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China's Intellectual Property Rights Commitments in the WTO: Legal and Economic Implications

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This article assesses the compliance of China's domestic laws in the area of intellectual property rights protection with the WTO Agreement on Trade-Related Intellectual Property Rights (TRIPS), which China obliged to accept upon its entrance into the WTO. It also discusses the implications which result from the implementation and enforcement of the intellectual property rights in China for doing business in China. The significance of intellectual property rights protection for achieving the strategic objects formulated by China's policy-makers and China's reputation in the world is tackled, as well. Qualitative research based on the concept of compliance showed that China's compliance with its TRIPS obligation should be evaluated with respect to different country-specific as well as country non-specific factors. However, the experience from the historical development of the leading world inventors, such as Japan or the United Kingdom, should also be considered.

Keywords: China, WTO, Intellectual Property Rights, TRIPS Agreement, State Intellectual Property Office, Dispute Settlement Body, WIPO

I. INTRODUCTION

After the announcement of economic reforms by Deng Xiaoping in the late 1970s, China made massive steps to integrate into the world economy. The state

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monopoly of foreign trade and the policy of autarkic self-reliance were abandoned and foreign trade decisions were decentralized. Special enterprise zones were created as free trade areas.¹ Normalizing China's diplomatic relations during the 1970s with the US, Japan and other developed market oriented countries contributed to lifting its international isolation. In 1971, China was admitted to the UN, and in 1980, regained its membership in the most influential economic and financial organizations, such as the World Bank and the International Monetary Fund ("IMF").² Since the early 1990s, China has increased its global outreach and participation in other international organizations.

As China has risen to a world economic power, its name is spelled in different forums. China has replaced the American and European controlled international financial institutions as the principle lender in Latin America. It is not only the largest investor in African energy and mineral resources, but also the principle market for Saudi Arabian, Sudanese and Iranian petroleum.³ In the first decade of the new millennium, China's rise, together with other emerging developing countries that became known as the BRICS (Brazil, Russia, India, China and South Africa), has changed the architecture of world trade.⁴ China is currently the world's biggest manufacturer and exporter. While in 1973 China's share in the world merchandise exports was only 1 percent, it was 14.2 percent in 2015.⁵ This means that China's share in the world exports increased more than fourteen times during 1973–2015, while the share of the US declined from 12.2 to 9.4 percent during the same period.⁶ In addition, the growing trade surpluses with its main trading partners enable China to achieve the highest reserves of foreign exchange in the world, which reached more than USD 3 trillion in 2016,⁷ holding over USD 1.3 trillion in the US treasury notes.⁸ In particular, Chinese yen (RMB)'s inclusion into the special drawing rights ("SDR") on October 2016 is a milestone in the internationalization of its currency; it is an affirmation of the success of China's economic development.⁹ Since China has recorded economic success in many areas, it has become the subject of frequent academic discussions. Today, many authors are analyzing the impact of China's economic growth and its WTO membership on other countries around the world.¹⁰

China's changing role in world trade is not expressed only by its growing market share, but also the structure of its exports. The reform measures carried out by China's authorities during the 1980s and the 1990s, followed by the open-door

policy, attracted investors from the US and other developed countries, who moved their production to China, including new technology and technical measures. In response to this challenge, China recorded success in the production and export of high-tech products. While the US and Japan recorded a decline of their market share in high-tech products during 1994-2007, China significantly increased it reaching 21.2 percent in 2007.¹¹ In 2015, China's high-technology export has already reached USD 554.3 billion, which accounted for 25.8 percent of the world market share.¹² However, data about high-tech exports have to be considered carefully because China is included into multinational production chains, in which production and sales are distributed among several countries around the world.

China became the 143rd Member State of the World Trade Organization ("WTO") on December 11, 2001 after 15 years of bilateral and multilateral negotiations.¹³ When China entered the WTO, it would obviously have to accept not only the general rules of the multilateral trade system, but also specific commitments in order to liberalize its trade regime and to provide easier access to its internal market for suppliers from other WTO members. Although China has now been a member of the WTO for more than 15 years and recorded significant progress in trade liberalization, the protection of intellectual property rights ("IPRs") in China has been the subject of serious discussion and doubts all the time. Did China implement the WTO's commitments into its laws? Why should China accept its WTO's commitments? What role does intellectual property protection play in the current Chinese economy? What implications does it have on the private sector in China? What implications does it have on investors and patent-holders from the other WTO members? Especially, these questions open the door for interesting discussion.

The article will begin by determining the IPRs issue in the frame of the WTO agreements and the complex of the multilateral trade rules. A mechanism for solving trade disputes among the WTO members is also introduced. The article will then focus on China's commitments in the area of IPRs and explores if China implemented its commitments into its laws. It will discuss different factors and conditions that have an impact on the fulfilment of China's commitments in the WTO in the area of IPRs including the enforcement of law on the state and local level. This means that the implementation of IPR's commitments into China's law as well as the effective enforcement of law is an important assumption for

achieving positive results and the protection of innovators and patent-holders. The article will mention not only the progress, but also current issues concerning the protection of IPRs that have remained in China all the time. The article will tackle these issues in a complex of China's membership in the WTO, including the WTO dispute settlement system. Finally, it will consider the economic implications of IPRs (both residents and non-residents from the other WTO Member States) in China and the significance of IPR protection for the Chinese government.

