

The Global Faces of China's Incomplete Reforms: A Perspective from China's New Intellectual Property Regime

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Abstract

The paper probes into an antithetical aspect of China's economic reforms in the global context by focusing on the recent developments of China's intellectual property regime as a key component of its knowledge-driven and innovation-oriented economy. It highlights China's political divergence against its economic convergence in its decade-long reforms, in particular, its state-oriented innovation system as against the world's neo-liberal economic order by analyzing a fundamental theme in a cutting-edge legal system. In core areas such as high-tech products and industrial innovation, the last decade witnessed China's preeminent transformation from a passive follower to a proactive advocator of IP standards. However, certain entrenched limits characterizing China's state-oriented economy and cultural system such as information blockade and coercive technology transfer serve as catalysts that are apt to provoke acrimonious confrontation between China and major economies. In this sense, China's incomplete reforms have taken on a new form: as China's influence on the global economy grows, conflicts of diverse national priorities become more palpable than simple-minded economic cooperation.

Keywords: China, Chinese economy, globalization, intellectual property, Sino-US trade war

1. Introduction

China's rise as a global economic power is, indisputably, one of the most phenomenal development in the past few decades. However, the underlying factors that shape and determine the country's striking growth have remained more or less a mystery. This is largely due to the fact that China's stunning economic achievements are concomitant with its most entrenched socialist political system, a remnant that, surprisingly, survived the Cold War. Since the 1980s, there have been debates between two

schools of economic discourses regarding the implications of China's reform performance: one advocates the creation of non-capitalist institutions, whereas the other endorses only those mechanisms that converge with the capitalist designs (Sachs & Woo, 1997).

Basically, we would agree with the convergence school in ascribing China's economic success primarily to the reform measures that are synchronized with the designs of non-socialist market economies. Yet, this premise seems to be overshadowed in the new century, particularly in the wake of China's growing global political influence underpinned by its economic weight (Hoover Institution, 2018). Since the global financial crisis of 2008, a number of economists have reflected on the dominance of the neoliberalism in terms of both its theoretical foundations and its policy implications in the past three decades (Rodrik, 2017; Bresser-Pereira, 2010). As a result, China has given full play to the leverage of its state-owned or state-backed economy on the basis of the "Beijing Consensus" in contrast to the "Washington Consensus" which embraced a neoliberalist path of economic development (Huang, 2018). This has become especially conspicuous since Mr. Xi Jinping became the helmsman of the economy with the world's largest population.

No doubt the political economy embedded in the Washington Consensus is subject to various criticism by even some leading commentators. For instance, Stiglitz (2002) elaborated on the side effects of "market fundamentalism" and the "one size fits all" treatment of individual markets. Rodrik (2006) pointed out that a "standard reform agenda" may not be appropriate remedy for developing countries or impoverished areas. Birdsall and Fykuyama (2011) questioned the role of "foreign financial fetish" despite the benefits of global trade and stressed the role of government regulation as the "visible hand" in maintaining not only remarkable economic growth but also social stability in developing countries, in particular those like China. Ghodsee's study (2017) is concerned about the economic difficulties that some former socialist countries experienced in their transition from communism to market economies.

It is, at least partly, for these reasons that some countries, especially China, have resorted to localizing their development models and agendas and summarized their philosophy in the idea of "Beijing Consensus". With regard to the economic rationales, there are noteworthy endeavors in differentiating between the neoliberalist economics

as the policy consideration featuring the Washington Consensus and the “mainstream economics” hinging on the Samuelson traditions. In that connection, influential Chinese economists have articulated their support of the government’s overriding role in backing strategic industries and state-owned enterprises. In defending such a stance, Lin (2017) warns against the middle-income trap in China’s structural transformation and upgrading. Zheng (2019) even relies on the traditional economics in arguing against the inconsistencies of the neoliberalist framework.

Yet, such debates on economic developments should be placed in the larger context of contemporary political and legal contingencies so that they could be perceived from a broader and overall horizon. In the past few years, the world has witnessed an unprecedented tide of political turmoil since the end of the Cold War. For instance, the economy of the European Union – an area in which the neoliberalist theories originated – has been deeply trapped in constant governmental intervention featured by the loose monetary policy and the financial measures of “quantitative easing” since 2008. Lack of incentives for the working class due to the overgenerous welfare programs and indiscriminate priority given to the demands for “equality” – often branded as a hallmark of “political correctness” – have generated a strong tide of backlash of populism, the most remarkable result of which is the Brexit referendum in the UK. Further, the American political system, which assumes the leading role among western liberal democracies, is allegedly suffering from a “decay” spawned by the protectionist measures adopted by the Trump administration (Fukuyama, 2016).

Amid such ongoing turmoil around the world featured by piecemeal but often interrelated struggles for an “independent path”, neo-Keynesian approaches, propositions of either the “European model” or the “Asian way”, and even anti-globalization movements are looming over the horizon. Increasingly as such, China is deviating rapidly even from Deng’s earlier blueprint of market economic reforms to embrace its “unique” development programs and agendas with much stronger socialist tinge reminiscent of Mao’s rule. Such political divergence is both understandable and worrying, however, considering both China’s domestic and the global political developments. In particular, China’s trade relations with the US and its allies have been affected considerably by the Sino-US trade war over the last two years. While the US and China are in the course of negotiating a deal towards the end of the trade

war, there are some fundamental differences that are not easily reconcilable under the aegis of any immediate trade agreements.

