

Performance comparison of state-owned enterprises versus private firms in selected emerging Asian countries

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Abstract

Purpose – This policy paper compares the performance of state-owned enterprise (SOEs) versus private firms in selected emerging economies in Asia, focusing on a number of performance indicators. The indicators are internationally recognized quality innovation, product and/or service innovation, financing of operations, dealing with government regulations and labor performance. To the best of the authors' knowledge, there has been no such comparative study for these indicators between SOEs and private firms and across countries. Most studies of SOEs have been national case studies. As such, they give us little knowledge of how a country compares with other countries at similar stages of economic development. A cross-country comparative analysis can help us identify broader trends and patterns.

Design/methodology/approach – The authors compare and discuss the performance of SOEs versus private firms in a number of emerging Asian countries, namely China, India, Indonesia, Malaysia and Vietnam. To do so, the authors use data from the 2018 World Bank Enterprise Survey (which is the latest available) for the period 2012–2015. The authors focus on a number of key performance indicators, namely internationally recognized quality innovation, product and/or service innovation, financing of operations, dealing with government regulations and labor performance.

Findings – The comparative analysis uncovers some interesting differences between the two types of firms. For example, somewhat surprisingly, SOEs tend to innovate more than private firms. However, the single most significant pattern the authors find is that in middle-income Asia both types of firms face formidable challenges with respect to doing business – e.g. scarcity of relevant training programs for employees. Therefore, the priority of policymakers must be to improve the overall business environment for all firms, regardless of their ownership structure.

Research limitations/implications – The nature of this paper is a policy paper. This is because the data used in this study is survey data, conducted every four–five years (or more) for each country in the study and available for very few countries. As the data are not available for a continuous period of time, The authors could not conduct empirical research for this topic and thus made it a policy paper that presents a comparison across Asian countries as case studies.

Originality/value – The five selected Asian countries are interesting case studies for a comparative analysis since they are middle-income countries where SOEs play a significant role in the economy. Furthermore, state ownership is an important institutional dimension in emerging markets, and strong ties with the government can influence the performance of SOEs through various market and non-market channels. Despite the potential importance of the research theme, there is very little existing research on cross-country comparisons of the



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performance of SOEs vis-à-vis private firms. This could be explained by scarce data availability. With this in mind, the study attempts to shed some light on SOEs' performance and add to the rather limited literature.

Keywords Performance comparison, State-owned enterprises, Private firms, Asia

Paper type General review

1. Introduction

State-owned enterprises (SOEs) still play a major role in many economies, especially in emerging and developing countries in Asia and elsewhere. SOEs are sometimes used by the government to achieve development goals. Although SOEs' pursuit of development goals may compromise efficiency and profitability, it can help mitigate market failures and expand the supply of public goods. By doing so, SOEs can contribute significantly to the broader economic and social development of a country. SOEs operate in a wide range of sectors in Asian countries. The share of SOEs among the top 10 firms is 96% in China, 69% in Indonesia, 68% in Malaysia and 59% in India (Kowalski *et al.*, 2013). Meanwhile, according to the Vietnam report on the 500 largest enterprises of the country in 2017 (VNR500, 2017), SOEs contributed more than half (52%) of the total revenue of the VNR500 list. They operated in all the key sectors of the economy, including finance, food, electricity, minerals, petroleum and telecommunications. Since China and India are among the fastest-growing economies in the world while Malaysia, Indonesia and Vietnam are also growing rapidly, it is tempting to conclude that SOEs are compatible with economic growth.

However, the shortcomings and failures of the SOEs are well documented. For instance, while some studies documented that Chinese SOEs are larger and more profitable than their private counterparts (Lardy, 2014, 2018) and employ more workers, this pattern was only observed during recent periods, especially after the global financial crisis in 2008 (Yu, 2019). However, over a longer time horizon, SOE reform was probably the single biggest structural challenge facing the People's Republic of China (PRC) as it continued its shift toward an economic model driven by innovation and productivity growth [1]. The return on assets of Chinese SOEs substantially lagged behind that of private firms (Holz, 2002).

