



Exploration of China's Intellectual Property Policy as a Paradigm for Brazil's Upcoming Development

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ABSTRACT: *This article examines how China attracted significant foreign investment despite lacking a strong intellectual property protection (IPP) system. It emphasizes that factors like China's large, untapped domestic market and strategic location advantages outweigh concerns about IPP for transnational corporations. Additionally, it discusses China's historical use of systematic IPR violations to promote economic growth and technological progress. By comparing it with the U.S.'s early development practices, it shows how weaker IPP systems have historically benefited developing countries. The article also examines the shift toward more robust IPP systems as nations advance to higher levels of development. Finally, it argues that IPP strategies depend on a country's stage of development, with weaker protections supporting developing economies and stronger systems fitting developed nations. Moreover, it suggests that China's strategic use of IPR policies in its economic growth can serve as a model for other developing countries, particularly Brazil.*

KEYWORDS: *Intellectual Property Protection, Economic Development, Foreign Investment, Technological Catch-up, Developing Nations, Brazil.*

INTRODUCTION

It is commonly believed that a strong intellectual property protection system is essential for attracting foreign investment. However, China's experience challenges this notion, as significant foreign investment flows into its economy despite a weak enforcement of such protections. This raises the question: how has China managed to attract multinational companies? Intellectual property protection is important for companies establishing manufacturing and research facilities abroad, as noted by Peter K. Yu:

While strong intellectual property protection is a main concern for marketing decisions, a decision to relocate manufacturing facilities is likely to be determined by such 'location advantages' as 'market size and growth, local demand patterns, transport costs and distance from markets, low wage costs in relation to labour productivity, abundant natural resources, and trade protection that could encourage "tariff-jumping" investments'. Likewise, a decision to relocate research-and-development facilities is likely to be affected by 'the level of education and training of the local workforce, the condition of its financial sector, the health of its legal system, and the transparency of governmental procedures'.

When considering China's economic rise starting in the 1970s, it's important to recognize that the country had an internal market of about one billion people. This market was largely untapped, offering enormous growth potential. For transnational companies at that time, not investing in China meant missing a crucial competitive edge over those that did. Instead of focusing only on how China managed to attract foreign investment despite concerns over weak intellectual property protection, it's more important to understand how China has consistently employed systematic violations of Intellectual Property Rights (IPR). Despite being a member of the WTO and the TRIPS Agreement since 2001, these violations have served as a strategy to speed up economic growth and technological progress.

Additionally, it's essential to acknowledge that China is not the only country; the US was also a major IPR violator during its early development in the 19th century (Peng, 2017). Over time, as the US advanced, it developed stronger IPR protections. Examining the history of other developed nations reveals that, for developing countries, engaging in IPR violations—particularly those external to their own—can promote economic and social growth by maintaining weak IPR protections. Meanwhile, for developed countries like Brazil, having a strong, well-established IPR system is far more advantageous.

BACKGROUND OF CHINA'S INTELLECTUAL PROPERTY RIGHTS PROTECTION

The origins of China's Intellectual Property Rights (IPR) system date back to the late Qing Dynasty (1636–1912). During that period, Chinese society prioritized collective ownership, which limited the scope of IPR. These cultural traditions, rooted in China's long history, continued to influence attitudes toward IPR principles into modern times. After the establishment of the People's Republic of China (PRC) in 1949, the government adopted a socialist system of public ownership. This focus on centralized production and rejection of market mechanisms hampered the development of an IPR framework.

Following Mao's death in 1976 and the failure of major initiatives, including the Cultural Revolution and the Great Leap Forward, Deng Xiaoping emerged as China's leader, introducing the “open door policy” based on economic reforms focused on modernization and opening China to global markets. These reforms enabled foreign companies to operate in China, providing them with access to a large, rapidly growing market and allowing them to benefit from low labor costs, making China highly attractive for investment. Subsequently, the Chinese government established joint ventures that required foreign companies to partner with local firms. This strategy attracted investment, transferred technology and skills, and kept benefits within China to support local industry and economic growth. The influx of foreign capital and the joint venture system enabled Chinese producers to imitate Western products and sell them internationally. Since the 1990s, China has been known as a “faking” nation, with many counterfeit factories and markets. It was estimated that 90% of movies, music, and software sold in China were pirated, resulting in billions of dollars in losses each year and accounting for approximately 8% of China's GDP from counterfeit sales. After the “open-door policy” and economic reforms led by Deng Xiaoping—aimed at establishing a socialist market economy—efforts to develop an IPR system began to take shape. China's IPR development can be divided into five phases.

