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The impact of corporate governance on state-owned and non-state-owned firms efficiency in China

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ABSTRACT

The purpose of this paper is to expand the literature on the corporate governance of transition economies by analyzing the relationship between corporate governance and productive efficiency in China's publicly listed manufacturing industry firms. We use the principal component analysis and the hybrid meta-frontier DEA model, separating inputs into radial inputs that change proportionally and non-radial inputs that change non-proportionally to measure the technical efficiency and technology gap ratios of publicly listed Chinese firms in different manufacturing industries during 2010–2013. The input variables are the net value of fixed assets, staff number, and the characteristics of the corporate governance system, while the output variables are gross revenue and total profit. The empirical result shows that inefficiency due to corporate governance is the main reason for lower efficiency in most manufacturing firms. For the technology gap ratio (TGR), the metal and mineral and the machinery, equipment and instrument are the two highest efficient sectors, whereas the paper and allied products sub-industry has the lowest efficiency during 2010–2013. In addition, the ratio of state-owned firms whose inefficiency is mainly caused by corporate governance to total state-owned firms is greater than that of non-state-owned firms in each year. The TGR analysis shows that the efficiency performance of non-state-owned firms is greater than state-owned firms.

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1. Introduction

A firm's performance depends not only on resource investment, but also on the characteristics of its corporate governance system. The Arrow–Debreu model treats an enterprise as a black box that requires various kinds of production factors and targets profit maximization under a budget constraint. However, it fails to explain information asymmetry caused by the principal–agent relation and various corporate behaviors.

Corporate governance is a set of mechanisms, both institutional and market-based, designed to mitigate agency problems that arise from the separation of ownership and control in a company, in order to protect the interests of all stakeholders, to improve firm performance, and to ensure that investors get an adequate return on their investment (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2002; Shleifer & Vishny, 1997). The effectiveness of corporate governance mechanisms has been a subject of a large body of literature both theoretical and empirical for many decades. Although the large majority of corporate governance studies prior to mid 1990s were based on data from developed market economies such as the U.S., U.K. and Japan, in recent years researchers began looking into corporate governance in transition economies (Dnes, 2005). Instead of traditional principal–agent conflicts espoused in most research dealing with developed economies, principal–principal conflicts between controlling shareholders and minority shareholders have been identified as a major concern of corporate governance in emerging economies (Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). Good corporate governance can effectively mitigate agency problems – especially the agency conflicts between the controlling and minority shareholders (Gillan, 2006; Shleifer & Vishny, 1997).

As the largest transition economy, China has a unique and large, socialist, market-oriented economy. Since the majority of listed companies in China were former state-owned enterprises (SOEs) and restructured as limited liability companies, many of the Chinese listed firms have a close economic relationship with their state-owned controlling shareholders (Chen, Firth, Gao, & Rui, 2006; Liu & Lu, 2007). This leads to a unique feature of ownership structure, whereby the state has retained controlling stake in all former SOEs. In particular, over 50% of a firm's shares have been held directly by the governments at the central and local levels or by the legal entities, which are ultimately controlled by the state (Chen, Firth, Gao, et al., 2006; Wang, Xu, & Zhu, 2004).

Many researchers find that state-owned company has lower efficiency. The bureaucrats' main concern is to achieve their political and economic interests, which are often quite different from shareholders' profit maximization objective (Boycko, Shleifer, & Vishny, 1996; Shleifer & Vishny, 1994). Furthermore, SOE managers have weak or sometimes adverse incentives to improve firm efficiency, because, as public employees, SOE managers cannot personally reap the benefits of increasing revenues yet they will bear many of the costs of reducing the firm's production costs (Megginson, 2005). In addition, soft budget constraint is regarded as another major source of inefficiency of state ownership (Kornai, 1986; Lin, Cai, & Li, 1998). In response to shareholder pressure, and deepening market reforms, The Chinese government has done much to improve the corporate governance. China's listed firms have increasingly adopted Anglo-Saxon style internal corporate governance structures (Allen, Qian, & Qian, 2005; Chen, Liu, & Li, 2010; Jingu, 2007). After comparing corporate governance in China with that of OECD countries, Cheung, Jiang, Limpaphayom, and Lu (2008) report that a number of China's largest listed companies have been making substantial progress in corporate governance reform.

In China, more private enterprises developed into larger corporations and/or went public in recent years. From 120 firms (11% of listed firms) in 2001 to 531 firms (35% of listed firms) in 2007 (Sami, Wang, & Zhou, 2011). At the end of 2013, there are 1533 non-stated-owned companies in 2516 Chinese listed firms, and the ratio reaches 60.93%. As a result, we investigate to what extent the corporate governance mechanisms affect productive efficiency of stated-owned company and of non-stated-owned company, respectively.

Many recent studies examine the relation between corporate governance and performance by using the multiple regression analysis, but measurement errors, which often occur in multiple regression models, lead to a correlated relationship between residual errors and independent variables, contravening any statistical hypothesis. Thus, the estimation of parameters based on regression analysis is prone to bias, which often results in wrong conclusions.