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Do institutions not matter in China? Evidence from manufacturing enterprises

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ABSTRACT

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This study addresses the apparent puzzle that China achieved spectacular economic performance despite weak institutions. Using a World Bank survey of 1566 manufacturing enterprises in 18 Chinese cities, we investigated whether property rights protection mattered for enterprise performance. We found that property rights protection had a positive and statistically significant impact on enterprise productivity. Two-step GMM estimation and heterogeneous response estimation further established the causal impacts of property rights protection on enterprise productivity. These findings were robust to various controls, exclusion of outliers, and alternative measures of productivity and property rights protection. *Journal of Comparative Economics* **41** (1) (2013) 74–90. Department of Economics, National University of Singapore, Singapore; Faculty of Business and Economics, University of Hong Kong, Hong Kong.

1. Introduction

> "Against this large and cumulative backdrop of the solid empirical demonstration of the virtuous effects of efficient financial and legal institutions, China appears to be a staggering anomaly", Huang (2008, p. 32).

Numerous cross-country and within-country studies have shown that institutions are fundamental to economic performance (Besley, 1995; Knack and Keefer, 1995, 1997; Mauro, 1995; Hall and Jones, 1999; La Porta et al., 1999; Acemoglu et al., 2001, 2002). Indeed, the World Bank and International Monetary Fund have stressed the importance of sound institutions in the growth of developing economies (Carothers, 2006; *Economist*, March 15, 2008).

However, the record of the Chinese economy over the past 30 years seems to contradict the scholarly finding that institutions are essential to economic performance. Until recently, China provided little formal protection of private property; in particular, protection of private property was not written into China's Constitution until 2004 (Blanchard and Kremer, 1997; Rodrik, 2004a,b; Allen et al., 2005; *Economist*, March 15, 2008). Nevertheless, China's economic performance has been nothing less than spectacular.

Did institutions really not matter for the performance of the Chinese economy? One explanation is that de facto institutional quality varied widely across China (Du et al., 2008; World Bank, 2008; Lu and Tao, 2009), and that China's economic

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development was concentrated in those regions where institutions are reasonably good.[1] This might possibly explain the apparent contradiction between the poor state of China's institutions and the country's spectacular economic performance at the macro-level.

Here, using detailed data at the enterprise level, we were able to address the China puzzle (i.e., that institutions were not important for economic performance) at the micro-economic level. We focused on the protection of private property, which is arguably the most important aspect of institutions (North, 1991; Acemoglu et al., 2001; Besley and Ghatak, 2009). Specifically, we investigated whether enterprises enjoying better property rights protection exhibited better performance.

We drew on the *Survey of Chinese Enterprises*, conducted by the World Bank with the Enterprise Survey Organization of China in early 2003.[2] The data set covered 1566 enterprises drawn from 9 manufacturing industries and 18 cities during a period when property rights were uncertain (recall that the Constitution guaranteed private property only in 2004). To measure enterprise performance, we used labor productivity, i.e., the logarithm of output per worker of an enterprise, and total factor productivity estimated using either the panel fixed-effect method or the methodology developed by Levinsohn and Petrin (2003). Our focus on productivity was motivated by Acemoglu et al. (2001), who studied the impact of institutions on income per capita, and interpreted the results as providing implications for the impact of institutions on economic growth.[3]

The quality of property rights protection can be measured by the effectiveness of various means for addressing disputes associated with private property. One means of resolving disputes is court litigation, and the other is to seek help from the state.[4] To measure the effectiveness of court litigation, we used the perceived likelihood that the legal system will uphold contract and property rights in business disputes. To measure the effectiveness of seeking help from the state, we used the perceived share of government officials oriented toward helping business.

Recent political economy studies showed that the state played a more important role in codifying and protecting private property than court litigation (Besley and Ghatak, 2009). This would be especially so in the case of China. Prior to 1978, under central planning, legal institutions were not needed at all. Subsequently, after the beginning of reform, the legal system adapted slowly to a complicated and fast-changing economic environment (e.g., Fan, 1985; Lieberthal and Oksenberg, 1988; Zhao, 1989; Li et al., 1990; Clarke, 1991). Moreover, in China, the legal system lacked autonomous enforcement powers. Even after 30 years of economic reform, government officials remained heavily involved in interpreting and enforcing national laws and ordinances. Consequently, it seemed reasonable to focus on the effectiveness of seeking help from the state as the principal measure of property rights protection, while using the effectiveness of court litigation as an alternative measure of property rights protection as a robustness check.

Our identification strategy exploited regional variation in the quality of institutions.[5] We found that an enterprise perceiving better protection of property rights had a statistically significantly higher productivity. In order to conclude that this relation was indeed due to a causal impact, that stronger protection of property rights increased productivity, we ruled out a number of alternative explanations and conducted various robustness checks.

First, we checked that our finding was not driven by omitted variables. We introduced a host of covariates related to CEO characteristics (such as human capital and political capital) and enterprise characteristics (such as enterprise size, enterprise age, private ownership percentage, and skilled labor ratio) used in previous research, as well as industry and city dummies. Our result was robust to the inclusion of these controls. It is also important to note that the positive impact of property rights protection on productivity became smaller with the inclusion of city dummies, which supports our earlier conjecture that the China puzzle could be explained in part by the concentration of growth in particular geographical areas with better institutions.

Second, we worried that our finding might still be biased due to some unobserved characteristic correlated with both expropriation and productivity. To address such potential endogeneity, we used the two-step Generalized Method of Moments (GMM) estimation with two alternative instruments for property rights protection, viz., the average assessment of property rights protection by enterprises of other industries located in the same city, and the logarithm of population in the respective city around 1918–1919. The two-step GMM estimates reinforced our findings that property rights protection had a positive and significant causal impact on productivity.

Third, we applied the heterogeneous response method of Rajan and Zingales (1998). Following Blanchard and Kremer (1997) and Rajan and Subramanian (2007), we used the number of suppliers to measure, for each enterprise, its reliance on the external environment. We found that enterprises which were more reliant on the external environment (in the sense of using more external suppliers) exhibited relatively higher productivity in cities with stronger property rights protection. In addition, following Djankov et al. (2002), we used the number of days to register a new business to measure, for each

[1] Another possible explanation is that the importance of institutions varied across industries and that China's economic development was concentrated among industries for which institutions are less important.

[2] The data set has recently been used by Cull and Xu (2005), Ayyagari et al. (2007), and Dong and Xu (2009), among others.

[3] By contrast, the existing literature on Chinese institutions focuses on the impacts of institutional quality on intermediate choices such as reinvestment, R&D investment and location (Cull and Xu, 2005; Du et al., 2008; Lin et al., 2010). We focus on an end outcome of welfare and policy interest – enterprise productivity.

[4] These two means for resolving disputes are formally called litigation through courts and regulatory state (Djankov et al., 2003).

[5] It is important to emphasize that regional differences in institutions across China are both significant and persistent. Using the Fan, Wang, and Zhu (1999–2010) data with consistent regional coverage, we correlated the absolute scores and ordinal ranking of the various provinces in 1997 and 2007. The correlations across the two years exceeded 0.80.