Generally, the poor performance of SOEs can be attributed to lack of competition and competitive pressures, lack of profit motive and accountability to shareholders, moral hazard associated with the implicit guarantee of a bailout in case of failure and implicit lifetime employment guarantee for workers which reduces their productivity (Lin, 2021; Singh, 2019). Additional endemic problems of SOEs include internal corruption, nepotism and patronage in managerial appointments, poor managerial decision-making due to lack of appropriate incentives and inadequate staff training and professional development (Yu *et al.*, 2020).

Theoretically, there are a number of reasons why SOEs are likely to underperform private firms. First, since SOEs are largely financed by public sector resources, the owner's responsibility and accountability are somewhat limited (Tang *et al.*, 2006). Those who are assigned by the state as representatives of equity (general directors) are merely salaried staff. As such, we cannot expect them to play an active managerial role like private-sector owners. In addition, private sector owners remain in control until the owner sells or transfers ownership to another person, so they understand and grasp every facet of their business. On the other hand, the representative of the state's equity in SOEs usually serves for limited terms (Frazier, 2006). This makes it impossible for them to have the same knowledge and experience about their firms and markets as private firm owners.

Second, the difference in ownership structure leads to differences in governance structure and business management. For SOEs, if the general directors are unable to meet their performance targets, they can usually ask the authorities to adjust their targets. As a result, some general directors of SOEs are less subject to pressure related to firm performance (Hu and Leung, 2012). On the other hand, for private businesses, the chief

executive, whether an owner or a hired professional manager has much less room to adjust performance targets. Firm performance is the only litmus test for assessing private sector chief executives but the litmus test for assessing public sector chief executives is not clear cut and is often clouded by political considerations.

Third, human resources are often the decisive factor in firm performance. Human resource management determines the success or failure of the business. Private enterprises tend to hire the best talent and invest appropriately in employees. They also have effective human management tools. In contrast, SOE general directors may not have full discretion over hiring and personnel decisions and furthermore, those decisions may be subject to political interference. Additionally, due to entrenched personnel management traditions and institutional pressures, SOEs may be slower than private firms to introduce modern human resource management practices (Feng *et al.*, 2014).

Fourth, the growth of a business depends on the innovation and creativity of the staff. The managers of SOEs are often determined by political authorities. Management based on political factors not only discourages incentives for creativity and innovation but also hampers the spread of knowledge and experience within a business (Belloc, 2014). Furthermore, most groundbreaking progress has often come from the exchange of ideas and talent with outsiders, from both industry peers and other businesses, especially with foreign-invested enterprises. For private economic enterprises, the exchange of ideas and personnel with outside organizations is regular and easy. However, such interaction with the outside world is much more difficult and less common for SOEs.

Fifth, in order to encourage employees to devote themselves and create value for their businesses, people need to be treated and assessed fairly. This is another limitation of the management mechanism of SOEs compared to private sector firms. The performance and assessment of personnel are based more on firm performance and less on other factors in private firms relative to SOEs. In line with this, compensation is more strongly related to performance appraisal in private firms than in SOEs (Feng *et al.*, 2014).

Empirically, however, it remains to be seen whether and to what extent SOEs and private firms differ in terms of their performance. Therefore, the central objective of our study is to analyze and compare the performance of the two types of firms [2]. To do so, we look at a number of well-known performance indicators, namely internationally recognized quality innovation, product and/or service innovation, financing operations, dealing with government regulations, and labor performance. We examine the existence and nature of performance gaps between SOEs and private firms in these indicators in selected emerging Asian countries. In the context of this study, we define a SOE as a business enterprise where the state has majority ownership (at least 50.01%) at the national or sub-national level.

For our comparative analysis, we selected five emerging Asian countries—China, India, Indonesia, Malaysia and Vietnam. The five Asian countries are interesting case studies for a comparative analysis since they are fast-growing middle-income economies where SOEs play a significant role in the economy. Specifically, in these countries, SOEs account for more than half of the top 10 firms (Kowalski *et al.*, 2013). Furthermore, at a broader level, state ownership is an important institutional dimension in emerging markets, and strong ties with the government can influence the performance of SOEs through various market and non-market channels (Wu *et al.*, 2016). Furthermore, these five countries are geographically close to each other since all of them are in South Asia and Southeast Asia. They may thus influence each other in their economic reform and development strategies. This explains our selection of this group of countries.

