



## How China Can Innovate

**Unless China improves its intellectual property protection, it will not create the environment needed for sustained innovation and growth.**

Earlier this year, innovation was made the centrepiece of China’s latest five year plan. As the country transitions from a state-led economy fuelled by cheap labour and investment in infrastructure to a services-based nation, capable of sustaining growth, the government has made **unprecedented resources** available to private firms to spur innovation.

As China’s effort to let market forces play a more “decisive role” in the economy takes shape, private firms are going to be crucial to both sustained growth and innovation. The noises coming from the top are encouraging. Earlier this year, Premier Li Keqiang said, “Innovation is the primary driving force for development and must occupy a central place in China’s development strategy.” He went on to add, “We should make consistent efforts to encourage the public to start businesses and innovate.”

Perhaps illustrating the urgency to foster a more innovative economy, he used the word “innovation” 65 times in his annual government work report, up from 38 times last year, according to the **Wall Street Journal**.

But as we point out in the paper, **Intellectual Property Rights Protection, Ownership, and Innovation: Evidence from China**, co-authored

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with Josh Lerner and Chaopeng Wu, forthcoming in the *Review of Financial Studies*, the success of these efforts will depend on building more robust institutions.

Until now, China has achieved the fastest growth in history despite its poor legal and financial institutions. It has also become one of the most prolific patent filers in the world. This has led many to question whether China is an exception to the Schumpeterian rule that effective legal and financial institutions lay the foundation for stronger economies. One argument for this view is that in the absence of legal protection, state-ownership has both incentivised and protected state firms from expropriation, therefore intellectual property protection was not entirely necessary.

### Protection matters

But these arguments miss the potential of private firms to innovate in China and how intellectual property protection affects these firms. In our study, we use China’s privatisation drive of 1995-2005 to identify how private ownership contributed to innovation and, importantly, how varying levels of intellectual property protection across China affected it.

When we examined firms, pre- and post-

privatisation, we found that innovation measured by patents filed, increases significantly after firms are privatised. On average, firms' patent stock increases 200-300 percent in the five years following privatisation. But, crucially, the increase in innovation is significantly larger in cities with high intellectual property protection than in cities with low protection.

Privatisation alone has essentially no effect on innovation in places where protections are weak. This is important, since a small increase in intellectual property protection leads to large gains in post-privatisation innovation. For example, we show that a one standard-deviation increase in the local intellectual property protection score nearly quadruples the post-privatisation increase in patent stock.

One might argue that number of patents alone doesn't necessarily give the best guidance of innovative flair. In addition to quantity, we find evidence that patents of these private sector firms are higher quality – cited more often internationally than patents of state-owned firms.

### **Better courts needed**

As we acknowledge in our paper, China has formally recognised the importance of intellectual property protection, becoming a member of the World Intellectual Property Organisation in 1980. The letter of the law is consistent with international standards but, in practice, there is evidence that China has a poor record in enforcement and significant differences exist across regions in the interpretation and enforcement of intellectual property law.

As shown above, this can mean a differing level of protection for firms which need to file a dispute in a province that doesn't have a high degree of enforcement. This can cause divergent economic outcomes depending on the region; the coastal cities were found to have stronger legal systems in our study.

We are suggesting that China should continue to improve its legal institutions in the letter of the law and the enforcement of the law. While the code of law is uniform, the quality of local enforcement is important. The legal profession as a whole is in need of reform. Judicial independence is still lacking and regional governments still hold much sway over local courts.

While China has demonstrated that it is capable of achieving incredible growth without strong legal enforcement of intellectual property, as it advances to the technology frontier, it will have to develop a stronger legal system to support the innovation it so

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desperately wants.

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