victims, whose penalties are becoming lighter even if they are still retained in the penal code (You & Xie, 2003). According to Jescheck (1981), decriminalization entered the central field of criminal law and caused significant changes. The theory of decriminalization challenges the practice of enforcing moral standards and excessive criminalization through punishment based on the state's moral beliefs or patriarchal authority. It argues that in a tolerant society where multiple values are accepted, there should be a clear separation between law and morality. Crime and punishment should be justified only when there is concrete harm to an individual's interests, which means that there must be a victim for legal action to be taken (Minoru, 2000). It can be seen that the role of decriminalization lies in correcting this tendency of over-criminalization and delimiting the appropriate circle of crimes in accordance with the modesty of criminal law.

If decriminalization prevailed from the 1950s to the 1970s, after the 1980s, criminalization once again showed clear signs of life (Lu & Liu, 2017). From a worldwide perspective, all countries, in order to adapt to the development of society, are moderately criminalizing, and in some cases even strongly criminalizing, behaviors that endanger society. For example, the United Kingdom created a large number of new crimes in the 1970s through a number of laws, shifting from decriminalization to criminalization (Zhang, 1995). In Germany, the decriminalization trend ended in the first half of the 1970s, and from the second half of the 1970s, there was a clear tendency to enact legislation that could be called "neo-criminalization" (Miyazawa, 1989). It can be seen that after a period of decriminalization in various countries, criminalization gradually took over again. In this regard, Zhang (2008) believes that the scope of decriminalization is limited, only a very small number of "victimless crimes", "they are victims of crime" is no longer dealt with as a crime. In contrast, it is striking that criminal legislation worldwide is at a "high point" (Feng, 2007). As a result, today's criminal law theories are showing a more significant trend of criminalization.

### b. The Expansion of Patent Rights as a Catalyst for Criminalization

Criminalization refers to the legalization of an act that was not originally a crime, making it a crime and the subject of criminal sanctions (Chen, 2000). The criminalization of certain behaviors, also referred to as incrimination, can be impacted by various factors such as time and environment. It is worth noting that actions that were not deemed criminal in the past or were not able to be judged in the past may now be subject to criminal punishment due to advancements in science and technology (You & Xie, 2003). Although the expressions of criminalization

differ, the core of understanding is the same, i.e., criminalization is the inclusion of more behaviors into the circle of crime and making them the object of criminal punishment.

The essence of criminal legislation is criminalization and decriminalization (Fang, 2012). Although appropriate adjustment and improvement of criminal law is the main way to achieve criminalization, criminalization is not limited to criminal legislation. As Liang (2005) points out, the so-called legislative criminalization refers to the provision of substantive crimes as legal crimes through a formal legislative process. The legislative process may be that of criminal legislation, but of course it may also include the legislative process of other laws.

In fact, due to the existence of blank facts about a crime, the determination of their specific constituent elements must be premised on the antecedent judgment of other relevant laws and regulations, making the adjustment of these laws and regulations actually contribute to criminalization. For example, Article 1 of the German Economic Penal Code stipulates that "Anyone who violates one of the following regulations shall be sentenced to up to five years' imprisonment or a fine: 1) Section 18 of the Economic Security Act; 2) Section 26 of the Transportation Security Act; and 3) Section 22 of the Food Security Act. .....". If the number of Offenses stipulated in the relevant articles of the aforementioned "Economic Security Law" and other laws increases, more acts will be included in the circle of Offenses, and the effect of criminalization will be achieved as well. As an additional example, according to Article 196 of the Japanese Patent Law, individuals who violate a patent right may be charged with the crime of patent infringement. However, the definition of 'infringement of a patent right' must be determined in accordance with the relevant provisions of the Patent Law. It is important to consider not only whether a particular method or means falls within the scope of the patent right, but also whether the act's objective is within the scope of the patent right and whether the behavior occurred during the patent term. It should be noted that failure to meet any of these requirements does not necessarily constitute patent infringement. If the Patent Law had broader provisions on the object, content or duration of the patent right, it would also allow more acts to be recognized as crimes because they meet the requirements for patent infringement.