One of such palpable fundamental issues at stake is China's intellectual property (IP) regime, as it is a highly attractive "business law" area that has been channelled into the world trade law system. On the other hand, Chinese IP law is informed overwhelmingly by China's political framework, and differs fundamentally from IP law in western countries. For one thing, in the constantly ongoing trade frictions between China and the US over the past three decades, information blockade and coercive technology transfer have only emerged recently as a top item on the list of negotiation. Such "trade barriers" are only one of the cascade of endogenous features rooted in the political, economic, and legal contingencies that the Beijing Consensus breeds in. However, China's IP law has remained a leading inducing factor and catalyst of trade frictions between China and its trade partners, in particular, the US. It will continue to be so in the years to come, as IP law plays an incrementally important role in promoting the development of China's strategic industries, technological innovation, and structural upgrading.

It is for these reasons that this article will focus on the political economy of Chinese IP law and analyze its most recent developments through a global perspective. To make it clear, we are, certainly, not arguing here that information blockade and coercive technology transfer are the cause of the ongoing Sino-US trade war. Nor do we even mean to say that problems arising from China's IP area constitute the most fundamental difference between the two countries behind the trade war. Rather, we intend to conduct a case study and reveal how IP law, usually deemed a purely technical issue involved in global trade, might be leveraged to reflect hugely diverse values pertaining to the political and economic paths chosen by two most influential countries in the world. By unpacking a leading and persistent inducing catalyst of trade frictions, we aim to show the resilience of and the differences between two political economies through a chic prism that compels our attention.

2. The Convergence and Divergence of the Chinese Economy in the Global Context

Reform Hope: Economic Liberalization as a Path towards Political Convergence

Ever since China's leadership initiated its reform and opening up process in 1978, there has been great hope that the world's most populous country would integrate into the existing global governance structure. Economic reforms in China, combined with the downfall of the Soviet Union in 1989, resulted in overwhelming confidence of Western countries in the superiority of liberal democracies to authoritarian regimes (Fukuyama, 1989).

At this time, embracing foreign investments and capitalism was hailed as a step towards unleashing dynamic economic development, and the aggregate welfare gains of open economic systems acted as a major driver for accepting the abolishment of the planned economy. China's increasing initiatives of capitalist market reforms were widely seen as a recognition of the strength of market-based systems for building productive and innovative economic systems – the backbone of rich, industrialized countries, for it was long held that the economic wealth created by more liberal economic systems would provide the basis for more democratic political systems (Lipset, 1959).

Presumably, China's accession to the World Trade Organization (WTO) in 2001 would further speed up domestic reforms first initiated in 1978, facilitate its integration into the global economic order, and, eventually, boost global trade and investment. Clearly, the integration of a large country such as China with its political system and values so incompatible with those of western countries constituted unique challenges to the WTO, for successful assimilation of such a new member into the existing international bodies would, ideally, "try to contain and intermediate these prospective frictions" (Noland, 1995).

However, this seemed an attainable target at the time in light of the collapse of the Soviet Union and the perceived superiority of western liberal democracies with their market-based economic system. This is because economic systems need to respond to external and internal factors over time and are, therefore, never stable

(Hollingsworth and Boyer, 1997). In an era of globalization, particularly, all countries are exposed to the influence of different systems at greater speeds than to changes in the national arrangement, and it is increasingly difficult to isolate technological changes from social, economic or political developments.

No matter whether a country wants a systemic change, the underlying institutional framework of the country will come under pressure to adapt itself to external contingencies. This will depend, for instance, on the domestic contours of the industrial relations system, the system of training and education, the internal structure of firms, the structured relationships between firms, the financial markets, the conception of fairness and justice, the structure of the state and its policies, as well as the country's customs and norms. All of these factors may have profound implications on the resulting economic system (or social system of production) (Hall and Soskice, 2001).

In this context, globalization could act as a catalyst for the diffusion of both common production technologies and the underlying economic systems, to the extent that both the decisions within the WTO and the concomitant liberalization have far-reaching implications for the national economic system. Generally, supranational institutions attempt to establish a level-playing field on a global or transnational level, under which nation states not only conduct trade but also compete with one another. In tandem with increasing financial liberalization, the growing global capital mobility acts as another driver for domestic change. Consequently, government behaviour would be subject to the scrutiny of financial actors and any policy considerations, even if the latter might be deemed unfavourably disciplined.

Such widespread optimism on the part of western countries generated and facilitated the belief that China would likewise continue its path towards economic liberalization which could, eventually, lead to a fundamental political change. Indeed, both South Korea (1988) and Taiwan (1996) served as good examples of illiberal countries transforming into democracies following a period of rapid economic ascent.

In fact, Chinese leaders who initiated and supported the Opening-up and Reforms recognized that timely policy adjustments would best serve its own economic interests. For example, a fundamental condition for any meaningful economic reform is the protection of private property rights. Hayek (1945) considers this, together with the

associated economic freedom, a prerequisite for the incentivizing use of knowledge creation and sharing. Indeed, both Weber and Hayek viewed the element of market predictability reassured by the rule of law in protecting property rights as essential for capitalist development (Weede, 2004). It was clear to the Chinese leadership that, without strengthening the protection of private property, economic development would face systemic constraints. Although radical reform was not an option to China's leadership, China's accession to the WTO did help initiate deeper reforms of the dominant status of state-owned enterprises, inducing major changes to China's economic structure, including the acceleration of China's privatization, economic liberalization, and the strengthening of market principles.