II. INTELLECTUAL PROPERTY RIGHTS: FROM GATT TO WTO

Although the value of international trade in intellectual property (“IP”) is not statistically recorded, “intellectual property is information with a commercial value.”¹⁴ The owners of inventions, designs or other creations have a right to negotiate payment in return for others using them. In contrast to goods, the stock of this knowledge does not diminish with its consumption and the marginal cost of disseminating them is often zero.¹⁵ However, IP, especially the development of technological innovations, usually requires considerable investments and thus cost. The IPRs has special significance when developed countries would recognize that rapidly emerging economies, such as BRICS, are able to compete with them in many industrial areas. Although trade in counterfeit goods has been a problem for a long time, as technologies for duplication became more advanced and the reproduction of IP easier and cheaper, trade in goods embodying stolen IP became a more serious issue.¹⁶

A. The First Steps in the Global IPRs Protection

Before founding the WTO, several international conventions laid down standards for the protection of IP. The most important are the Paris Convention (on copyright), the Rome Convention (on neighbouring rights), and the Treaty on Intellectual Property in Respect of Integrated Circuits. These and many others conventions are administered by the World Intellectual Property Organization (“WIPO”). However, the WIPO was regarded as ineffective in enforcing the various treaties and the international conventions were not able to meet the

increasing needs of business communities that arose in the trade area.¹⁷ Unilateral measures for ensuring the IP protection enacted by the individual countries on the basis of national legislative, could not substitute those accepted on the multilateral level, either. Thus, multilateral trade rules started to be developed through the General Agreement on Tariffs and Trade (“GATT”) in the late 1940s, but the provisions and work related to IP were also limited.

In practice, strengthening the IP protection was not a priority for all countries. While the OECD countries called for multilateral rules and the enforcement of IPRs, many developing countries argued that the adoption of the OECD levels of IP protection would be detrimental to the welfare of their population and the development of their economy.¹⁸ Another concern of most developing countries was that a greater protection of IPRs would strengthen the monopoly power of multinational companies, thereby detrimentally affecting the poor population by raising the price of medicines and food.¹⁹ On the other hand, newly industrializing countries especially in Asia, dependent on the transfer of technology from developed countries, realized that inward foreign direct investments (“FDI”) would be conditioned by greater IP protection. That is why the IP issue was negotiated for several years during the GATT rounds of negotiations whose big part was to find the solution required to accept trade-offs from all countries (or, in other words, a trade-off between IPRs and the rest of the agenda). However, in contrast to other agenda, the negotiations about IPRs were not about freeing trade, but about more protection. At the end of the Uruguay Round in 1994, the contracting parties of the GATT 1947 signed an agreement establishing the WTO in which the Trade Related Aspects of Intellectual Property Rights (“TRIPS”) became one of the three pillar agreements with GATT 1994 and the GATS.²⁰ Although the TRIPS Agreement allowed some exceptions on non-discrimination with respect to the number of international conventions in specific circumstances, it is possible to consider achieving trade-off in this area as the reason behind the success of the multilateral trade system.²¹ However, Stiglitz argues that TRIPS should never have been part of the WTO, because it separates the developing and developed countries and has made it more difficult to close the gap between these two types of countries. He also maintains that it provides little protection for the IP of developing countries.²² Thus, finding the right balance between the interests of innovators (a lobby of patent-holders) and a wider public interest (a lobby of poor

countries) sometimes puts national governments into a difficult position, in which they have to make a decision following some compromises.

B. IPRs Protection under the WTO

The TRIPS Agreement defines IPRs as “the rights given to persons over the creations of their minds,” and it distinguishes (1) copyright and related rights, (2) trademarks, (3) geographical indications, (4) industrial designs, (5) patents, (6) layout designs (topographies) of integrated circuits, and (7) protection of undisclosed information.²³ In contrast to the previous international conventions, the TRIPS Agreement establishes the minimum standards of protection for the above mentioned seven areas; sets minimum standards for the enforcement of IPRs in administrative and civil actions; makes the general dispute settlement mechanism of the WTO available to address TRIPS related issues; and extends basic GATT principles such as transparency, national treatment and most favoured nation (“MFN”) to IPRs.²⁴ On the one hand, the TRIPS Agreement sets the minimal standards of protection, while, on the other hand, problems arise in context with the implementation of the commitment. Article 1 of the TRIPS Agreement provides: “... Members shall be free to determine the appropriate method of implementing the provisions of this Agreement within their own legal system and practice.”²⁵ The WTO members are obliged to provide procedures and remedies under their domestic law for the effective enforcement of IPRs of right-holders on the principle of national treatment, which means to apply the IPRs rules in the same way for domestic as well as foreign subjects.