Despite the potential importance of this research theme, there is little existing research on cross-country comparisons of the performance of SOEs vis-à-vis private firms for these countries (except for China). Specifically, a number of studies compare a range of issues between SOEs and private firms for China. These include Chun (2009) for employees, Amighini

et al. (2013) for internationalization strategies, Fryxell and Lo (2001) for environmental ethics, Lu *et al.* (2009) for manager's occupational stress, Chen *et al.* (2021) for performance feedback and firm's research and development (R&D) strategy, Shahab *et al.* (2019) for corporate social responsibility (CSR) ratings and financial distress, Ding *et al.* (2007) for earnings management, Li *et al.* (2021) for the optimal subsidies and Feng *et al.* (2010) for political capital and loan access. Meanwhile, for the other four countries, to the best of our knowledge, there are only a few studies. These include Gupta and Kumar (2020), Locke and Duppati (2014), Nagale (2017) for India; Fauzi *et al.* (2010), Sutiyono (2007) for Indonesia; Ramasamy *et al.* (2005), Bhatt (2016) for Malaysia; and Hakkala and Kokko (2007), Nguyen and Van Dijk (2012) for Vietnam. All of them are national studies. Only Le *et al.* (2021) look at the same group of countries as ours. This could be explained by scarce data availability, together with different definitions of state ownership and state control across countries. With this in mind, the study attempts to shed some light on SOEs' performance and add to the rather limited literature.

The rest of this study is organized as follows. Section 2 reviews the relevant literature. Section 3 presents the data and discusses the comparative analysis of the performance of SOEs versus private firms in selected emerging Asia. Differences and/or similarities across countries are also discussed. Section 4 concludes the paper.

2. Literature review

This study compares the performance of SOEs versus private firms in selected emerging economies in Asia, focusing on a number of performance indicators. The indicators are internationally recognized quality innovation, product and/or service innovation, financing of operations, dealing with government regulations and labor performance. To the best of our knowledge, there has been no such comparative study for these indicators between SOEs and private firms and across countries. Most studies of SOEs have been national case studies [Chun (2009), Amighini *et al.* (2013), Fryxell and Lo (2001), Lu *et al.* (2009), Chen *et al.* (2021), Shahab *et al.* (2019), Ding *et al.* (2007), Li *et al.* (2021), and Feng *et al.* (2010) for China; Gupta and Kumar (2020), Locke and Duppati (2014), and Nagale (2017) for India; Fauzi *et al.* (2010) and Sutiyono (2007) for Indonesia; Ramasamy *et al.* (2005) and Bhatt (2016) for Malaysia; Hakkala and Kokko (2007) and Nguyen and Van Dijk (2012) for Vietnam]. As such, they give us little knowledge of how a country compares with other countries at similar stages of economic development. A cross-country comparative analysis can help us identify broader trends and patterns. In this section, we review the relevant literature.

Due to data unavailability, there is a very small number of studies on the innovation of SOEs in Asia, and most of them are for China (for instance, Girma *et al.*, 2009; Choi *et al.*, 2011; Li, 2011a, b, Wu *et al.*, 2016). The economic transition from central planning to a decentralized market-driven economy makes China a particularly interesting case study to investigate the relationship between ownership and innovation (Choi *et al.*, 2011). While bureaucratic nature and inefficient effects of state ownership might have negative effects on the financial performance of firms, they do not necessarily have unfavorable impacts on the innovation performance of firms (Choi *et al.*, 2011). In transition economies such as China, the government plays a pivotal role in the process of industrialization. The government also plays a vital role in developing innovation capabilities through direct intervention and its industrial and science and technology policies (Le *et al.*, 2016). A wider set of government objectives and long-term policy choices beyond the specific aim of short-term profit maximization have a positive effect on firms' innovation. Furthermore, SOEs have significant incentives and access to essential infrastructure that can facilitate government-initiated innovation (Chang *et al.*, 2006). Therefore, we predict that:

H1. The innovation or innovative activity of SOEs outperforms that of private firms.

Innovation or innovative activity is essential to improve the efficiency and competitiveness of a firm (Girma *et al.*, 2009). Through the innovative activity, firms (1) develop new processes or methods to produce existing goods or services more efficiently and/or (2) develop newly or significantly improved products or services that allow them to expand sales and improve their market performance. Girma *et al.* (2009) referred to these two types of innovative activities as process and product innovation. The study examined Chinese SOEs during 1999–2005 and showed that, at the firm level, foreign investor participation is associated with the higher innovative activity. On the other hand, at the sector level, on average there is an unfavorable impact of foreign direct investment (FDI) on innovative activity in SOEs. Meanwhile, sectoral FDI has a positive effect on SOEs that export, invest in human capital, or undertake R&D.