In this process, however, China's previous institutional arrangements underwent significant disruptions, and certain vulnerabilities associated with greater integration into the existing global economic order became a serious concern (Breslin, 2003). For the Chinese Communist Party (CCP), maintaining political control remained a key constraint on any form of economic reforms. Any form of shock therapy, as the eastern European countries experienced in their transition from planned to market economies (as well as the parallel political change), did not present itself as viable a policy option to Chinese leadership.

Overall, China's reforms are characterized by the approach of advancing towards a goal via gradual, often slow stages. Past or recent efforts of reform experimentation such as that on special economic zones, mixed-ownership, interest rate, or the introduction of the Hong Kong-Shanghai Stock Connect mechanism remain the hallmark of China's reform process. In spite of this gradualist approach, China's continuous efforts of reforms and opening-up often fuel the argument for China's path towards institutional convergence with the western world.

Incomplete Reforms: Economic Reforms Alone Are No Guaranteed Driver for Convergence

While adopting a capitalist economic system, different countries may exhibit distinct limits of institutional convergence. As a result, there is no single optimal institutional arrangement even across the western world. The disparate, individual coordinating mechanisms that countries retain for themselves will hinder convergence towards virtually identical systems. According to Hollingsworth and Boyer, institutions

embedded in a larger framework prevent the entire system from radical and fundamental changes, and changes induced into one institutional sphere cannot be isolated from other spheres. As a result of this historical institutional framework, countries are riveted to a certain form of path dependency.

Although systems will change over time, they are limited by the past framework which have implications for the future framework. Hollingsworth and Boyer also recognize that the functional institutional arrangement in one country does not necessarily apply to another country in an identical way. It is acknowledged that systems, which are no longer able to compete on the international arena, will come under pressure to adopt better performing practices. Nevertheless, practices coming from elsewhere may need to be modified and adapted to the existing institutional framework.

Under the leadership of the CCP, there will be clear limits as to how far China will converge with western countries. Its path dependency is shaped by the CCP's strategy of balancing economic reforms absent political reforms. The unchallenged position of the CCP sets forth serious institutional challenges in the form of both policy contradictions in a restrictive political environment and efforts towards further liberalization in the economic sphere. In that sense, the CCP leadership manipulates the country at the heart of capitalism with "Chinese characteristics".

Thus, any proposal of changes to the institutional arrangement of China's economic system must take into account the country's constraining political factors. For one thing, China always claims that it has adhered to its earlier approach of "one center, two basic points", and "continued to improve the socialist basic economic system, mechanism and institutions by continuously pushing forward the reform of the socialist market economic system" (Huang, 2018). Huang argues that "this means that China has not followed the Washington Consensus, but the Beijing Consensus." Further, the global financial crisis in 2008 fuelled a lasting tide of criticism of the underlying neo-liberal economic theory (Stiglitz, 1997; Bresser-Pereira, 2010). Together with the alleged "political decay" of liberal democracies, the "western model" does not provide the CCP a convincing example to follow (Fukuyama, 2016). In the light of these perceived institutional deficiencies, China's development path seeks to pursue its own development path with Chinese characteristics under the guidelines of socialist theories.

The adaptation of capitalist ideologies, therefore, serves the CCP's ultimate goal of "perfecting" the Chinese socialist economic system by creating new theoretical foundations for economic development. The hope that China would continuously adapt to a liberal democracy while pursuing greater economic reforms has never been a realistic scenario. In addition, China is confronted with the challenge for breaking through the middle-income trap and its evolving economic system will still need to face its greatest test. The rapid economic development was due to improved allocation of the means of production, as is manifested by the "East Asian Development Model" successfully deployed in Japan, South Korea and Taiwan.

China's GDP per capita has reached around 10,000 USD following a period of rapid economic growth. Considering the double-digit growth in the past decades, it is only natural that economic growth is beginning to fall to lower levels. To catch up with the average income of the advanced economies, China's development must continue to maintain high productivity growth. Whereas China largely benefited from the demographic dividend with a surplus of low-skilled workers shifting from agriculture in rural areas to manufacturing in urban areas, its future growth will rely on a much higher degree of knowledge dividend. This requires not only better-educated workforce, but also the ability of its leadership to nurture an institutional environment supportive of fostering innovation.

Challenging an Autocratic Regime's Ability to Foster Innovation

Research based on cross-country analysis does indicate a negative relation between autocratic political regime and economic development resulting from larger dispersion of growth rates (Glaeser, Porta, Lopez-De-Silanes, and Shleifer, 2004). Nevertheless, the supposition that economic liberalization needs and facilitates political liberalization is yet to be tested in China. So far China's political system has not been captured in any form of debacle despite its constant pursuit of economic reforms, which seems to vitiate many caveats against an immediate collapse of the CCP. On the other hand, autocratic capitalism is capable of creating the underlying institutional stability and trust necessary for rapid economic development (Ang, 2018). However, the verdict is still pending, as China's economy faces the challenge of an innovation-driven transition to the next stage of economic development.

The International Monetary Fund's list of advanced economies as of now is exclusively composed of liberal democracies with the exception of Singapore, Macau, and Hong Kong. Being part of China under the one country two systems approach, both special administrative regions of Macau and Hong Kong have maintained their own post-colonial institutional setting. This becomes most apparent in Hong Kong's recent struggle for fundamental institutional change, which exerts pressure on China's top leadership. By contrast, Singapore provides a successful example of transforming into an advanced economy without becoming democratic. However, Singapore's political system has unique characteristics with higher degrees of political freedom and judicial independence than China under the CCP.