Therefore, based on the above logic, the manifestation of the trend of expansion of patent rights in patent legislation will inevitably also affect the criminalization of patent protection. If the patent law in the patent right object, content or period of time to be expanded, will correspondingly increase the chances of a certain behavior constitutes patent infringement, so that more behavior is included in the criminal circle, to achieve the deterrent effect of criminalization.

In Japan, the 1921 Patent Law stipulates that the patent right encompasses the exclusive rights to manufacture, use, and sell the patented product. Displaying the patented product for sale is not considered patent infringement. However, the 1959 Patent Law expanded the patent right to include the exclusive right to display the product for transfer purposes, making such behavior subject to regulation under the crime of patent infringement (Röhl, 2005).

In Germany, before 1999, manufacturing activities involving plants were not considered patent infringement due to plant inventions not being protected under German patent law. However, after the implementation of the 1999 European Patent Convention Implementation Act, which recognized the patentability of plant inventions not limited to specific varieties, corresponding provisions were added to the German Patent Act. This expansion of patent laws brought these plant-related activities within the scope of patent infringement Offense.

**c. The Reflection of the Criminalization of Patent Protection in Legislation**

An inspection of patent laws reveals a tendency to criminalize patent protection in the legislation of many countries i.e., in the United Kingdom, the Patents, Designs, and Trade Marks Act 1883 established the Offenses of counterfeiting patents and registered designs. The Patents Act 1977 extended the Offense of counterfeiting patents from "the act of selling" to "the act of disposing of the patent for value", thus covering the acts of renting and offering for sale in addition to the act of selling. This expansion demonstrates the criminalization of the offense.

In the United States, the Patent Act of 1952 provides for the Offenses of patent counterfeiting, which applies to general patents, design patents and plant patents. In comparison, the current U.S. Patent Act expands the elements of the Offense of counterfeiting by expanding "manufacture, use or sale" to "manufacture, use, offering for sale or sale in the country, or import into the country", which is derived from the expansion of the content of patent rights under the Patent Act.

In Germany, the Patent Act of 1877 provided for the Offenses of patent infringement and counterfeiting. The Patent Act of 1891 extended the content of patent rights to include products obtained directly from patented methods. The Patent Act of 1994 added the element of "importing or storing the product" to the Offense of patent infringement. These successive expansions of the Offense of patent infringement are therefore a result of the patent rights' expanding content.

In Japan, the Patent Ordinance of 1888 established the Offenses of patent infringement and patent counterfeiting, and the Patent Law of 1921 added the element of "importation or delivery" to the Offense of patent infringement, and the element of "use of false marking in advertisement" to the Offense of patent

counterfeiting, and the Patent Law of 2008 included indirect patent infringement in the Offense and has continued to promote the criminalization of these two Offenses.

In Korea, the Patent Act of 1961 provided for the Offenses of patent infringement and counterfeiting, and the Patent Act of 1990 expanded the scope of the Offense of patent infringement by adding exclusive rights such as the right to "rent or display" to the content of patent rights.

The above criminalization of patent protection is mainly a result of the adjustment of the relevant criminal provisions to follow the changes in the content of the patent. Even some criminal provisions have been criminalized without any change in the criminal provisions themselves because they directly refer to the patent content provisions.

**Necessity of Establishing the Offense of Patent Infringement**

**1. Consistent with the Trend of Criminalization of Patent Protection**

From the international perspective, criminalization is in the dominant position, and the trend of expansion of patent rights further promotes the criminalization of patent protection, thus adding the Offense of patent infringement is in line with the current trend of criminalization under the trend of expansion of patent rights.

Many developed and developing countries have established the Offense of patent infringement. Among the developed countries, in addition to Germany, Japan and Korea mentioned above, Sweden, Denmark, the Netherlands, France, Italy, Austria, Norway, Luxembourg, Spain and other countries have provided for the Offense of patent infringement in their patent laws, which is punishable by a fine or imprisonment (Bagga, 2016).