The first phase started in the early 1980s, following the Sino-US Trade Agreement (1979) and China's entry into the World Intellectual Property Organization (WIPO) Convention in 1980,

when systematic laws were introduced. During this time, China enacted its first Trademark Law (1982) and Patent Law (1984), marking a key step towards establishing a comprehensive IPR framework.

The second phase, in the early 1990s, involved revisions to these laws and the introduction of the Copyright Law, partly influenced by U.S. pressure. This culminated in the 1992 China–US Memorandum of Understanding on IPR protection, which committed China to strengthening its legal protections.

The third stage coincided with China's efforts to join the World Trade Organization (WTO), requiring compliance with the TRIPS Agreement's minimum standards. This period saw major updates to China's Patent Law (2000), Trademark Law (2001), Copyright Law (2001), and the Computer Software Protection Regulations (2002).

The fourth phase, which began in 2008, involved further reforms aimed at aligning IPR laws with national innovation and development goals. Key revisions included updates to the Patent Law (2008), Copyright Law (2010), and Trademark Law (2013).

The most recent stage, beginning in 2019, has focused on strengthening IPR protection and encouraging independent innovation. During this phase, China made additional revisions to its three core IPR laws, further demonstrating its commitment to improving the robustness and flexibility of its IPR system.

In conclusion, China's development started with a counterfeit-based economy, aiming to gain manufacturing skills and achieve higher quality and independent production. This phase increased economic complexity, enabling China to enhance existing technologies and eventually innovate, transitioning from simple manufacturing to expanded industrial growth and increased economic influence.

This stage of development focused not only on economic growth but also on social progress. Industrial growth created jobs, improved infrastructure, and raised living standards. Education and skill development programs enhanced human capital, resulting in a more capable workforce. As China's industry and technology advanced, its social structure evolved. Ferrarini & Scaramozzino (2016) found that increasing complexity boosted human capital by promoting skill development and learning. Education has a positive correlation with per capita output. Thus, while a counterfeit-based economy is often viewed as a temporary or initial phase in a nation's development, it is clear that for China, it played a vital role in driving both economic and social progress. It can also serve this role for other developing countries. This phase acted as a stepping stone toward greater self-sufficiency, technological innovation, and the growth of a more complex and prosperous society.

CHINA'S IP POLICY POST-WTO

China's choice to maintain a relatively weak intellectual property rights (IPR) protection system, especially during its early economic growth, may have fostered a culture of copying among the public and Chinese businesses. This approach helped promote rapid industrial growth by allowing companies to access and replicate foreign technologies without the constraints of strict IPR enforcement. However, as China continues to develop economically and shifts toward a more innovation-driven economy, this copying culture presents serious challenges. On December 11, 2001, China officially joined the World Trade Organization (WTO) after 14 years of negotiations. By then, China's economy had already entered the

"trillion-dollar club," highlighting its increasing influence in global markets. Joining the WTO improved standards for intellectual property protection in China and brought several benefits because of its status as a developing country. WTO agreements include special provisions for developing nations, such as extended timelines for implementation, measures to increase trade opportunities, and support for developing infrastructure related to WTO operations, dispute resolution, and technical standards. Least-developed countries receive even more preferential treatment, including exemptions from many rules.

Furthermore, the needs of developing countries can justify actions generally not allowed under WTO agreements, such as providing certain subsidies. Governments may also make exceptions to patent rights to serve social purposes, such as during national emergencies or when the rights holder fails to supply an invention. Gradual improvements in IP protection increased foreign investors' confidence in China's market stability and safety. As a result, foreign investment grew, and the international community viewed China's legal framework and market more positively.

Since the WTO benefited from China's membership, major reforms to China's intellectual property protection system were unnecessary, enabling China to sustain rapid economic growth without disrupting existing practices. This balance helped China strengthen its global economic position while making use of WTO provisions. As a result, China's decision to join the WTO and sign the TRIPS agreement contributed to positive economic results. It allowed a smooth shift from a less developed to a more advanced IP system, supporting ongoing rapid growth and legal improvements.