By contrast, China's institutional arrangement varies considerably from that of most western countries, despite the ongoing domestic reforms and greater integration into the global economy (Faberberg and Srholec, 2007). In fact, the willingness of China's top leadership to engage in economic reforms is only associated with the underlying necessity to increase the competitiveness of China's economy. Starting in the 1980s, China has already introduced a series of changes to its national innovation system by strengthening the "civilian-orientation, increasing the role of industries, and closer interactions among industries, universities and government" (Sun, 2002). However, despite the rapid GDP growth in the past decades, China's economy still suffers from inefficiencies including a lack of innovation, most pronounced in the still large state-owned sector.

Whereas China's economy requires a transition by strengthening its innovation capacity, the political environment is becoming more restrictive under Xi Jinping. Expansion of party cells in private companies, build-up of a surveillance state, and strengthening of ideology are just a few examples of Xi's political maneuver, which aims to manifest the position of the CCP rather than facilitate any form of political liberalization. While there is appetite for reform in the economic sphere, nothing has emerged in the political sphere on a comparable scale. As such, China's innovation system, which is still in the making, confronts a number of uncertainties, and its future will depend on whether China is able to initiate corresponding political reforms that buttress its innovation-oriented transition.

For instance, one of the key elements that provoked the Sino-US trade war was the “Made in China 2025” strategy. Although China’s ambition to build a more competitive innovation system predates the launch of that strategy in May 2015, the strategy itself can be seen as a major policy push which goes far beyond the ten core industries defined therein. State-driven industrial policy combined with stronger integration of private sectors aim to improve capital allocation, the innovation landscape, and technological autonomy, all of which are necessary to transform the nation into a global high-tech nation by 2049.

From the CCP’s perspective, however, success in attaining these targets is crucial to further legitimizing its political grip over the country (Zenglein and Holzman, 2019). For this reason, this round of Sino-US trade war goes beyond the previous trade frictions and has often been referred to as a “protracted war” between the core interests of the Chinese top leadership and those of an “awakening” US government per se. The ongoing deterioration of the Sino-US relationship amid the unfolding escalation of such a trade war exacerbates China’s difficulties in tackling the impending institutional challenges its economic transition is facing.

There are some promising aspects, though. One limitation suppressing potential innovation in autocratic regimes is a lack of investment in human capital, as researches show that, generally, dictatorships have a less educated population (Glaeser, Porta, Lopez-De-Silanes, and Shleifer, 2004). While this observation might be relevant to the majority of non-democratic nations, it does not apply to countries (like China) following the East Asian Development Model characterized by heavy investment in education. Another distinct feature is China’s endorsement of entrepreneurship. Despite a stricter political environment, China has a flourishing start-up community, a phenomenon that runs counterintuitive to a repressive political environment.

During the Third Plenum of the Central Committee of the CCP, the top leadership hallowed the role of the state-owned sector as an integral pillar of the Chinese economic system. The CCP leadership also espoused strengthening market mechanisms in this context. Under Xi Jinping, however, the underlying ideologies of economic reforms are based on the principles of Marxist political economics (Huang, 2018). Such a theoretical framework highlights the strategic role of state-owned

enterprises as well as strong political support by the state (Lin, 2017). Therefore, any interpretation that the mandate of strengthening market mechanisms should land in any form of western-style liberalization would be misplaced. Instead, such policy adjustment only recognizes the strength of the underlying institutional foundations of western economic systems. As part of China's efforts of building a system of "socialism with Chinese characteristics", however, this political mandate does not aim at replacing but complementing the existing institutional structure under the leadership of the CCP.

What seems to be a strategic contraction to the CCP is an integral part of its plan of addressing the future challenges to China's economic development. Further efforts of the Chinese leadership towards liberalizing the economy include strengthening market mechanisms and the rule by law, both of which aim at facilitating an innovation system capable of competing with today's advanced economies. Moreover, adapting China's institutional building blocks to those of western liberal democracies represents merely a gesture of contained openness, whose purpose is to make foreign innovation a catalyst for China's competitiveness.

In short, from the CCP's standpoint, China's economic reforms will not engender any contradiction by deepening economic liberalization and further opening up to the world while enforcing a stricter political environment. On the contrary, increasing economic liberties should be balanced by a more repressive regime, both of which serve to strengthen China's economic development in the long term. The key issue for the CCP, therefore, is to develop efficient institutional arrangement, especially appropriate legal mechanism, which both foster economic development whilst ensuring political control. The challenges to economic theories posed by China's economic rise are now entering a crucial phase. If China succeeds in becoming an innovation power while remaining a largely autocratic regime, the Beijing consensus might turn into an ontological alternative development model for many authoritarian governments.

3. Intellectual Property: More Than an Instrument of Promoting Knowledge-driven and Innovation-oriented Economy

In the following parts, we will turn to China's IP law regime. This is not to say that Chinese IP law is the cause of or solution to China's current choice of its political

philosophy and economic path. Instead, we intend to provide a case study from the perspective of a representative component of China's legal framework, which comprises one of the key issues in the Sino-US trade frictions. Without prejudice to the foregoing debates on China's convergent or divergent considerations, this arena reflects how China handles a technical issue with rich implications for the world's economic and political developments. With this study, we cherish the humble hope that it might help enlighten some aspects of the contemporary debates on the convergence and divergence of two completely different or antithetical path dependencies.