Since 2001, the negotiations about IPR have continued in the frame of the Doha Development Round (“DDR”). They brought other changes in the TRIPS Agreement,²⁶ which has currently resulted in two added amendments into the TRIPS Agreement. New amendments of the TRIPS Agreement, inserted into the new Article 31 *bis* of the Agreement as well as the Annex and Appendix, provide the legal basis for the WTO members to grant special compulsory licences exclusively for the production and export of affordable generic medicines to other members that cannot domestically produce the needed medicines in sufficient quantities for their patients.²⁷ Besides public health, another task for the DDR is geographical indications and its registration system. In this area, the negotiations have continued all the time through the WTO TRIPS Council that is charged

with leading negotiations about all IPR issues. However, globalization and technological changes would bring new challenges for the TRIPS Agreement. For example, the rise of electronic commerce directed at the general consumer also raised issues for the protection of distinctive signs such as trademarks and geographical indications. Another concern is connected with the rise of trade in digital products.²⁸

Although the Council for TRIPS is responsible for administering the TRIPS Agreement, it does not have any power to impose sanctions for non-compliance. Thus, the non-complying members can be sanctioned only through the WTO dispute settlement mechanism.²⁹ The Understanding on Rules and Procedures Governing the Settlement of Disputes (“DSU”) is a legal base for the WTO dispute settlement mechanism.³⁰ It sets working procedures and a proposed timetable for panel work. From this aspect, the DSU mechanism is “one of the main achievements of the Uruguay Round, primarily because it ended the reliance of dispute settlement on the consensus principle that had led to the frequent non-adoption of decisions.”³¹ Currently, when a respondent country in the dispute is its ‘loser,’ it must adopt the decision of the WTO panel or Appellate Body. Otherwise, compensation and the suspension of concessions are applied in compliance with Article 22 of the DSU.

III. CHINA’S IPRs UNDER THE WTO: COMMITMENTS AND COMPLIANCE

When China acceded to the WTO in 2001, it had already participated in the TRIPS negotiations during the Uruguay Round and had initialled the Final Act. In addition, China has already been a WIPO member since 1980. In the 1990s, China also signed different IPR conventions, such as the Madrid Agreement concerning the International Registration of Marks (1989), the Berne Convention for the Protection of Literary and Artistic Works (1992), the Universal Copyright Convention (1992), the Patent Cooperation Treaty (1994), the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure (1995), the Locarno Agreement Establishing an International Classification for Industrial Designs (1996), etc.³² The establishment of the

modern Chinese IPRs system was necessitated by the opening up of the Chinese economy in the late 1970s, which needed to attract FDI and fulfil the obligation stipulated in the bilateral agreements between the Chinese government and foreign governments on cooperation in science and technology.³³

During China's accession process to the WTO, the Working Party explored the compliance of China's legal system with the TRIPS Agreement. In addition, during the bilateral negotiations with some WTO members, China agreed to go some way beyond the requirements of the TRIPS Agreement.³⁴ When China joined the WTO in 2001, it required the Chinese government to make changes to hundreds of laws, regulations and other measures affecting trade and investment.³⁵ In order to fulfil the compatibility of China's IPR laws with the TRIPS Agreement, China is especially obliged to:

1. ensure the national and MFN treatment to foreign right holders regarding all IPRs;
2. amend its copyright laws to clarify the payment system by broadcasting organizations which use the recording products and include provisions in rental rights in respect to computer programs and movies, mechanical performance rights, the rights of communication to the public, the protection of database compilations, provisional measures, increasing the legitimate compensation amount and strengthening the measures against infringing activities;
3. amend the trademark law to include a specific provision on the protection of geographical indications;
4. insure the protection of domestic textile design by China's Provisions on the Implementation of the International Copyright Treaty as works of applied art;
5. modify the Patent Law to ensure improvements in the provisions regarding compulsory licensing for patents and the clarification of the subject matter that would be subject to compulsory licensing;
6. ensure effective protection against an unfair commercial use of undisclosed test or other data submitted to authorities in China;
7. ensure that China's legal environment would be able to meet the requirements for enforcing the TRIPS Agreement;
8. adequately compensate the damages paid by the infringer to the right holder;
9. impose sufficient sanctions by administrative authorities to prevent or deter further infringement; and
10. consider the monetary thresholds for bringing a criminal action to be able to address piracy and counterfeiting in order to lead criminal procedure more

effectively.³⁶

China has committed to abide fully by the rules of the TRIPS Agreement from the date of its accession to the WTO.³⁷ No exceptions from the application of the TRIPS Agreement, not even a transitive period for the implementation of obligations, were negotiated among China and the WTO members.

IV. CHINA'S COMPLIANCE WITH THE TRIPS AGREEMENT

A. Theoretical Aspects of Assessing the Compliance

The concept of compliance is frequently used by political scientists in the field of international relations. More than the concept of compliance, however, it should be named "the concept of implementation" with respect to operationalizing compliance.³⁸ The model makes a standard assumption about government behaviour. In general, it is assumed that states are rational and act in their own self-interest, and that they are aware of the impact of international law on behaviour.³⁹ The violation of international law is not without cost. The first type of cost is sanctions, which other states may choose to impose when a given country violates international law, or does not fulfil its contractual obligations. Sanctions can have the form of economic or political measure. However, using sanctions is usually not an optimal solution of this problem. It often leads to escalating tension among countries, because every action causes additional social costs in the form of retaliatory measures or in other words "reciprocity in sanctions." This idea is also expressed in the managerial theory of compliance that rejects sanctions and other forms of 'hard' enforcement in favour of the collective management of (non)-performance.⁴⁰