Among developing countries, Bulgaria, Greece, Poland, Argentina, Bolivia, Brazil, Chile, Ecuador, Guatemala, Honduras, Paraguay, Peru and Uruguay also established the Offense of patent infringement (Boyle, 1935). For example, Article 183 of the Brazilian Industrial Property Law stipulates that "Any person who produces a product belonging to a patent for invention or utility model or uses a method belonging to a patent for invention without the permission of the patentee commits a crime and is punished by imprisonment from three months to one year or by a fine." In Asia, patent infringement Offenses are also found in the Patent Act of Thailand and the Patent Act of the Philippines.

**2. Patent Rights Need the Ultimate Protection of Criminal Law**

Zheng (1997) believes that the infringement of patent rights will not serve to deceive the public, but merely damage the interests of the right holder, as the criminal punishment representing public power held by the state is not appropriate to intervene in such private disputes. The author believes that this view is open to question.

Firstly, it is worth noting that despite TRIPS stating in its preamble that intellectual property rights are private rights, acts that are detrimental to the interests of right holders are not exempt from criminal law protection. Although patent infringement is primarily a private rights and interest's issue, it is important to note that TRIPS does not require member states to deny criminal protection for such infringement. Copyright and patent are both types of intellectual property rights and are considered private rights. While copyright infringement offers the public the same textual content and is more readily accepted by the public due to its lower cost, it does not appear to directly harm society. However, TRIPS Article 61 mandates that member states—including those with common law—define the criminal processes and sanctions for instances of piracy.

Second, patent infringement is not free from harm to the public interest. To examine the harm of patent infringement to the public interest, we cannot only make a superficial article, but should look at the essence through the phenomenon, and analyze the problem with a historical, objective and comprehensive perspective. Patent is the main production factors in the era of knowledge economy and the necessary tools to obtain competitive advantage, if patent infringement cannot be effectively punished, not only will hit a country's domestic enterprise innovation enthusiasm, but also let the foreign core technology does not dare to enter the country, and ultimately may make the country to stay in the low-tech, low value-added work in the "assembly plant" stage. The proliferation of patent infringement will make the enthusiasm for invention and creation seriously damaged, thus negatively affecting the socio-economic and scientific and technological development, therefore, it is very necessary to make the particularly serious patent infringement into a crime and to give criminal penalties. Furthermore, patent rights are an essential part of the patent system. Patent infringement can jeopardize a right holder's legitimate rights and interests, as well as the regular operation of the patent system and the national patent management order. It can also have a negative impact on a country's legal system, which can lead to international disputes and ultimately harm the nation's overall interests, the public's interests, and long-term goals (Jaffe & Lerner, 2011).

Thirdly, although patent rights have been partially protected by criminal law, it is not comprehensive enough. In patent rights, the exclusive right to enforce the patent is a substantive right, while the patentee's right to mark the patent mark, etc. is only a formal right. The criminal law only provides for the Offense of patent counterfeiting without the Offense of patent infringement, which in fact only protects the form of patent right without protecting the essence of patent right, and it can be said to be away from the root of the problem. If only to adopt the "fill in the blank principle" of civil damages to deal with patent infringement, will not be

able to produce an effective deterrent effect, resulting in repeated patent infringement, it is difficult to maintain a good market competition environment, the purpose of the patent system cannot be realized. Therefore, the setting of criminal law is not only to punish the crime, the most important thing is to make the infringed patentee's interests to get the legal relief, to prevent the infringement of the rights and interests of the patentee's unlawful acts (Xie & Tian, 2004). In addition, if the harm to private rights is so serious, it is necessary to resort to criminalization measures in order to restrain the occurrence of anti-social behavior (Minoru, 2000). Indeed, Zheng (2004) agrees that, for private rights to be fully protected, public rights cannot be completely unmediated.

Because of this, even though a patent is a private right, violating one affects not only the patent holder but also the market economy, scientific and technological advancement, and public interests. Therefore, when a patent infringement is serious enough that civil remedies are ineffective, it becomes necessary to join the criminal sanction of the harshest kind of legal sanctions in order to provide the best possible protection for the public, which is not against the criminal law of modesty.