Li (2011a, b) examines the pattern of innovation and learning among SOEs in Chinese high-tech sectors during the period 1995–2004 using a panel data set including 21 high-tech sectors. Based on an augmented knowledge production function, the study empirically investigates the impact of three types of investment for acquiring technological knowledge to boost the innovation capabilities of firms, namely in-house R&D, importing foreign technology and purchasing domestic technology. The results reveal that importing foreign technology is conducive to fostering innovation in Chinese high-tech SOEs only if there is also in-house R&D. Domestic technology purchases, however, are found to have a direct favorable influence on a firm's innovation performance.

The second strand of literature discussed in this study relates to the options for financing the operations. In this regard, the majority of the studies focused on SOEs in Asia (see, for example, Poncet *et al.*, 2010; Hale and Long, 2011; Bilgin *et al.*, 2012; Herve-Mignucci *et al.*, 2015; again, most of them are conducted for China). Having stable sources of finance for operations is essential to cover the normal and/or extra needs of capital for business operational activities such as daily operational activities, business expansion, covering the loss of an order or unexpected expenses incurred by external parties (Le and Tran-Nam, 2018; Le *et al.*, 2019). Hale and Long (2011) examined internal and external, formal and informal, financing sources of Chinese firms during the period 1997–2006 and found that state-owned firms continue to enjoy more favorable access to external finances than other types of Chinese firms. In addition, the study finds that the Chinese formal financial sector does provide Chinese private firms with substantial financial resources, especially for their short-term needs during daily operations, even though private firms are disadvantaged vis-à-vis SOEs. Poncet *et al.* (2010) utilized a unique micro-level data set of Chinese firms in 1998–2005 to examine the presence of credit constraints. The empirical findings are consistent with the predictions from the political pecking order hypothesis that different types of firm ownership face different degrees of financial constraints. Private firms, which are commonly regarded as the engine of growth of the Chinese economy, are shown to face the highest degree of financial constraints. Meanwhile, SOEs and foreign firms do not experience any financial constraints. Therefore, we propose that:

H2. SOEs have easier access to financing for business operations than private firms.

Bilgin *et al.* (2012) use a rich firm-level data set to examine how training, technology adoption, finance channels and exporting behavior affect the performance of small and medium enterprises (SMEs), measured as profits per worker. The study finds that since in-house innovation is expensive to SMEs in developing countries, these companies might benefit from technology spillovers, in the form of importing more foreign materials inputs and utilizing foreign technologies from technologically advanced economies. Furthermore, the study finds that both informal finance sources and formal finance channels do not strengthen the performance of smaller enterprises in financing daily operations. Interestingly, informal channels hamper a firm's performance. The study also found no evidence of a significant effect

of on-the-job training on firm performance. [Herve-Mignucci et al. \(2015\)](#) study the role of finance in the state-owned and state-controlled companies which dominate the coal power industry in China. The study finds that SOEs have increasingly become financially self-sustaining because their asset base has grown sufficiently large to enable them to fund their coal capital expenditures internally. SOEs have been increasingly independent of external finance. Instead, they rely on self-finance through various ways such as increased integration, diversification, access to public markets and most importantly, through reinvestment of profits and tariff revenues to cover asset depreciation expenses ([Herve-Mignucci et al., 2015](#)).

With regard to dealing with government regulations, SOEs may have an intrinsic advantage due to the triple role of the government as a regulator, regulation enforcer and owner of assets ([Buge et al., 2013](#)). These advantages can take the form of direct subsidies, concessionary financing, state-backed guarantees, preferential regulatory treatment, exemptions from antitrust enforcement or bankruptcy rules. They may be justified in the domestic context to correct market failures, provide public goods and foster economic development. However, if their effects extend beyond borders, they may undermine the benefits from international trade and investment, which are predicated on the basis of non-discrimination and respect for market principles ([Buge et al., 2013](#)). [Billon and Gillanders \(2016\)](#) used data from the World Bank's Enterprise Surveys and failed to find a relationship between state ownership and bureaucratic constraints such as the number of days it takes for imports and exports to clear customs, time spent dealing with government regulations and losses due to crime. These findings are somewhat inconsistent with those of [Fan et al. \(2009\)](#) who found a link between their state ownership dummy and the frequency of bribery for purposes of business licenses, tax collection, government contracts, public utilities, customs and law courts. Therefore, we predict that:

H3. SOEs have an advantage in dealing with government regulations compared to private firms. However, the likelihood of bribery is also higher.

