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How Does Being Public Affect Firm Investment? Further Evidence from China☆

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ABSTRACT

What role does the stock market play in the allocation of capital? Few studies have examined how being public affects firm investment in emerging markets. This study fills this gap by comparing investment behavior in public and private Chinese firms over the period 2004–2010. We find an overall improved capital allocation of public firms relative to private firms in China. By disentangling the financial constraints effect from the agency effect, we show that public firms are less likely to underinvest when there is cash flow insufficiency and more likely to overinvest when there is free cash flow. We conclude that both effects coexist and that whether or not being public improves investment behavior depends on the net effect of loosening financial constraints and worsening agency conflicts. Further examination shows that financial information plays a limited role in these effects, implying that the association between being public and firm investment may not be attributed to information asymmetry but, rather, institutional arrangement in China.

1. Introduction

Improving the allocation of capital is supposed to be one of the primary roles of the stock market. However, the question of whether publicly traded firms have greater investment efficiency than privately held firms remains unanswered in the real world. Public firms enjoy access to a deep pool of capital and have correspondingly lower cost of capital, which enables them to pursue profitable investment opportunities more easily than private firms (Pagano, Panetta, & Zingales, 1998). On the other hand, public firms are more vulnerable to agency problems as ownership and managerial control are separated and managers' interests diverge from those of shareholders (Berle & Means, 1932; Jensen & Meckling, 1976), which may distort firms' investment behavior. Despite the importance of this issue, few studies have examined how being public influences the allocation of capital, mainly due to limited data availability. In recent studies, Mortal and Reisel (2013) find that public listed firms exhibit higher investment–growth sensitivity and are better positioned to take advantage of growth opportunities than their private counterparts. In contrast, Asker, Farre-Mensa, and Ljungqvist (2015) provide evidence showing that listed firms' investments are less

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responsive to changes in growth opportunities than those of unlisted firms, which suggests that the stock market harms firm investment incentives.[1] Although Mortal and Reisel (2013) argue that institutional setting matters and that the relative advantage public firms have at allocating capital only exists in countries with well-developed stock markets, their results are not compatible with the findings of Asker et al. (2015), who find a detrimental effect of being public on firm investment in the United States, a country with well-developed financial markets and strong investor protection. In this study, we complement their work by providing further evidence from China, where both the financial markets and the legal environment of investor protection are weak. We also reconcile the seemingly contradictory evidence by distinguishing between the financial constraints effect and the agency effect, and thus reveal the underlying mechanisms of how being public affects firm investment.

In a perfect world, investment opportunity would be the only determinant of investment, and firm financial characteristics would play no direct role in investment decisions (Modigliani & Miller, 1958). However, a number of researchers have documented a positive association between firm investment expenditure and internally generated cash flow (e.g., Fazzari, Hubbard, & Petersen, 1988; Hubbard, 1998), indicating the presence of investment inefficiency in the real world. There are two interpretations for this deviation from the optimal investment decision under ideal conditions. First, the investment–cash flow sensitivity may exist because external capital is not a perfect substitute for internal funds, and capital market frictions prevent firms from funding all of their desired investments (Myers & Majluf, 1984). Thus, costly external financing creates the potential for using internally generated cash flows to expand the feasible investment opportunity set (e.g., Fazzari et al., 1988; Hubbard, 1998). Second, the investment–cash flow sensitivity may be a manifestation of the agency problem, which occurs when managers pursue their own interests instead of maximizing returns to shareholders (Jensen & Meckling, 1976). When managers' objectives diverge from those of shareholders, the presence of internally generated cash flow in excess of that required for the firm's positive NPV projects creates the potential for those funds to be misused (Jensen, 1986; Richardson, 2006; Stulz, 1990). As being public simultaneously mitigates a firm's financial constraints but worsens its agency problems (Asker et al., 2015; Brav, 2009; Gao, Harford, & Li, 2013), we infer that whether being public improves investment behavior is conditional on the extent to which the firm's financial constraints and agency conflicts are affected. This study takes a step towards disentangling the two effects of being public on firm investment: (1) the *Financial Constraints Effect*, i.e., the effect of loosening financial constraints; and (2) the *Agency Effect*, i.e., the effect of worsening agency conflicts. We test the two effects by separating the conventional investment–cash flow sensitivity into underinvestment–shortage of cash flow and overinvestment–free cash flow relationships to better understand the investment differential between public and private firms.

Based on a sample of public and private firms over the period 2004–2010 in China, our study begins with investment–growth opportunity sensitivity, following Mortal and Reisel (2013) and Asker et al. (2015), to obtain a general idea of whether being public improves firm-level capital allocation in China. We then use the underinvestment–shortage of cash flow relationship to examine the financial constraints effect, and the overinvestment–free cash flow relationship to examine the agency effect. The results show that on average, public firms' investment is more responsive to changes in growth opportunities than that of private firms. Specifically, relative to private firms, public firms are less likely to suffer underinvestment when internally generated cash flow is insufficient, and they exhibit a greater propensity for overinvestment when there is free cash flow, which means that the financial constraints effect and the agency effect of being public coexist. We conclude that being public could simultaneously improve investment behavior by reducing financial constraints and distort investment behavior by increasing agency conflicts, and the relative advantage of public firms in allocating capital depends on whether the benefits of being public outweigh the cost.

Our findings contribute to the literature in several ways. First, we separate the financial constraints effect and the agency effect to reveal the underlying mechanisms that lead to the investment differential between public and private firms, and thus reconcile the extant mixed evidence on how being public affects capital allocation. We find that whether or not being public is beneficial depends on the net effect of loosening financial constraints and worsening agency conflicts. Expanding this interpretation to a broader context, our comparison of the investment behavior in public and private firms serves as cross-validation of prior research on investment behavior that used only public firms (e.g., Fazzari et al., 1988; Richardson, 2006). The contrast of investment behavior between public and private firms is of value, as the variation in both financial constraints and agency conflicts across these two groups of firms is more substantial than the variation within public firms. Second, we complement extant literature on how being public affects firm investment by providing further evidence from China. We find that listing a firm on a stock market could be beneficial, even in emerging markets, if the advantage of access to capital outweighs the cost resulting from agency conflicts. Our study in China's context is of particular interest. As discussed in the following section, China's institutional setting provides a unique test environment that makes both the financial constraints and agency effects of being public more visible. Moreover, this study not only offers supplementary evidence to prior research findings, which are largely from developed financial markets, but also suggests that institutional arrangement could play an important role in shaping firms' investment behavior.

The remainder of this paper is organized as follows. Section 2 discusses the institutional background in China. Section 3 reviews prior literature and develops our hypotheses. Section 4 describes the data and methodology. Section 5 presents our main tests on whether and how public firms differ from private firms in investment behavior. Section 6 shows a further examination on the role of financial information. Section 7 provides the robustness checks, and Section 8 concludes the paper.

[1] Two studies comparing the investment behavior of public and private firms in certain industries in the United States reach different conclusions. Sheen (2011) examines the chemical industry and finds results similar to those of Asker et al. (2015). Gilje and Taillard (2013), however, find public firms in the natural gas industry are more responsive to changes in natural gas prices than their private peers.

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