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Property rights security and firm survival: Micro-data evidence from China

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ABSTRACT

The security of property rights has been found to play important roles in various aspects of firm behaviors. However, its effects on firm survival have been largely neglected in previous research. Using annual data of Chinese manufacturing firms over the period 1998–2008, we analyze the link between property rights security and firms' survival probabilities, differentiating firms into stated-owned enterprises (SOEs) and non-SOEs, and considering whether the linkage evolves over time. Examining a wide range of specifications, we find that the protection of property rights, by limiting government intervention and promulgating laws and rules, is crucial for firm survival. Moreover, better security of property rights benefits non-SOEs more. We also find that the beneficial effects of secure property rights on firm survival are more pronounced for years after 2003 when China speeded up deregulation to comply with its WTO commitments and reform target to establish a modern system of property rights than for years before 2002.

1. Introduction

Many studies have shown that protection of property rights is essential for growth and prosperity (Acemoglu & Johnson, 2005; Acemoglu, Johnson, & Robinson, 2001; Acemoglu & Robinson, 2012; Coase, 1937, 1960; De Soto, 2000; Glaeser, Ponzetto, & Shleifer, 2016; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997, 1998; Levine, 2005; North, 1990; Shleifer & Wolfenzon, 2002). Moreover, as the economy of a country depends on its ability to produce goods and services which is accomplished by firms, there has been a renewed interest in literature to understand the effect of secure property rights on various aspects of firms' behaviors and performance (Baker, Stein, & Wurgler, 2003; Baumol, 1990; Beck, Demirguc-Kunt, & Maksimovic, 2005; Berkowitz, Lin, & Ma, 2015; Cull & Xu, 2005; Demirguc-Kunt & Maksimovic, 1998; Djankov, Qian, Roland, & Zhuravskaya, 2006; Johnson, McMillan, & Woodruff, 2002; King & Levine, 1993; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000, 2002; Levine, 2006; Rajan & Zingales, 1998; Shleifer & Vishny, 2002). These studies, however, have remained largely silent about the role of property rights protection in firms' survival prospects. Firm survival literature, especially recent micro-econometric studies, typically put the emphasis on the importance of structural indicators such as firm characteristics, industry characteristics and macroeconomic shocks in determining

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firms' exit outcomes (see, Dunne, Roberts, & Samuelson, 1988; Geroski, 1995; Harhoff, Stahl, & Woywode, 1998; Zingales, 1998; Bougheas, Mizen, & Yalcin, 2006; Farinha & Santos, 2006; Goldeng, Grünfeld, & Benito, 2008; Guariglia, 2008; Bridges & Guariglia, 2008; Carpenter & Guariglia, 2008; Spaliara, 2009; Alvarez & Görg, 2009; Görg & Spaliara, 2009; Tsoukas, 2011). The purpose of this paper is to provide, preliminarily, a systematic empirical analysis of the direct (ceteris paribus) impact of property rights security on firm survival, which is important for understanding the mechanism by which the protection of property rights affects firm dynamics and economic growth.

The main reasons why secure property rights may shield firms from exit can be summarized as follows. On the one hand, by protecting firms from government intervention and predation (namely, "grabbing hand" policies that increase the cost of doing business rather than "helping hand" services that are conducive to firms' economic activities), well-defined property rights allow firm-owners to retain all their earnings and thus encourage them to pursue strategies of profit maximization and actively engage in sustainable operations. On the other hand, improving the protection of property rights fosters a more efficient market: by ensuring consensus expectations, transaction cost can be reduced through fair, transparent, and uniform penalty-reward assignments. Property rights are viewed as key to channeling resources toward productive investments by North (1990), as "the inability of societies to develop effective, low-cost enforcement of contracts is the most important source of both historical stagnation and contemporary underdevelopment in the Third World." (p.54) Many studies have shown that better protection of property rights can reduce firms' cost of capital, enhance their corporate governance, encourage overall investments in physical and financial assets and induce efficiency-enhancing allocation of investable resources from fixed assets to intangible ones and\or from short-term investment for production use to long-term investment in innovation (see, Besley, 1995; Acemoglu et al., 2001; Johnson et al., 2002; La Porta et al., 1998, 2002; Furman, Porter, & Stern, 2002; Beck, Demirguc-Kunt, & Levine, 2003; Claessens & Laeven, 2003; Beck et al., 2005; Cull & Xu, 2005; Lin, Lin, & Song, 2010; Lin, Lin, & Zou, 2012, for example among many others). Most of these factors are crucial for firm survival. As such, this paper follows Acemoglu and Johnson (2005) and Levine (2005) to focus on the two most important groups of property rights security indicators - those reflecting lower risk of expropriation and government intervention and those representing more ease and reliability of contract enforcement, to provide direct evidence for the beneficial effects of secure property rights on firm survival.