### 3. An Important System for Encouraging Competition in the Marketplace

Hart et al. (2013) have argued that the monopolistic character of IPRs and the freedom sought by market competition are in conflict with each other, creating an inherent tension between IPRs and market competition. However, patent rights and market competition are not naturally opposed to each other. Enterprises utilize patent rights to obtain competitive advantage, and fierce market competition prompts enterprises to seek newer and more patent rights. From this point of view, there is also a harmonious symbiotic relationship between them, which is mutually complementary and promotes each other. Imagine, if there is no patent to protect the technological advantages of enterprises, resulting in the proliferation of plagiarism phenomenon, the serious homogenization of goods, the market competition strategy based on price competition, which will ultimately lead to low profits of commodities, the enterprise both sides lose, rather than make the market competition into a depressed state. Although the patent right is a monopoly right, it protects the legitimate rights and interests of the right holder, prevents others from plagiarizing the implementation of the patented technical achievements by means of unfair competition, and substantially maintains the fair competition in the market.

For example, Netac Technology Co., Ltd was established in China with a registered capital of only RMB 150,000 yuan in that year, but through the good use of flash disk patents, the company created a sales miracle of RMB 250 million yuan in only three years and sniped the siege of large multinational IT companies, such

as Sony, Kingston, Sandisk, etc., with patent infringement lawsuits. Therefore, in the Atari Games case, the U.S. court held that patent rights and antitrust laws are complementary, and both are committed to encouraging innovation, industrialization and competition. The Antitrust Guidelines for Intellectual Property Licensing, as published by the U.S. Department of Justice and the Federal Trade Commission, highlight the common objective of promoting innovation and advancing consumer welfare through the intersection of intellectual property and antitrust laws.

At the same time, intellectual property is an important tool for economic development and wealth creation that has yet to be fully utilized in all countries, especially in developing countries. Economists have attempted to explain the reasons why some economies grow faster than others or why some countries are wealthier than others. It is generally agreed that knowledge and innovation have played a significant role in recent economic growth. Paul Romer, the chief economist of the World Bank, has highlighted the importance of knowledge accumulation in driving economic growth. To foster economic growth, it is recommended that countries invest in research and development (R&D) and allocate resources towards programs aimed at developing human capital. It can be argued that intellectual property rights have a significant impact on a country's economic growth and market prosperity. Patents are often considered a centralized form of technological research and development and knowledge innovation.

Since the patent right has a significant impact on market competition and economic development, the law must provide more comprehensive protection to ensure that this goal is realized. This protection must extend beyond civil compensation for resolving minor patent infringement disputes to include the seriousness of the malignant infringement and the use of effective constraints, punishment, and deterrent effects.

## Conclusion

The role of science and technology in global economic competition has become increasingly prominent with the accelerated pace of economic globalization. It is widely recognized that competitive advantage no longer depends solely on resource endowment and labor costs. In fact, scientific and technological innovation has become a decisive factor in international competition, with patented technology at the core of winning. Therefore, it is imperative for most countries to strengthen the protection of patent rights. Sun Yat-sen, the Initiator of China's Democracy, said that “The trend of the world, vast and mighty, prospers those who follow it and perishes those who go against it”. Einstein also believes that “The measure of intelligence is the ability to change”. Only by being good at evaluating the situation

and following the trend can we make the decision-making on major issues more reasonable and in line with the law of development of things.

Therefore, in the process of reforming and improving the system of criminal protection of patent rights, in the face of the question of whether patent infringement is to be criminalized, it is not appropriate to make affirmative or negative conclusions based solely on the words "it is now necessary or unnecessary" or "other countries have or have not"; rather, attention should be paid to the development of patent rights, which is the object of criminal protection, and to the trend of the expansion of patent rights, and its driving force in the criminalization of patent protection. Both China and Pakistan are experiencing rapid advancements in science and technology. Both countries can realistically expect to see current and future economic and social development from the implementation of a relatively high level of patent protection, and the criminalization of patent infringement is a necessary step toward becoming an innovative nation as well as a necessary path toward the development and improvement of the legal system about intellectual property rights.

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