From the beginning, intellectual property rights (IPR) are widely held as an instrument to realize the policy goals set in terms of public interests, especially innovation and knowledge transfer. For instance, the 1710 Statute of Anne, Britain's earliest copyright law, was established as "an Act for the encouragement of learning". Also, the US Constitution in 1787 (Art I, § 8, cl 8) vests Congress with the power "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." Historically, the regulation of IPRs has mingled with and depended on the political contingency, economic levels, and cultural settings of a country. Thus, how to achieve the balance between the protection of IPRs and public interests varies considerably from country to country.

The disparity of national IP regimes is further aggravated by the fact that, IPRs, in general, assume inherent tension with public interests – a term invariably dotted with an elusive nature. As such, IP laws are replete with complicated and nuanced constructs for the purpose of balancing different interests: innovation and technology transfer under patent law, commercial distinction and consumer interests under trademark law, and authorial remuneration and access to information under copyright law.

Historically, different countries employed diversified regulatory mechanism to protect those interests they value most in a specific stage. The US, for example, used to exclude foreigners from acquiring patent protection in the nineteenth century. Later, foreigners were allowed to acquire patents in the US, but had to pay ten times

application fees as much as US citizens. Similar measures obtained in the field of copyright protection, when piracy of British books was routine in the US. Protectionism, in fact, used to be the currency of many western countries in IP protection, when the world barely entered into the era of globalization (Khan, 2019).

Even today, while most countries of the world are members of those international conventions for the protection of IPRs, it remains a fixed and universal rule that patents and trademarks must be granted by and registered with a local IP office before they could be put to lawful commercial use within that registered country or region. Only the exercise of copyright is often no longer confined to a nation's border, as it is an IPR that will be protected automatically and independent of registry.

Propelled by revolutionary developments of information and communication technologies, the mechanism of IPRs has long transcended the hedge and enclosure of a mere legal regime and become an indispensable component of the world's innovation and trade system that aims to provide incentives, allocate resources, and facilitate innovation, creation and fair trade. Therefore, IPRs were interwoven into the agreements of the WTO as a global trade regime --- the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). It consists of an insurmountable set of rules of convergence for every country that relies on global trade for its economic growth and stability.

While TRIPS recognizes "the underlying public policy objectives of national systems for the protection of intellectual property, including developmental and technological objectives", the mechanism and obligations regarding the limitation of IPR in different circumstances are not strong enough to warrant an equal balance between IP protection and its restriction which is the prerequisite for realizing those policy objectives. The current international IP regime is, therefore, characterized as a system that aims merely to "ratchet up" the global standards, one that is overwhelmingly amenable to industrialized countries.

Literally, China is no exception to this regime, though China's IP regime has always been branded as porous or ineffective since it was established in the 1980s. This was particularly attributable to the fact that China's IPR regime had been imbued with political tasks since the outset, namely, that it was more an instrument of social control

than a legal approach of promoting innovation and dividing economic interests between private creators and public users (Alford, 1995). During most of the post-reform period, this was seen as the fundamental reason for China's failure to comply with international IP standards, sustained by China's claim of overwhelming unevenness of economic development within the country.

Consequently, China has developed its national IP regime largely under international pressure, driven particularly by its own incentive of joining the process of globalization and digital economy (Chen, 2017). Alone the first decade of this century witnessed two rounds of amendments of China's major IP laws so as to adapt its regulatory standards to those set forth uniformly in international conventions. It must be emphasized that the development and amendment of China's IP regime resulted primarily from a series of trade frictions often acrimonious enough to trigger an economic confrontational state as it stands today between China and the US. In a sense, it was such external force that often highlights China's divergence from uniform IP standards and attempts to bring China onto the road towards converging rules that shape and maintain the inspiration and energy for creation, innovation and commercialization in the long run.

In the past decade, however, China's standpoint concerning its IP regime has undergone a fundamental metamorphosis. The Chinese economy maintained steady growth with booming development of domestic telecommunication technologies exemplified by its ambitious investment in 5G race and the advent of an almost cashless society. As a result, China is rebuilding its IP regime with unprecedented consciousness. Indeed, China has taken pains to readjust its domestic regulatory policies, and put forward its own national IP strategies in 2008, setting the goal of turning IP into an engine of the country's future innovation. Moreover, China has invested considerable legal resources in promoting IP reforms in legislative, administrative and judicial fields.

On the surface, marching towards convergence of IP standards is an understandable step, since such developments merely manifest a path that most western countries including the US and Germany have stridden over in the past when technological progress transformed societies that imitate the innovation of other nations while ignoring IP standards into advanced countries with adamant positions of IP protection. Yet, beneath the ruse, a more fundamental trend of divergence is mantled in such a

turn to convergence. In fact, China's recent efforts to reform and redesign its IP regimes aim more to subsidize the needs of its state-owned innovation system than to cater to the constantly changing economic and social environment. While cultural and political factors used to impede IP protection in China, China is gaining impetus rapidly in becoming both a new stakeholder in certain sectors of technological innovation and a new power in international economic order by boosting its IP standards with specific focus.

4. China's New Blueprint of Rebuilding Its IP Regime to Foster Innovation While Maintaining Political Control

Starting in 1979 with the Law on Sino-foreign Joint Ventures, China issued a bunch of fundamental IP laws including the Trademark Law (1982), the Patent Law (1984), the Copyright Law (1990), and the Law against Unfair Competition (1993) which also protects trade secrets. These laws, together with a number of related laws and regulations, form the basis of China's IP regulatory regime. However, it is only after forty years of economic reforms that China is about to jettison its entrenched role of a mere imitator of international economic rules and be engaged proactively in serious legal efforts towards rebuilding its IP regime by infusing more of its own innovation and trade strategies into this legal framework. This is due to several important factors arising in this recent decade, which shapes the current contours of global economic environment, especially the ongoing Sino-US trade war. In different scenarios of IP protection, China is taking measures to enhance a converging trend. Yet these measures serve less the purpose of catering to the US demands than that of China's own blueprint of rebuilding its IP regime. The following part provides an analysis of China's efforts of updating the most essential components of this regime, and shows how the legal convergence of global standards now feature China's IP laws and prevail against certain divergence from such standards which will persist in foreseeable future.