The second type of cost for violating an international obligation is reputation. If a country violates international law, other states may refuse to enter into future agreements, demand greater concessions when entering into such agreements, or lose faith in the strength of existing agreements.⁴¹ In the WTO, the 'bad' reputation of a Member State is documented by its unfair trade practices, the violation of general WTO principles and rules or the non-fulfilment of specific commitments

that are included in the schedules of goods and services concessions of the individual Member State. All these issues are the subject of the WTO dispute settlement system. The frequency and number of disputes in which a Member State is in the role of respondent shows its good or bad reputation among the other WTO Member States.⁴²

On the whole, a nation would act on the basis of cost and advantage, but its calculation is hardly precise.⁴³ This is also the case of China. As has been said, when China strived to join the WTO, China's authorities had to do many trade-offs during the accession process. Negotiations were led with 133 WTO members on the multilateral level and with 43 WTO Member States on the bilateral level. These countries had different economic interests and were on a different economic level, which also showed their priorities in negotiations. From the perspectives of those who participated in these negotiations, "China promised a great deal of market access, although it gained very little additional access from foreign trading partners in return."⁴⁴ However, China's authorities have always considered issues in the long-term perspective. Thus, the short-term costs connected with China's commitments in the WTO would be compensated by the long-term advantages. China's WTO membership will eventually lead it to shaping the future of world trade.

A critical question is then why countries do not comply with their commitments. It is due to either ambiguity in the treaty language, limitations in capacity to carry out their undertakings, or the magnitude of the social, economic and political changes required to comply.⁴⁵ A comprehensive model of compliance also considers factors that affect the implementation, compliance and effectiveness of international accords. These factors can then be divided into two groups. One includes 'country-specific' factors determined by parameters (such as history and culture, physical size, physical variation, number of neighbours, etc.), fundamental factors (such as economy, political and institutional attitudes and values), and proximate factors (such as administrative capacity, leadership, non-governmental organizations, knowledge and information). The other is 'non-country specific' factors including the characteristics of the field of interest (such as the number of actors, the role of multinational corporations in the given area, the effect of economic subsidies, etc.), the characteristics of the accord (reciprocity or unanimity in accepting obligations, provision for obtaining state

support, monitoring, incentives and sanctions, etc.) and the characteristics of the international environment (such as international non-governmental organizations, other international organizations, international financial institutions, worldwide media, international conferences or forums, etc.).⁴⁶ However, all these factors should be analyzed dynamically, because they have changed during the time.

B. China's Compliance with the TRIPS Agreement

The question how China fulfilled its IPRs commitments in the WTO includes two issues. The first is connected with the implementation of the TRIPS Agreement into China's legislative, while the second is related to the effective enforcement of IP laws in China. In other words, how laws and implementing regulations that are enacted by the Chinese authorities in the area of IPRs are effectively used on the national as well as local level after China's entrance into the WTO.

After the accession of China to the WTO, the Chinese government gradually improved its IP administrative and regulatory system.⁴⁷ The administration of IPRs is carried out the national and local level, through the State Council⁴⁸ and its administrative bodies,⁴⁹ and the local administrative authorities. The state administrative authorities are responsible for examining and granting or registering IPRs, while the local authorities administer and enforce them at the local level. Although the division of competencies on the national and local level looks very clear, it should be kept in mind that China has 1.3 billion people who live in 23 provinces, 5 autonomous regions and 4 municipalities. These administrative bodies are further divided into lower levels. Besides the central government, there are four types of local governments, two types of provincial governments in municipalities and cities and rural area governments.⁵⁰ In the following, the term 'local government' is used to refer to the levels of government other than the central government. The role of local government in economic development is substantive. The Chinese government system is highly centralized in official appointments, while, at the same time, quite decentralized in economic development activities. The central government controls the power over regulation, resource allocation, quotas, and the approval of numerous activities on the central level. However, it relies on the cooperation of local governments in implementing and achieving the set of policy goals. Local governments might also pursue their own goals which are not necessarily in compliance with those

pursued at higher levels. Although there has been no real division of functions, a certain competition would exist between provincial/municipal governments.⁵¹ Thus, China's administrative structure could influence especially the effective enforcement of IP laws in China. Although the Chinese authorities have modified China's IPR laws and regulations to facilitate China's WTO commitments, an effective IPRs enforcement has not been yet achieved.⁵² China's major trading partner identified the main problems as a lack of coordination among the main enforcement agencies, local protectionism and corruption.⁵³ Actually, the more number of state offices is or the stronger the state influence is, the lower the economic effectiveness of a country is. Inefficient bureaucracy and corruption are currently among the five main problematic factors for doing business in China.⁵⁴ The centralised state power and the existence of State-Owned Enterprises in the main sectors of the Chinese economy are another specific factor in the creation of the Chinese model of compliance. The education of customs officers and other bureaucracy on every level is also connected with this issue. Although the administrative capacity in China is sufficient, a lack of sufficiently trained personnel is another problem in China.⁵⁵