This paper will use firm-level data over the period 1998–2008 from China, the second largest economy and one of the most active emerging economies in the world, to see whether the security of property rights matters for firm survival, and whether such effects differ for different types of firms and over years. We believe that evidence from China will enrich the literature that has been to date dominated by studies primarily dealing with developed countries. Moreover, China's relevant reforms in recent years not only aim to enhance its property rights security that may enhance the survival of firms as a whole, but also introduce more competition that may have differential effects on strong and weak firms, that is, the survival chance of the former may be improved and that of the latter reduced. This phenomenon has yet to attract sufficient attention in the literature and we hope this paper will incite interest and encourage future studies in this area. Furthermore, we think that arguments in favor of property rights security may be especially relevant for developing and transition economies, including China, as they move away from a system characterized by underdeveloped financial market, weak legal enactment, strict institutional setup and frequent direct government intervention. To allow for easy international comparison, this study restricts data to newly-opened manufacturing firms as most of the other country case studies also focus mainly on the manufacturing sector and the newly-established enterprises. Although results from a specific industry and a specific group of firms may not be applicable to other industries and other firms, studying a narrowly defined group can provide much clearer results since the sample firms share similar characteristics, and such observations can help us to avoid sample selection bias in such survival analysis (we will discuss this in more detail later) as much as possible.

It finds that the protection of property rights, by limiting government intervention and promulgating laws and rules, is crucial for firm survival. When differentiating the effects of property rights security on the survival of state-owned enterprises (SOEs for short, hereafter) and non-SOEs, it finds that non-SOEs benefited more from better security of property rights. Moreover, the beneficial effects of property rights security on firm survival are found to be more pronounced for years after 2003 than for years before 2002, as China speeded up deregulation to comply with its WTO commitments and reform target to establish a modern system of property rights. These findings are robust to alternative estimation methods, to alternative definitions of SOEs and to the consideration of possible effects of change in survey threshold. As many countries have become concerned with developing policies to facilitate "creative destruction" and help improve the success rate of newly-established firms (especially for those with higher productivity levels) and encourage start-ups and innovations, this paper indicates that enhancing property rights protection, through a clean government with less "grabbing hand" intervention and an efficient contract enforcement system, is crucial for firms to live long enough to contribute to the economy.

It is worth mentioning that this paper is not the first to consider the effects of property rights security on firm survival in the context of China. Che, Lu, and Tao (2011) use a sample of industrial firms newly established in 1998 and finds the security of property rights (or, institutional quality, measured by the percentage of extralegal payments to the government in firms' total revenues aggregated to the regional level) significantly and positively influences the survival of private enterprises in China. The current paper is closely related to Che et al. (2011) but different in the following aspects: first, it considers a broader measure of property rights security that includes two indicators: limited government intervention, and sophisticated intermediaries and laws, both of which are comprehensive indicators graded along several sub-level dimensions. Second, it considers all newly established firms (including state-owned and private firms) between 1998 and 2007; the variable of interest is a dummy indicating whether some firm disappeared in some year through 1999 to 2008. Moreover, the paper employs a complementary log-log proportional hazard rate model which is thought to be more appropriate for data collected on a yearly basis in survival literature. It also identifies which firms are more likely to benefit from improvement in property rights security with respect to firm survival. Finally, using an