Patent Law: A Battlefield of Activating the Engine of Innovation

As far as technology innovation is concerned, China is assuming an overall new role, which makes it inevitable to run a competition with its leading trade partners such as the US. In 2016, China issued "Administrative Measures for Determining High and New Technology Enterprises", which contain measures for ascertaining "high and new

technology enterprises” that may enjoy certain privileged economic and tax policies. One of the fundamental criteria is that such enterprises possess their “core independent IPR” that must be registered in China or enjoy exclusive global licence for more than five years. By creating such a legal terminology, China aims to differentiate the protection of the IPRs in the possession of Chinese individuals and enterprises from those owned by foreigners and foreign companies.

The US has reacted strongly to China’s emerging innovation strategy, particularly when this is connected with the plan of “Made in China 2025”. Pursuant to Section 182 of the US Trade Act of 1974, the US Trade Representative has continued to place China on its “priority watch list” in its recent “Special 301 Report” in respect of China’s new move into the high technology field. The US often accuses China’s new measures of facilitating “core independent IPR” as “discriminatory” or “direction or facilitation of the acquisition of foreign companies and assets by domestic firms to obtain cutting-edge technologies” (USTR, 2019). The recent turbulence in which Huawei is involved around the world is only an example of how China’s ambition of securing top innovation comes into fundamental conflict with leading innovators in the world.

Perhaps the most current and arguable issue concerning patents is perceivable in a pending WTO dispute that the US launched at the beginning of 2019 against China (WTO, 2019). This dispute arises from a number of laws and regulations that the US and a number of country suspect will result in forced technology transfer from foreign companies doing business in China. The entire legal regime in question consists of China’s trade law, company law, contract law, and IP-related technology law. The dispute yet to be solved is not the concern of this article, but the core issue related to that dispute is patent protection. Therefore, it’s worth having a look at China’s patent law, before there is a chance of discussing further issues pending the result of that dispute in future.

In fact, it is patent law that serves to protect and encourage inventions, practical and new models (utility models), and industrial designs. Since 2011, the number of patent applications in China has remained the top in the world, which, alone in 2016, outnumbered the total of patent applications of the US, Japan, and the EU (Croft, 2019). To reinforce China’s promotion of scientific inventions in industrial areas, China’s legislature is ready to review an extensive revision of the existing Patent Law

in 2019, covering the patentability, the scope and duration of patents, the compulsory licence, and the liabilities for patent infringement.

The 2019 bill will further transform international standards into Chinese law by updating certain rules that are not yet completely consistent with those standards. For one thing, the duration of term allowed for submitting patent application documents will be extended from 3 to 16 months upon first application. This represents a universal practice, which will allow transnational applicants from different countries to meet different demands according to their national standards. Additionally, the duration of protection of design patents will be extended to 15 years, which conforms to international standards.

The 2019 bill imposes considerably higher amount of damages and monetary punishment on patent infringers, raising the standards up to 5 times the illegal income in case of counterfeit patents and up to 5 million Yuan in the event of deliberate infringements. Besides, the law establishes liabilities for Internet service providers (ISP) in case of online patent infringement so that patentees may directly require damages from ISPs should the latter fail to take actions upon being notified of potential infringement.

The new bill lays down the principle of bona fides as a fundamental principle of patent law, which aims to ban patents that “undermine public interests” or “exclude or limit competition”. However, such vague terms are bound to be associated with those interests defined by the Chinese government, as it is the case with many other laws. For instance, the existing rules of China’s Patent Law (Art. 25) exclude certain categories from patent protection such as scientific discoveries, rules and methods for intellectual activities, methods for the diagnosis or treatment of diseases, animal and plant varieties, substances obtained by means of nuclear transformation, etc. The 2019 revision proposes the exclusion of “nuclear transformation” itself from patent protection. Obviously, this is because it involves the public interest of defending China’s national security.

Further, public interests are visible in the new regime of patent licence approved by the government. According to this bill, the government may award licence to apply specific patents developed by state-owned enterprises, or if a patentee explicitly

renders the patent open for use, or in case of the “compulsory license” where the government deems it necessary. These rules are compliant with another new principle of facilitating public access to patents, wide use of patents, and economic growth at large, those priorities stated in China’s national IP strategies.

A special issue of patent protection in China is the ownership of patent rights in case of an invention by employees during the course of their employment. Under the current Patent Law, the patent rights are awarded basically to the employing units, unless a contract between the employing unit and the inventor or designer provides otherwise. In other words, Chinese law imposes profound limits on inventors in favour of the “units” which are, in many cases, state-owned companies and entities. The 2019 bill enriches the alternatives of awarding individual inventors by allowing them to share the profits and interests of such inventions or designs in the form of shares, futures, bonus, etc. so as to enhance their incentives of invention and design.

Trademark Law: Emerging Lucrative Business Field with Imminent Regulatory Needs

Further, while China aims to promote a bunch of famous Chinese brands in the world, many Chinese manufacturers are producing and processing products for foreign designers with foreign trademarks for the purpose of exporting such products. Chinese law allows for such practice and maintains that attaching foreign trademarks to products made in China is not illegal as long as such products are not sold in China. This is the basic legal framework that China adopts in order to promote domestic manufacturing, which often leads to the problem of China being accused of exporting counterfeit goods when such goods are sold in other countries.