In order to improve the IP regulatory system, the Chinese authorities amended IP laws and regulations, as well as departmental rules. These revisions included especially the Patent Law, the Trademark Law, the Copyright Law, new regulations on the protection of computer software, new plant varieties, and layout designs of integrated circuits.⁵⁶ In addition, the Chinese authorities enacted tens of other IP related laws, implementing rules or regulations after China entered into the WTO.⁵⁷ In the area of patents, the key amendment in legislation involved a judicial review of design and utility models.⁵⁸ Another change lay in the issue of parallel imports. Up until 2008, the legislative had not clarified whether parallel imports were allowed, but the revised Patent Law explicitly permitted them in the end.⁵⁹ Other measures, which were introduced in the area of patent protection during the monitored period, included the granting of design patents for graphical user interface products, the improvement of the protection of biological materials through patents, the improvement measures for the patent agency system and the standardization procedures for patent protection enforcement across China. There were also changes in the following areas: (1) trademark protection related to the protection of sound marks and well-known trademarks; (2) the adoption of "a one-

trademark-registered-for-multiple-class” system as a new way of application for registration as well as online electronic applications to facilitate registration; (3) the protection of well-known trademarks; (4) the introduction of the principle of good faith for the registration and use of trademarks; (5) the increase of penalties for trademark infringement; (6) the strengthening of the protection of exclusive trademark rights; and (7) the strengthening of responsibility for trademark infringement of the operator of an Internet trading platform.⁶⁰

Although the IPR laws have been gradually improved by the Chinese authorities after its joining the WTO, some issues have remained unsolved. For example, parallel imports in the case of copyright and trademarks have remained not covered by legislation until now. The Trademark Law provides more detailed guidelines for the identification of well-known trademarks, but it does not set time limits for the identification process.⁶¹ Another issue is the new multiple-class trademark application system. A question may arise whether it is actually beneficial for trademark applicants.⁶² There is a serious uncertainty in relation to the compliance of China's IP laws with the national and MFN rules. The TRIPS Agreement states:

Each Member shall accord to the nationals of other Members treatment no less favourable than that it accords to its own nationals with regard to the protection of intellectual property, ... and also With regard to the protection of intellectual property, any advantage, favour, privilege or immunity granted by a Member to the nationals of any other country shall be accorded immediately and unconditionally to the nationals of all other Members...⁶³

Practice shows that the principle of non-discrimination, laid down in Articles 3 and 4 of the TRIPS Agreement, has been violated during the registration of trademarks. In detail, all applicants are required to register their trademarks with the Trademark Office of the State Administration for Industry and Commerce (“SAIC”). However, foreigners and foreign companies not domiciled in China or without industrial or commercial establishments in China must register their trademarks through an agency qualified to act as an agent by the SAIC,⁶⁴ which can be more costly and less safe for them. If registration with the State Trademark Office is a prerequisite for protection under the Trademark Law, then a different process for the registration of trademarks between Chinese and foreign companies

would raise serious concerns among foreign applicants. Although this issue has already been recorded by the WTO Secretariat earlier⁶⁵ and the improvement of the patent agency system was the subject of the last amendments of the Patent Law in 2008, the registration of trademarks in bad faith has continued all the time. For example, the United State Trade Representatives (“USTR”) states that the US companies across industry sectors continue to face Chinese applicants registering their marks and holding them for ransom or seeking to establish a business building off the American company’s global reputation. These incidents have caused consumer confusion, commercial harm and costly legal proceedings.⁶⁶ Except for the registration of trademarks, the registration of layout-designs is another area in which foreign applicants (non-resident in China) have to register through a patent agency designated by the State Intellectual Property Office (“SIPO”).⁶⁷ Some authors mention that a low transparency of accepted provisions and the effective enforcement of the IPRs law in China also remains unclear.⁶⁸

The enforcement of IPRs in China is carried out by a large number of responsible authorities, which enact administrative or judicial measures. Administrative actions consist of mediation by the authorities, while judicial actions, whether civil or criminal, are taken through the public security authorities, procuratorial organs and the courts. The administrative authority can impose fines on the infringing party or confiscate or destroy the infringing goods or copies, materials, tools or devices used mainly for the infringement. If mediation does not bring satisfactory results, the administrative authority may refer the case to the people’s court. The people’s courts can impose monetary fines based on either the value or volume of the counterfeited goods or both. Criminal prosecutions may be also taken in certain cases in accordance with the Criminal Law.⁶⁹ Although the Chinese authorities have adequate instruments to fight against IPR infringement and all public security authorities above the prefecture and city levels cooperate to fight against IPRs crime activities, China’s main trading partner regarded an inadequate deterrence provided by the system of administrative, civil, and criminal penalties as one of the main problems.⁷⁰ In order to intensify the enforcement of IPRs, the Chinese authorities revised the Patent Law in 2008, by which penalties including the patent owner’s expenditure in protecting patents and fines, as well as legal compensation, have increased. However, statistics confirm that, the number of patent disputes has increased during the past years in spite of higher financial

sanctions.⁷¹

The Customs, which check consignments at the border, are another important body in the enforcement of IPRs in China, which borders with 14 other countries. Although the TRIPS Agreement does not oblige China to apply border measures in cases of exporting counterfeit trademark or copyright goods, China has paid special attention to the IP protection of exports and cooperates in this area with the US, the EU and other WTO members in order to strengthen the enforcement of regulations on counterfeit and pirated exports. The Customs carry out their activities under the revised Regulations on Customs Protection of Intellectual Property, which entered into effect on April 1, 2010. However, trading partners still urge China to step up its efforts in enforcing IPRs protection, including a greater and more effective customs control and criminal prosecution.⁷² Responding to this requirement, customs offices in China have launched several special campaigns to crack down on IPR-infringing activities and the production and sale of counterfeit goods.