The move toward stronger IPR protection, which is critical for enhancing global competitiveness and attracting foreign investment, may face resistance from a population and business environment used to less stringent enforcement. As China adopts more comprehensive intellectual property laws, adjusting to these new rules could be challenging for companies and individuals who have relied on imitation rather than innovation. This shift may create tensions within the business community, especially for firms that rely on copying or reverse engineering. Ultimately, while a lenient IPR system may have supported China's early economic growth, its evolving role in the global economy demands a more robust approach to protecting intellectual property. The key challenge is balancing stronger enforcement with supporting local companies as they adapt to the new legal landscape, enabling them to succeed in an environment that increasingly values original innovation over imitation.

Additionally, while counterfeiting might offer a quick shortcut for technological catch-up, it is not a sustainable or effective long-term strategy for economic growth. Although reproducing foreign products enabled China to quickly access global technologies and boost manufacturing capabilities, it cannot solely drive a country toward genuine innovation or lasting competitiveness. For a nation to truly catch up technologically, significant investments in education, research, and development (R&D), along with fostering an innovative ecosystem, are essential. China has recognized this and taken action over the past few decades. Beyond copying technologies, China has strategically invested in its education system, with a particular emphasis on science, technology, engineering, and mathematics (STEM), to develop a highly skilled workforce capable of fostering innovation. This focus on education and innovation has allowed China to transition from merely a manufacturer of foreign designs to a global leader in technological advancement. This shift is evident in the increasing number of patents, the growth of high-tech industries, and the expanding international presence of its tech companies.

In summary, this process has aligned China with global standards without hindering its economic growth. Over time, it improved the investment climate, with foreign investors increasingly confident in China's commitment to protecting intellectual property and strengthening the rule of law. While counterfeiting may have served as a catalyst, China's real technological progress has been achieved through long-term, deliberate investments in education and innovation. These efforts have positioned China not only to compete but, in some sectors, to surpass the technological capabilities of many developed countries. Counterfeiting alone cannot sustain growth; it is the combination of innovation, education, and strategic investments that determines a nation's ability to compete globally.

IS THE CHINESE IPR PROTECTION STRATEGY NEW?

Historically, developed nations have used intellectual property to maintain their technological advantage over developing countries by enforcing strict protection standards, making it harder for emerging economies to catch up. The international IP framework, supported by organizations like WTO and WIPO, favors advanced economies. Agreements such as TRIPS set rules that limit access to knowledge and technology for developing nations, hindering local innovation and increasing their reliance on major powers. Large corporations also use IP as a market barrier through strategic patents and legal battles to block emerging companies, especially in the pharmaceuticals and software industries, where high licensing fees prevent local production. Additionally, developed countries often link market access and investment to strict IP enforcement in trade negotiations, pressuring developing nations to adopt unsuitable legal frameworks. Instead of encouraging innovation, IP maintains global inequalities, reinforcing the technological and economic dominance of wealthier nations.

China's strategy of using counterfeit goods to catch up technologically resembles the methods used by other developed countries during their early industrial stages. In the 19th and early 20th centuries, nations such as the United States, Germany, and Japan relied on imitation, copying, and reverse engineering of foreign technologies to accelerate their economic and technological growth. For instance, during early industrialization, the United States engaged in unauthorized copying of British machinery and manufacturing techniques, which were crucial for advancing American industry. Similarly, Japan's Meiji Restoration involved adopting foreign technologies through copying and adaptation, which enabled rapid modernization and industrial growth. These countries used imitation as a foundation, gradually improving foreign technologies and developing their own innovations.

In this context, the US primarily led the development of a global IPR protection system to sustain its technological and economic dominance following World War II. It shaped the multilateral IPR framework by enacting strict laws to safeguard American innovations and prevent developing countries from gaining a technological edge. The system was refined through the Washington Consensus of the 1980s-90s, which promoted free-market reforms, deregulation, privatization, and strong IPR laws as parts of economic modernization efforts. These policies encouraged developing nations to adopt comprehensive IPR laws in exchange for aid and trade benefits, most notably reflected in the 1990s TRIPS agreement negotiated during GATT's Uruguay Round. Managed by the WTO, TRIPS established the global IPR standard, aligning international law with the interests of industrialized nations—especially the U.S., which uses IPR to maintain technological dominance and control access to innovations. In this system, the U.S. held significant influence over the WTO by leveraging its economic power and strategic alliances to shape global trade rules that favored American companies. As

a result, countries seeking to participate in global trade had to adopt stringent IPR regulations to protect U.S. technologies and industries, particularly in sectors such as pharmaceuticals, software, and electronics. The system aimed to prevent potential competitors from developing their own technological bases by making access to knowledge and innovations more costly and limited. It also created a framework in which intellectual property became a vital tool for the U.S. to maintain its ongoing economic and technological dominance.