Again, the US interprets China’s legal practice as the failure to control bad-faith registration of trademarks and acquiescence of counterfeit goods. US industrial actors have reported such cases frequently to the US government with huge estimated economic losses (USTR, 2019, 42). Based on various data, the US identifies China as the world’s leading source of counterfeit goods. The 2019 OECD report estimated that 63.4% of the world’s fake exports came from China and Hong Kong. Many of these goods involve fake trademarks, to the extent that the US is deeply concerned with the imminent needs for legal control of unwarranted trademark registration and inordinate trademark use in China.

In 2019, China's legislature passed amendment of the Trademark Law, which focuses on the crackdown of bad-faith registration of trademark. The amendment seems to be an immediate response to the US' reference to China's flawed practice in its Special 301 Report, where "third parties are able to obtain trademarks in China in bad faith even when the U.S. trademark is famous or well-known, and the resulting registrations damage the goodwill or interests of U.S. right holders" (USTR, 2019, 42).

Above all, the amendment now makes it clear that all "bad-faith" applications for trademark registration will be rejected, as long as such trademarks are found to be "without the purpose of real use". Applications for registering trademarks have been a practice of very low costs, which is the reason why many individuals and enterprises in China have made use of this system to register trademarks that are, in fact, identical to or indistinguishable from those existing famous brands. This may explain why, in 2018, Chinese courts granted a bunch of trademarks to individuals and companies related to the US president (Reuters, November 6, 2018), while they had been registered by a number of Chinese companies beforehand for the purpose of soliciting illegitimate profits in China.

This is also why the online business of trademark agency has become a highly lucrative sector. For instance, China's Internet tycoon Alibaba started to provide online trademark registration service in December 2018 and, in the first quarter of 2019, it turned into China's No. 1 trademark agency with a turnover that outpaces the total of the two agencies that come next to it on the list. With its unparalleled technology of cloud computing, artificial intelligence, block chain, etc., Alibaba will exert inestimable influence on the sector of trademark agency in future.

Therefore, the amendment provides a bunch of complementary provisions that deal with this emerging sector. Where a trademark agency "knows or should have known" that a client's trademark registration application is based on "bad faith", it may not conduct business on behalf of the client. The amendment also highlights such cases in the process of "dissent", namely, it allows anyone to raise objections within three months upon publication of preliminary approval of a registered trademark. Even if some acquires a registered trademark, China's trademark administration (now National Intellectual Property Administration) may still declare invalidation of that trademark in the event such registration was based on fraud or other illicit means.

Importantly, as it is with the new bill on patent law, the 2019 amendment of trademark law largely raises the standards for punishment of bad-faith trademark infringement. The amount of damages used to be not more than three times the amount of actual losses of trademark owners or profits of infringers, whereas the amendment now lifts it up to not more than five times. If it is difficult to ascertain such amounts, courts may award damages of not more than five million Yuan compared to three million before the amendment.

Notably, the Trademark Law relies on China's social credit system for enforcement. For example, where a trademark agency commits any misconduct, the Chinese government may record it into its credit file and, in serious situations, may publish the record and decide to stop accepting its trademark agency business. Most recently, the US has raised explicit objections to the use of the social credit system in enforcing IP law in China.

Copyright Law: Information Control More Than the Free Flow of Information

China's copyright system has certain peculiarities that are distinct from other branches of IP law. As an authoritarian country, China views the regulation of copyright as something profoundly related to its cultural identity, political ideology, and social control. This is most discernible in its institutional feature, namely, that copyright is not administered by the NIPA as it is with patent and trademark, but by China's National Copyright Bureau (NCB).

Since its formal establishment in 1985, China's NCB has always been the same government body also known as the General Administration of Press and Publication, a team with two official titles. In 2018, China announced officially that the Central Propaganda Department of the Chinese Communist Party would lead and guide this team as a Party-state agency, which is in charge of copyright affairs, the development of China's press, and the import and export of publications.

This institutional characteristic has rich implications. The utmost task of China's copyright law, then, is to administer a nuanced policy of censorship of works that the Chinese government finds unacceptable, while providing copyright protection of the rest of the works. The free flow of information, which is regarded generally as the prerequisite and goal of copyright law, is more an illusion than reality. For this reason,

it is, practically, impossible for all foreign publications to enter the Chinese market without surviving the censorship test conducted by a small number of government officials. This was one of the underlying reasons why the US had been involved in decades of bitter trade talks with China before launching a WTO dispute eventually against China in 2009 (Chen, 2017).

The 2009 Sino-US IP dispute at the WTO has a symbolic value (WTO, 2009). At the core of the dispute was the censorship threshold required for granting copyright protection in China. The WTO ruled in favour of the US in the end, which made it necessary for China to adjust the censorship rule in its copyright law. However, the adjustment that China made in the subsequent revision of its copyright law was only formalistic, leaving the question only more obscure than before. Consequently, the US Trade Representative refers frequently to China's lack of the free flow of information as a fundamental trade barrier in many of its reports.

As a result, China has to confront more structural problems in future. For one thing, online copyright piracy is still rampant in China due to the lack of effective and sustainable legal mechanism. The Chinese government is accustomed to the use of regular campaigns of filtering the web to curb and crack down on copyright-infringing materials, but it is a medley of different goals, the most important of which is to block access to those materials that wouldn't survive the censorship or even contravene the standards of publication established by the Chinese government. The side effect, however, is that Chinese users find it psychologically legitimate to circumvent such campaigns, access unlicensed contents, and use piracy APPs stealthily.