In order to improve the administrative enforcement, the Chinese authorities have launched a series of campaigns for public awareness of IPRs protection. Since 2006, the SIPO has been publishing annual Action Plans on IPRs protection and offering a Chinese-English bilingual IPRs protection government web portal.⁷³ In 2011, the Chinese authorities founded the National Leading Group on the Fight against IPRs Infringement and Counterfeiting chaired by the Vice Premier of the State Council.⁷⁴ Despite these efforts, the infringement of IPRs is widespread.⁷⁵ As of 2015, China was the largest IPRs infringer which shipped such goods as mobile phones and accessories, memory cards, computer equipment, CD/DVD and lighters, to the EU.⁷⁶ China was again placed on the Priority Watch List in USTR's 2016 Special 301 report. In December 2016, moreover, the USTR announced the results of its "2016 Out-of-Cycle Review of Notorious Markets," which included several Chinese markets. The US authorities point out especially an inefficient civil resources mechanism and a still insufficient commitment overall. They are demonstrated by resource constraints, lack of training, lack of initiative, lack of transparency in the enforcement process and its outcomes, procedural obstacles to civil enforcement, lack of coordination among Chinese government ministries and agencies, as well as local protectionism and corruption. On the whole, the US authorities state that after 15 years in the WTO, China would be still weak on

many IPRs rules.⁷⁷ This statement is confirmed by the international comparison. China was in the 62nd among 138 countries in IP protection with a score of 4.3 points, where the scale is in the range from 1 to 7 (7 is the best). Although the Chinese authorities improved its IPRs regulatory framework and amended its IPRs laws and regulations in order to comply with its commitments in the WTO and other international organizations or conventions, the enforcement of IPR continues would be still a major challenge for China.

V. CHINA'S IPRs PROTECTION UNDER THE WTO DISPUTE SETTLEMENT MECHANISM

Although many WTO members doubt China's compliance with the TRIPS Agreement and the fulfilment of its IPRs commitments in the WTO, there was only one case for China to be the subject of the WTO dispute settlement mechanism for its IPRs infringement. That is the China - Measures Affecting the Protection and Enforcement of Intellectual Property Rights case (DS362) between the US and China. Several other WTO members also requested to join the consultation as the third parties of this dispute.⁷⁸ The WTO's Dispute Settlement Body ("DSB") received a request for consultation from the US representatives on April 10, 2007. The dispute concerned measures affecting the protection and enforcement of IPRs, namely, Articles 9, 41, 46, 59 and 61 of the TRIPS Agreement.⁷⁹

The WTO panel found that Article 61 of the TRIPS Agreement (border measures – remedies) was not disrupted and concluded that the factual evidence presented by the US was inadequate to show whether or not the cases excluded from criminal liability met the TRIPS standard of 'commercial scale' when that standard was applied to China's marketplace.⁸⁰ The other two areas of dispute were found by the WTO's panel to be inconsistent with the provisions of the TRIPS Agreement. In the first case, the panel concluded that the way in which China's customs auctioned the goods was inconsistent with Article 59 of the TRIPS Agreement.⁸¹ In the second case, related to the TRIPS Agreement as well as the Berne Convention, the panel concluded that China's failure to protect copyright in prohibited works was inconsistent with Article 5(1) of the Berne Convention as incorporated in Article 9.1 of the TRIPS, so that the copyright in such prohibited

works could not be enforced.⁸² The DSB adopted a panel report at its meeting on March 20, 2009. In June 2009, China and the US informed the DSB that the reasonable period of time for China to implement the DSB recommendations and rulings would be 12 months from the adoption of the report.⁸³ Although the Chinese representatives stated that China had completed all necessary domestic legislative procedures for implementing the DSB recommendations and rulings, in January 2017, the US representatives again claimed that China did not appeal the WTO panel rulings in favour of the US and subsequently modified the measures at issue.⁸⁴ Article 22 of the DSU provides:

If the losing Member fails to bring its measure into conformity with its WTO obligations within a reasonable period of time, the prevailing complainant is entitled to resort to temporary measures, which can be either compensation or the suspension of WTO obligations (Art. 22.1). If no satisfactory compensation has been agreed within 20 days after the date of expiry of the reasonable period of time, any party having invoked the dispute settlement procedures may request authorization from the DSB to suspend the application to the Member concerned of concessions or other obligations under the covered agreements (Art. 22.2).

This case demonstrates that despite all the positives, which are connected with the TRIPS Agreement, it is extremely difficult to solve IPRs disputes through the WTO's dispute settlement mechanism. Those difficulties are due to the following factors. First, it is difficult to collect a clear evidence of systematic non-compliance with the TRIPS Agreement. Actually, IPRs disputes are small part of the total trade disputes in the WTO. Second, the fulfilment of the WTO's commitments as well as the DSB recommendations and rulings are demanding time with unsteady results. If some form of sanction is applied to China, it can cause retaliation and escalate tension among all sides of the dispute.

