

A Review on did State-owned Enterprises do Better during COVID-19? Evidence from a Survey of Company Executives in China

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Abstract

In the article "Did state-owned enterprises do better during COVID-19? Evidence from a survey of company executives in China," the authors examine the performance of Chinese state-owned enterprises (SOEs) compared with that of non-SOEs using data from a survey of 1,182 company executives in China. In the survey, SOEs reported less business reductions under COVID-19. The authors apply an estimation approach that separates firm performance resulted from government support and that resulted from innate ability to cope with COVID-19. After controlling for the government-support effect, the authors find that SOEs performed significantly worse in the pandemic period.

Keywords: Firm ownership • Firm performance • COVID-19

Introduction

COVID-19's sudden outbreak in China, and the subsequent drastic measures taken by the Chinese government to stop its spread, substantially changed China's business environment. In their article, the authors use data from an online survey of 1,182 company executives in China conducted in April 2020 [1]. With business operations in China severely impacted by the sudden outbreak of COVID-19, the survey data provides valuable first-hand information on how companies in China responded to the COVID-19 shock. In particular, facing the unprecedented situation, companies took actions which would seldom be observed in normal times. For example, when asked what HR (human resources) measures already taken in the first quarter of 2020, 199 survey participants (16.8%) reported "laid off workers", 138 (11.7%) reported "cut salaries across company", and 18 (1.5%) reported "raised salary or raised hiring". The authors argue that such seldom-observed variations in firm behavior provide an unique opportunity for research on firm ownership and firm performance.

Literature Review

The literature features extensive research on firm behavior under public and private ownership. Megginson and Netter provided a comprehensive survey on privatization and concluded that "(research) now supports the proposition that privately owned firms are more efficient and more profitable than otherwise-comparable state-owned firms" [2]. However, the empirical evidence on the performance of Chinese SOEs relative to Non-SOEs is mixed. Yu provided a summary of 14 studies, all using data of Chinese firms to estimate the relationship between state ownership and firm performance. Among them, 8 found a nonlinear relationship (inverted U-shaped, U-shaped, or convex), 3 found a negative relationship, 2 found a positive relationship, and 1 found no relationship [3].

In a principal-agent framework, Sappington and Stiglitz modeled public and private firms as delegated production arrangements in which the government retains some authority to intervene directly, with the main difference lying in

the transactions costs faced by the government when attempting to intervene in the delegated production activities. In their modeling, the government has greater ease to intervene under public ownership, but its promise not to intervene is more credible under private ownership. Applying this theory, one would expect more government assistance for SOEs than Non-SOEs but more active adaption of Non-SOEs than SOEs in the pandemic period [4].

In the literature on privatization, some studies show that SOE productivity has been improved, others show otherwise. In a study of China's privatization experience over the period 1994-1997, Sun et al. Found an inverted U-shape relationship between state ownership and firm performance in a sample of China's listed companies with firm performance measured by the market-to-book ratio of equity. They explained this result by claiming "too much government holding of SOE shares means too much control and interference in the economic operations of SOEs; too little government holding means too little support from the government to pull the SOEs out from their difficulties". Viewing this empirical result in the theory of Sappington and Stiglitz, the inverted U-shape relationship can be understood as resulted from the tradeoff between the beneficial effect enjoyed by SOEs in government support (which raises their financial performance) and the detrimental effect associated with the inefficiency of SOEs (which lowers their financial performance) [5-8].

Data and Methodology

In their survey sample of 1,182 companies, 113 (9.6%) are SOEs, 735 (62.2%) are Chinese private enterprises, and 290 (24.5%) are foreign/overseas-owned enterprises in China or joint ventures with more than 50% foreign/overseas ownership. Their survey contains three indicators on company's assessment of COVID-19's impact on their business operations: (1) Estimated reduction of business activities in China in the first quarter of 2020; (2) Expected recovery of business activities by end of June 2020; (3) Estimated adjustment of 2020 target revenue. Their survey contains data on HR decisions already taken in the first quarter of 2020 measured in seven levels in descending order of harshness to employees from "Laid off workers" to "Raised salary or hiring". This HR data exhibits variations seldom observed in normal times, which is essential to their estimation approach [9]. The key to their estimation is to find measures of firm-level government assistance. The survey asked participants to rate Chinese government's support to their industry under COVID-19 (first quarter of 2020) on a scale from 0 (lowest support) to 10 (highest support). Based on this data, the authors construct one government-support variable. However, there is unobservable firm-specific government support. The authors argue that certain decisions made under the sudden and massive COVID-19 shock may reveal the impact of such government support, and they consider firm's HR decision under COVID-19 as revealing part of the impact of government support. A more

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supportive HR decision signals closer ties with the state and possibly more assistance, whereas a harsher HR decision signals less net government support.

Their study adopts a two-stage estimation approach. The first stage estimates firm's HR decisions under COVID-19, which the authors use to construct a proxy for the underlying firm-government relationship. The second stage estimates firm performance by controlling for this firm-government relationship proxy and other observable firm characteristics (as well as industry fixed effects). With the industry-level government support measure capturing part of firm-specific government support effect, adding the proxy variable helps control for the additional part of firm-specific government support effect.

Their first-stage regression on HR measure uses "share of company's 2019 revenue generated from business operations in China" as an instrument variable. As the COVID-19 situation was much severer in China than abroad in the first quarter of 2020, companies with a higher share of revenue generated from China were more pressed to take quick and drastic HR measures; thus there is high correlation between the China-revenue-share variable and the HR measure variable. However, entering March 2020, the severity of the COVID-19 situation fell in China but raised significantly outside China, and consequently the degree of recovery expected by end of June 2020 and the degree of adjustment of revenue target estimated for the year became insensitive to the share of revenue generated from China or from outside China; thus there is lack of correlation between the China-revenue-share variable and the expected recovery/revenue variable. These two statistical features allow the China-revenue-share variable to be a valid instrument variable for the estimation [10].

Discussion

SOEs and Non-SOEs differ in multiple dimensions, which fall into two broad categories. The first category is firm-government relationship. In general, SOEs receive more support from the government but bear more burdens imposed by the government. The second category is firm behavior. In general, SOEs are less driven by market signals. For studies aiming at finding if SOEs and Non-SOEs behave differently, it is crucial to distinguish between influences from these two categories. In the literature, many studies estimated the difference between SOEs and non-SOEs using financial performance measures, and the results were largely mixed. As a company's financial performance between SOEs and non-SOEs depends both on its reaction to market signals and on its relationship with the government, it is hardly surprising to find mixed results on the difference in financial performance as the influences from the two broad categories may cancel each other, yielding a net effect that is negative, zero or positive, depending on the given scenario.

The authors argue that, without controlling for firm-specific government support, one cannot interpret the observed/estimated performance difference between SOEs and non-SOEs as necessarily reflecting their ownership-based behavioral difference. The difficulty lies in the fact that we do not observe government support to enterprises. The sudden and gigantic COVID-19 shock caused companies to take drastic actions, which reveals information about

underlying factors including government support. The authors utilize such information to construct a proxy for the ownership-related government support effect. By controlling for the ownership-related government support effect on firm performance, they are able to estimate the effect associated with the ownership-based firm behavior [11].

Conclusion

Despite the seemingly superior performance of SOEs over Non-SOEs as shown in the raw data of the COVID-19 survey of 1,182 companies in China, this study finds that Chinese SOEs on average performed significantly worse than Non-SOEs under COVID-19 once a sufficient amount of underlying differences in government support is controlled for.

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