There are a number of legal measures yet to be transformed into the pending amendment of the Copyright Law, a project that China claimed to launch in 2011, but still lingers in the preparatory phase of a long legislative review. Those measures are expected to bring improvements, for example, on the protection against unauthorized transmission of live broadcast programmes by enhancing the level of criminal sanctions on potential infringers. The reasons for delaying the validation of these long prepared amendments are complex. But, again, the interests of governmental bodies in granting licence to publishers and distributors constitute an obvious barrier.

IP-related Trade and Investment Law: Unfulfilled Promises Awaiting Enforcement

Other relevant IP laws could be found sporadically in China's competition laws, trade laws, and investment laws. But this patchwork renders, at best, merely a fragmentary legal framework possible, which leaves many loopholes in the protection of IP-related interests of foreign enterprises in China. This is also one of the most disputable issues at stake in bilateral or multilateral negotiations between China and other major industrial countries.

For example, the protection of trade and commercial secrets is of widespread concern to foreign investors, but one can only find relevant regulations in a bunch of laws, regulations, and judicial interpretations. When interpreting the Law against Unfair Competition, the Supreme People's Court (SPC) defines trade secrets with three distinct features: they must be "unknown to the public" and "capable of bringing economic benefit to the owners, whilst assuming practical applicability". Besides, rights owners must have taken "security measures" to protect them. In 2018, China also enacted an amendment of that law with regard to the protection of trade secrets. In 2019, the SPC issues a new judicial interpretation concerning preliminary injunctions for the purpose of protecting IP and trade secrets.

However, what "unknown to the public" means in different parts of the world is highly controversial. Besides, many companies are unaware of the need and means of taking security measures to protect information that they think could be classified as "trade secrets". In legal practice, Chinese courts often consider factors beyond the abovementioned elements such as the need to balance the interests of those companies against the interests of employees who disclose confidential information of the companies they work for. In this case, companies suffer systematically from infringement of trade secrets, as the law fails to impose punishment stringent enough to deter rampant infringement. Besides, no law addresses the case where such commercial secrets are submitted to government bodies, which seems to be an inevitable question for a country that relies heavily on state-owned enterprises for advancement of the national economy.

Another recent statute in respect of IP protection and, in particular, technology transfer is the Foreign Investment Law of 2019. The law was supposed to replace the previous

company laws applicable to foreign enterprises in China. As a result of hard trade negotiations with the US, the law explicitly bans stealing IP and commercial secrets from foreign companies as well as coercive policies of technology transfer that governments might impose on foreign enterprises. Violation of these principles may lead to criminal sanctions. China's legislature passed the law in a swift process that few laws would have the privilege to undergo. Apparently, this represents China's efforts to address some common concerns of foreign governments and business.

However, it is highly doubtful whether such broad principles could be enforced effectively in practice without further laws and regulations specifying those vague terms. This is a common issue of similar laws in China that merely serve to announce the so-called fundamental principles without feasible details of legal enforcement. In fact, Chinese government officials are often reported to have either ignored or denied the existence of forced technology transfer. In the turmoil of Sino-US trade war, public authorities in China feel it legitimate to reject such accusations as purely fabricated out of political hostility (Xinhua, May 29, 2018).

Besides, the Foreign Investment Law allows the Chinese government to expropriate the investment of foreign investors for the public interest, on the condition that the latter will be offered "fair and reasonable compensation". Finally, foreign investment is subject to China's national security reviews whose decisions are final and binding. These provisions could serve as the basis for the Chinese government to take retaliatory measures against companies from countries that the Chinese government is not aligned with, which might exert negative influence on the incentive of foreign companies to initiate innovation or facilitate legitimate technology transfer in China.

5. Conclusion

China's economic reforms assume an antithetical aspect from the very beginning, but it becomes increasingly obvious that the economic convergence cannot offset the political divergence in the global context. Currently, such an antithesis is reflected by trade frictions more condensed than ever, which coalesce around the discrepancies with regard to the acquisition and protection of IPRs, especially in the areas of industrial innovation (patent), commercial values (trademark), information and cultural products (copyright), and technology transfer (trade and commercial secrets).

The recent developments of China's intellectual property regime exhibit such conflicts of interests as a key component of its knowledge-driven and innovation-oriented economy. In fact, the clash between China's political divergence and its economic convergence is highlighted in its decade-long reforms, in particular, by the contradictions between China's state-oriented innovation system and the world's neo-liberal economic order. This is a natural outcome of China's economic developments. In core areas such as high-tech products and industrial innovation, the last decade witnessed China's preeminent transformation from a passive follower to a proactive advocator of IP standards. In a sense, this represents China's progress in technological and commercial fields, which underpins China's role as an endorser of strong IP protection in future.

However, certain entrenched limits characterizing China's state-oriented economy and cultural system such as information blockade and coercive technology transfer may serve as catalysts that are apt to provoke acrimonious confrontation between China and major economies. The current narrative in the Sino-US trade war fully reveals the systematic clashes between the world's two biggest economies. What used to lurk behind numerous cooperation opportunities in the most populous country now shows up as a corner of an iceberg. In other words, China's incomplete reforms have taken on a new form: as China's influence on the global economy grows, conflicts of diverse national priorities become more palpable than simple-minded economic cooperation.

Disclosure statement

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