As mentioned above, China's membership in the WTO does not mean that the commitments which China accepted during its accession process are automatically fulfilled. As has been said, on the one hand, China is often criticized for mal-enforcement of IPRs. It is still weak after 15 years of its membership in the WTO. On the other hand, the WTO Secretariat and others appreciate China's progress relating to IPRs. One of the main questions is why China should further improve the enforcement of IPRs laws. This question may have several answers. First, the Chinese authorities would finally realize the importance of IPRs protection for

further economic development of China.⁸⁵ Second, non-compliance means to be a subject of the compensation and suspension of concessions. In addition, China's widespread counterfeiting not only does harms the business interests of right-holders, both foreign and domestic, but also includes many products that pose a direct threat to the health and safety of consumers,⁸⁶ which influences China's reputation in the world.

In the past, China's economic 'miracle' was based on the package of economic reforms following the open door policy. FDI exploded after 1992 and, within a few years, become the predominant source of technology inflows into China. Also, multinational corporations ("MNCs") became key players transferring technology into China, for not only their attempts to access the domestic market, but also their speed including China into global production networks of high-technology products. Chinese economic policymakers were increasingly willing to provide market access and promises of protection of IPRs to foreign MNCs if they were willing to transfer production to China.⁸⁷ In other words, the relocation of the production from developed countries, such as the US, Japan, the UK, etc. to China was also followed by a transfer of technology. Thus, the producers from developed countries got additional gains from the lower production costs and the Chinese government got an easier access to new technological progresses. However, the current situation is different. Besides being in the third position of the top host economies with FDI inflows of USD 134 billion in 2016, China was also in the second position of top home economies with FDI outflows of USD 183 billion in the same year.⁸⁸ This means that while at the end of the 20th century China was the main destination for foreign direct investment inflows from the whole world, at the beginning of the twenty-first century China has also become one of the leading investors in the world. In 1994, China's investment in research and development ("R&D") was below 0.6 percent of GDP,⁸⁹ but today's gross domestic R&D spending is 2.05 percent of GDP which is higher than that of the UK and Canada.⁹⁰ Although China has been a middle-income economy all the time, it holds the 22nd position among 127 economies in the Global Innovation Index in 2017. There, China has a better position than Australia, Belgium, Italy and some other higher-income countries.⁹¹ China has become more competitive in many economic sectors because of its own innovation and research.⁹² In the past, the protection of IPRs was essential for ensuring the continued inflows of FDI

and the associated transfer of newly developed technologies, as well as fostering the development of new technologies and services in China. Currently, however, the Chinese authorities realise that the strengthening of IPRs protection is also important for its domestic innovators and IP holders. On the whole, China's compliance with the TRIPS Agreement has a positive influence on the foreign as well as domestic owners of IPR who want stable environment for doing business in China.

Table 1 shows a growing number of applicants for patents, trademarks and industrial design in China during 2001–15. While the highest number of filings was recorded in trademark, both in the beginning as well as at the end of the monitored period, the highest increase of filings was recorded in patents. Especially, patents applied by residents increased the most; it was more than 32-fold. The highest number of patent applications covered digital communication, electrical machinery, apparatus, energy, computer technology, and other fields of technology.⁹³ A positive correlation between patent applications (residents as well as non-residents) and patent filings is also obvious. This indicates improving the system of IPRs management in China. However, the rights-holders in China frequently have their IP rights infringed. More concretely, about 1.3 percent of seizures of counterfeit and pirated goods concerns violations of the IP rights of Chinese companies.⁹⁴ It indicates a very strong threat of counterfeiting and piracy that undermines the innovative efforts of Chinese companies relying on knowledge-based capital and using IPRs in their business strategies. In addition, counterfeiting goods causes financial loss to both the Chinese government and the IPRs holders.⁹⁵

Table 1: The Number of Patents, Trademarks and Industrial Designs in 2001-2015⁹⁶

	2001	2005	2010	2015
Patent:				
- Applicants (Resident)	30,038	93,485	293,066	968,252
- Applicants (Non-resident)	33,412	79,842	98,111	133,612
- Filings	31,232	97,948	308,326	1,010,448
Trademark				
- Filings	238,301	630,346	1,054,465	2,146,666*
Industrial Design				
- Filings	56,748	155,236	421,418	589,571

* Data available until 2014.

The TRIPS Agreement has been implemented in China from both micro and macro-economic point of view. This brings gains for business (companies) and the economic growth for the whole country. In other words, the effective enforcement of IPRs in China brings a higher confidence for domestic as well as foreign investors and patent-holders, which are the source of new productions and jobs in China. Then, the economic growth creates the optimal assumptions for achieving political goals and stability in the country. In the 13th Five-Year Plan, which was approved in October 2015, Chinese policymakers considered innovations as the main driver of economic growth.⁹⁷ In order to enhance China's capability of protecting IP, in June 2008, the State Council issued the Outline of the National Intellectual Property Strategy. The Outline identifies the strategic goal of China becoming, by 2020, a country with a comparatively high level in terms of the creation, utilization, protection and administration of IPRs. In January 2015, the State Council issued an action plan on the further implementation of IPRs strategy, highlighting the goals and measures for IPRs from 2014 to 2020.⁹⁸

The compliance of China with the TRIPS Agreement is also connected with China's reputation among the other 163 WTO members as well as their bilateral trade partners. China is currently the leading producer of manufacturing goods in the world, so that it needs to cooperate (export as well as import) with other countries around the world. In general, the protection of IPRs produces more stability and transparency in business. On the other hand, however, the experience of some producers and exporters shows that counterfeiting and piracy have become a 'motor' of innovation-driven economies. They count on the possibility of the copy of their products in advance, so that they innovate their production all the time. In general, to be more competitive in the world market, it is necessary for producers to jump one step further.