In the 1980s and 1990s, China primarily mimicked foreign products and technologies to close its technology gap. This strategy boosted domestic innovation, leading to the rise of giants like Huawei and ZTE. While considered unfair internationally, it was essential for China's rapid emergence as a tech power, similar to how other nations have historically relied on imitation. Its early IPR system was weak and pragmatic, allowing China to access Western technology at lower costs through methods such as IP theft, forced transfers, and taking advantage of lax enforcement instead of following strict international standards like TRIPS. This approach helped China build a strong industrial base and grow quickly. Unlike the protectionist policies of developed nations, China adopted an open but non-compliant approach, using its market, low costs, and the willingness of foreign companies to share technology via joint ventures. This deliberate strategy aimed to exploit global IP vulnerabilities for economic benefit, enabling China to develop a robust tech industry and become a leader in manufacturing, high-tech sectors, and innovation. As its economy expanded, China strengthened its IPR protections to align with international standards after building its technological expertise and industrial capacity. This demonstrates that, for developing countries, weak IPR can be a strategic tool for growth. The pattern of enhancing IPR protections as nations develop shows that developed countries benefit from strong protections to stay ahead, while developing countries often leverage weaker protections to foster growth.

Today, China uses IPR to enhance its technological and manufacturing capabilities. Effective enforcement boosts China's global standing and encourages compliance, especially in areas like 5G and AI. Through patents and licensing, China maintains its competitiveness and limits foreign access to key technologies. This shift from importer to exporter highlights how IPR now supports China's geopolitical and economic ambitions. China's rise has reshaped the global order. Initially, China followed international IPR norms, but over time, it challenged the U.S.-dominated system by adopting a different approach. As its economy and technological skills grew, China relied on state-led innovation, strategic use of weaker protections, and occasionally ignored international standards. This enabled China to build its tech base through practices like forced technology transfers and exploiting foreign IPRs, similar to methods once used by the U.S. To better align with international norms, China moved from copying to promoting innovation, focusing on protecting its own IPR for economic growth and influence.

This shift ended the U.S.'s historical dominance in global intellectual property governance, marking the beginning of a new phase in international trade and technological competition. China's strategic use of IPR to expand its influence, along with its selective participation in global IP regulations, marks a significant change from the U.S. approach. As a result, the global IP landscape has become more complex and competitive, with power now shared among China and other emerging economies rather than concentrated in a single dominant country. Recently, the United States has taken a more assertive stance toward the World Trade Organization (WTO) by blocking new judges from joining the WTO's Appellate Body, the organization's primary platform for resolving disputes. This body is crucial for resolving trade disputes and

ensuring that member nations, including the U.S., comply with WTO rules. However, as China's economic influence grew, the U.S. believed the Appellate Body no longer aligned with its interests, especially regarding China's trade practices. The U.S. criticized what it perceived as the body overstepping its authority and interpreting WTO rules in a manner biased toward developing countries, such as China, which often received more favorable trade terms under WTO agreements. By blocking the appointment of judges, the U.S. effectively disabled the Appellate Body, weakening the WTO's ability to resolve disputes and enforce trade laws. This move reflected broader frustrations with what was seen as an imbalance in the global trading system, where the U.S. felt the WTO's dispute resolution process was insufficient for addressing issues such as China's government subsidies, intellectual property theft, and trade deficits. The U.S. argued that the WTO failed to evolve and adapt to the changing global economy, especially as China's rise shifted the balance of power. Through this action, the U.S. expressed its dissatisfaction with the WTO's structure and decision-making process while attempting to regain influence over trade disputes, particularly those involving China. Blocking the Appellate Body became a key point of disagreement and a major step in the U.S.'s effort to reshape international trade rules to better serve its national interests.

