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U.S. PATENTS AND COMPETITIVENESS WITH CHINA

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INTRODUCTION

Current discussions of patent policy often invoke comparisons with China. In particular, they call for more powerful enforcement of patents domestically to compete with innovation in China.¹ And it is true that China is enjoying massive technological growth in fields such as artificial intelligence and 5G communications.

But, in fact, that growth has very little to do with patent protection, either in the United States or in China. And, for this reason, incautious action to broaden patent protection and enforcement in the United States could ultimately harm, rather than help, domestic competitiveness.

INNOVATION THROUGH PRIZES, NOT PATENTS

Technological growth in China has largely been spurred through the Chinese government's concerted effort to provide subsidies, incentives and prizes for innovation in key areas such as artificial intelligence and wireless communications. Released by China's State Council in May 2015 the "Made in China 2025" plan calls for the development of Chinese high-tech industries through "financial support

policies" and "fiscal and taxation policy" designed to circulate money to businesses in those industries.² In accordance with this, the Chinese government invested \$430 million in artificial intelligence research over the course of just six months in 2018.³ China has also outspent the United States in 5G mobile communications technology by \$24 billion since 2015.⁴

China is encouraging its citizens to file patent applications but those encouragements further demonstrate that technological development in China is being motivated by prizes rather than patents. The Chinese government subsidizes the costs of patent filings, which eliminates friction toward filing⁵ but it also offers patent applicants a wide range of valuable rewards, ranging from tax breaks,⁶ to desirable housing,⁷ to government contracts⁸ and even commutation of prisoners' sentences.⁹

To the extent that patents are stimulating greater innovative activity in China, then, it is likely because of the rewards offered rather than the patents themselves.

IS PATENT ENFORCEMENT REALLY DRIVING GROWTH IN CHINA?

Indeed, there are multiple reasons to believe that patents and patent enforcement are of minimal value and interest in China, such that the patent system is not a substantial driver of growth in the country.

For one thing, Chinese patent applications are low in quality. Chinese law offers three types of patents: "invention" patents akin to standard utility patents for inventions in the United States, "design" patents for ornamental or decorative features on products and "utility model" patents for "technical solutions proposed for the shape and structure of a product."¹⁰ The latter two patent types are less rigorously examined and less powerful as enforcement tools.¹¹ Multiple recent studies show that Chinese patent filings have been predominantly of the design and utility model types, which suggests that the incentives for filing patents are not encouraging serious inventive activity.¹²

Furthermore, Chinese patents tend not to be retained for long. A *Bloomberg* study found that 90 percent of design patents in China, and substantial numbers of invention and utility model patents too, are abandoned within the first five years of their enforcement term.¹³ This again suggests that patents and patent enforcement are not a substantial asset for the Chinese innovation economy.

And finally, patent enforcement damages in China tend to be very low. In fact, a 2018 survey of Chinese patent litigation found that the median damage awarded was under \$5,000.¹⁴ It is hard to believe that such a small monetary sum drives

high-tech innovation, particularly when compared to billions in government investment. To be sure, China is considering amendments to its patent laws that could theoretically bolster patent enforcement but those amendments are not in effect and likely are not yet affecting the behavior of technology firms.¹⁵ As a result, there is little reason to believe that patents and patent enforcement are a serious driver of the technological innovation that China enjoys today.

CHINESE INTELLECTUAL PROPERTY THEFT IS UNRELATED TO PATENTS

A separate issue often raised about China and technological development is the country's acts of "intellectual property theft."¹⁶ Such allegations are well-supported and almost certainly true but they are unrelated to patents.

Intellectual property theft has generally referred to theft of trade secrets. Two forms of such theft are generally discussed: industrial espionage, involving hacking of corporate systems or other spying to obtain proprietary information; and forced technology transfer, in which the Chinese government requires disclosure of proprietary business practices as a condition for doing business in China.¹⁷

Neither industrial espionage nor forced technology transfer involves patents, and indeed neither could. A patent is required to make full disclosure in writing of the workings of the patented invention.¹⁸ If a company were to patent its technologies, then, there would be no need for the Chinese government to spy on the company or force disclosures; the government could simply read the patent on the U.S. Patent and Trademark Office's website. Intellectual property theft instead refers to proprietary corporate information closely held—a particular type of intellectual property called trade secrets, which is distinct from patents.

CONCLUSION

While there is no doubt that China is making coordinated efforts to lead in multiple important emerging technologies, the United States should respond simply by encouraging competition among domestic firms.¹⁹

It is a basic American value that capitalist competition is the default driver of economic success. Experts on economic growth recognize that competition drives competitors to outdo each other through innovation, thereby pushing the technological frontier outward.

As temporary monopolies that suppress competition, patents are an important part of innovation but must be used in appropriate measures. Failing to do so undermines the rate of American innovation for at least two reasons. First, increasing patent rights encourages companies to put resources

into patent disputes rather than research and development. Patent licensing can be an incredibly lucrative business for lawyers but it does not engage scientists and engineers to innovate. Obviously some level of patent protection is necessary to preserve the value of R&D investments but scaling up protection too far can make rent-seeking more valuable than research.²⁰ And second, U.S. patents are not solely owned by U.S. firms. A rapidly growing number of patents in the United States are held by Chinese companies.²¹ If patents become too powerful an enforcement tool, they could ultimately be turned into weapons against American companies, further stymieing domestic innovation and giving a leg up to foreign competitors.

ABOUT THE AUTHOR

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ENDNOTES

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