VI. CONCLUSION AND RECOMMENDATIONS

This article has shown that although the protection of IPRs in China has become one of the urgent priorities of the Chinese government in recent, China is still the largest producing economy of counterfeit goods in the world.⁹⁹ How effectively did China absorb the TRIPS obligations into its legal system after joining the

WTO? Actually, China enacted domestic IP laws in accordance with the TRIPS Agreement and amended the Patent Law, the Copyright Law, the Trademark Law and IP regulations. However, some issues have remained unsolved until now, which has influenced on the investment and business in China for both residents and non-residents. Today, the effective enforcement of IPRs in China is the point at issue. It is based on the subjective assessments of other stakeholders with respect to the WTO agreements and rules, which are focused more on the implementation of IPRs commitments than their enforcement.

The WTO can positively make contribution to enforcing IP laws (or compliance with the TRIPS Agreement), especially through the Council for TRIPS and the Dispute Settlement Body. However, the effective solution of IPRs disputes in the WTO has not been wholly confirmed in this article. In addition, while assessing China's compliance, it is necessary to remember that the TRIPS Agreement establishes minimum standards and the 'flexibility' offered to all WTO members in interpreting various articles of the agreement makes the assessment of compliance more problematic. Eventually, the assessment of China's compliance with the TRIPS Agreement should include both the intention and willingness of the Chinese policymakers to comply, and the capacity to do it. This is influenced by not only country specific factors (*e.g.*, geographical feature, historical background, political and economic system, technological level), but also non-country specific factors (*e.g.*, further negotiations in the WTO, the improvement of the WTO dispute settlement mechanism, and the role of MNCs in China). China's willingness and intention to improve IPRs protection were documented after 2001. However, in addition to enacting new laws and regulations and formulating development plans and strategies, a wider cooperation with other WTO members and international organizations should be necessary. In this sense, China's policymakers are recommended to utilize the activity of the MNCs in a common endeavour to fight against counterfeiting and piracy in China. Thus, for the capacity to comply with the TRIPS commitments, they should consider not only the amount of efforts for the protection of IPRs, but the effectiveness and the quality of human sources.

IPR protection is indispensable for foreign investors as well as IPRs holders to do business in China. However, China also needs an effective system of IPRs for several reasons. First, foreign investors and their new technologies have

played an important role in developing China's industry all the time. Second, the Chinese government supports its own innovators and creators. From this point of view, China's government also has an interest to protect China's research and innovation. Third, counterfeit and piracy cause tax and customs losses. Lastly, these will damage China's reputation in the global society.

China has recorded positive progress in the area of IPRs during the last 15 years, but shortcomings still remain in the enforcement of IPRs laws in China, especially on the local level. However, the higher the economic level of a country is, the higher the necessity and stress on the protection of IPR is put. Two and a half centuries ago, fast-growing nations, such as the US and other western powers, whose capitalism as we know it today was still very much in its infancy, were a hotbed of literary piracy. In comparison with the US and western countries, up until the early nineteenth century, China retained its pre-eminent position in the world economy. It was the major producer of steel, the leader in technical innovations in textile manufacturing in the world, the source of new innovations in the production of paper, book printing and the leading trade nation. At this time, British and European manufactures followed China's lead, assimilating and borrowing its more advanced technology, and were eager to gain entrance to China's advanced and lucrative market. In a similar way, 40 years ago, Japan was one of the biggest patent infringers, but, in the 1990s, it changed into an exporter of new ideas and now becomes the third biggest patent filler in the world.¹⁰⁰ These more or less distant historical events show that the protection of intellectual property is related to a country's economic development. China is similar the US, Japan and Britain of the past.¹⁰¹ Accepting the TRIPS Agreement China can demonstrate its desire to be an innovator, not a copier.

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67. *Id.*
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 94. OECD/EUIPO, TRADE IN COUNTERFEIT AND PIRATED GOODS: MAPPING THE ECONOMIC IMPACT (2016), *available at* http://www.oecd-ilibrary.org/governance/trade-in-counterfeit-and-pirated-goods_9789264252653-en (last visited on Jan. 24, 2018).
 95. The US Department of Commerce estimates that companies lose between USD 20 billion to USD 24 billion annually because of global piracy. *See* D. Fleming, Intellectual Property Rights in China (2006), *available at* <http://wongfleming.com/intellectual-property-rights-in-china> (last visited on Jan. 24, 2018). China estimated its own annual tax losses due to counterfeiting at more than USD 3.2 billion. *See also* USTR, *supra* note 35.
 96. *Supra* note 93.
 97. *See* 13th Five-Year Plan for Social and Economic Development, *available at* <http://en.ndrc.gov.cn/newsrelease/201612/P020161207645765233498.pdf> (last visited on Jan. 24, 2018)
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