USING THE CHINESE INTELLECTUAL PROPERTY MODEL AS A REFERENCE FOR BRAZIL

As demonstrated, the original Chinese legislation explicitly prohibited granting patents for pharmaceutical substances and products obtained through chemical processes. However, the amendment effective in 1993 removed this prohibition, allowing patents for pharmaceuticals and extending the patent term from 15 to 20 years. In 2001, following negotiations for accession to the World Trade Organization (WTO), China further amended its legislation to align with the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs).

In 2008, the law was amended again to better align China with international standards, including adopting the principle of absolute novelty and limiting patent rights, similar to the Bolar exemption. This new amendment established the linkage system, which connects the granting of a generic drug's health registration to the expiration of a related patent, and also mandates the payment of punitive damages for patent infringement. Thus, China became the world's top PCT applicant, surpassing the United States for the third year in a row with 69,540 applications. The country has clearly established itself as a leader among nations that see intellectual property protection as a way to achieve sustainable economic growth.

In contrast, despite being pioneers in protecting inventions worldwide—starting with the Decree of April 28, 1809, which granted an exclusive privilege of fourteen years to "inventors and introducers of some new machine and invention in the arts"—Brazil, beginning with Law n° 9,279/1996, extended the protection term for invention patents to 20 years from the filing date (or at least 10 years from the grant). This sparked debates about unfair "monopolies" that harm public interest, leading to Direct Action of Unconstitutionality (ADI) n° 5529, which, in May 2021, the Supreme Federal Court reinforced by affirming the unconstitutionality of the provision setting the minimum patent protection term at ten years from the grant. This reflected a strong judicial stance against patent holders' interests and created some legal uncertainty for those investing in new technologies. (see: <https://www.migalhas.com.br/depeso/376145/brasil-e-china-em-rumos-distintos>). From this perspective, the Chinese IP model becomes highly relevant to Brazil, demonstrating how strategic policies focused on innovation and technology commercialization can produce transformative results. This approach has allowed Chinese

companies to become leading patent applicants, increasing IP registration and licensing among universities and research institutes. By complying with international agreements like TRIPs, China's system demonstrates legislative frameworks that effectively promote innovation despite implementation challenges. Central to this success are Chinese initiatives such as the National Medium- and Long-Term Program for Science and Technology Development, which emphasizes translating research findings into commercially viable technologies. Brazil could significantly benefit from adopting similar strategies, encouraging collaboration among research institutions, universities, and the private sector to establish successful enterprises that actively seek patent registration. Although Brazil has strong intellectual property laws, there is considerable room for improvement by taking inspiration from the Chinese model. Improving processes for protecting and licensing inventions can help Brazil strengthen its own IP system. Given the distinct legal frameworks of Brazil and China, this presents not only an opportunity for adaptation but also a pathway to enhance Brazil's innovation environment and improve its standing in the global market.

CONCLUSION

In conclusion, this article has examined how China strategically utilized its initially weak intellectual property protection system to advance technology and foster economic growth. By not fully adhering to international intellectual property standards, China gained access to foreign technologies and used them to quickly develop its industrial sector. Meanwhile, the U.S. has shaped the global intellectual property system to maintain its technological dominance, often leveraging institutions like the WTO to ensure that international trade rules favor its interests. However, as China's economic and technological influence grew, it began to challenge and move beyond the U.S.-led global governance of intellectual property, adopting a new approach that combines state-led innovation with selective participation in international IP norms. Ultimately, this paper suggests that while strong intellectual property protections benefit developed nations, weaker protections can serve as a strategic advantage for developing countries seeking to close the technological gap. From this perspective, the Chinese IP model is highly relevant to Brazil, demonstrating how strategic policies focused on innovation and technology commercialization can yield substantial outcomes. This strategy has enabled Chinese companies to become top patent filers, boosting IP registration and licensing within universities and research institutes. By adhering to international agreements like TRIPs, China's system showcases legal frameworks that effectively foster innovation, despite some implementation challenges. Although Brazil has strong intellectual property laws, there is considerable room for improvement by taking inspiration from the Chinese model. By improving its protection and licensing of inventions, Brazil can strengthen its IP system. Considering the different approaches of Brazilian and Chinese laws, this is not just about adaptation; it's about enhancing Brazil's innovation capacity and improving its global market position.

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