The fourth strand of literature relates to the association between employee qualification and firm ownership. Several studies documented that skilled and ambitious workers self-select into private sector enterprises which are unconstrained by the rigid wage systems of SOEs ([Adamchik and Bedi, 2000](#); [Münich et al., 2005](#)). On the other hand, credit constraints can limit the demand of domestic private firms for skilled workers in developing countries like Vietnam ([Phan and Coxhead, 2013](#); [Baccini et al., 2019](#)). Meanwhile, SOEs in Vietnam enjoy preferential access to skilled labor as well as capital, land and protection from foreign competition ([Pincus, 2016](#)).

In the same vein, SOEs in China pay higher wages than private firms ([Sun, 2018](#)). The significant wage gap between SOEs and non-SOEs in China can be attributed to the fact that SOEs recruit a lot of highly skilled workers. Related to this, SOEs are heavily represented in many skill-intensive industries ([Sun, 2018](#)). Therefore, we propose that:

H4. The employees of SOEs have higher qualifications than the employees of private firms.

3. Performance comparison of state-owned enterprises versus private firms in selected emerging Asian countries

In this section, we compare and discuss the performance of SOEs versus private firms in a number of emerging Asian countries, namely China, India, Indonesia, Malaysia and Vietnam. To do so, we use data from the 2018 World Bank Enterprise Survey (which is the latest available) for the period 2012–2015. The Enterprise Survey is a firm-level survey conducted by the World Bank. It uses standard survey instruments to collect data on the quality of the

business and investment climate across countries. The surveys are answered by business owners and top managers from a representative sample of firms in the economy. They cover a wide range of issues, including performance indicators. Enterprise Surveys are conducted once every three or four years and the years of the surveys vary across countries [3]. The survey years of data used in this study for China, India, Indonesia, Malaysia and Vietnam are 2012, 2014, 2015, 2015 and 2015, respectively. These are the most recent data available for these countries from Enterprise Surveys. Table A1 provide descriptive statistics of the data.

Innovation is the key ingredient of economic dynamism in an economy. Table 1 compares the innovation performance of the five selected Asian countries. With 87.2% of its SOEs having an internationally recognized quality certification, China outperforms India and Indonesia (83.3%), Vietnam (73.3%) and Malaysia (50.0%). Interestingly and somewhat surprisingly, for all five countries, SOEs outperform private firms in innovation. Furthermore, in India, Indonesia and Vietnam, SOEs outperform private firms in terms of different types of product innovation over the last three years. Such innovation includes newly or significantly improved products and services, methods of manufacturing products or offering services, organizational structures or management practices and marketing methods. The share of SOEs that invest in formal R&D activities and provide employees with formal training for the introduction or development of newly or significantly improved products or services and processes exceeds the corresponding share for private firms. Similarly, the percentages of firms that purchase or license any patented or non-patented inventions or other types of knowledge for the development of new or significantly improved products or services and processes is higher among SOEs.

The finding that SOEs innovate more than private firms in the selected countries is consistent with our proposed hypothesis and the view that while state ownership may reduce efficiency and adversely affect the financial performance of firms, it may not necessarily harm innovative activity (Choi *et al.*, 2011). For instance, in transition economies like China and Vietnam, the government continues to play a key role in the socialist market economy. As such, there is a strong political commitment to develop innovative capabilities through direct government intervention as well as industrial and science and technology policies (Le *et al.*, 2016). In this connection, SOEs may have a longer investment time horizon than private firms which are much more subject to the pressures of short-term profit maximization. As such, they may be better positioned to undertake riskier long-term investments with uncertain payoffs such as R&D. In addition, to the extent that innovation is one of the development objectives that the government wants to pursue with SOEs, the government may encourage SOEs to invest in innovation. In this context, the government may give SOEs significant incentives, such as privileged access to essential infrastructure that will facilitate government-initiated innovation (Chang *et al.*, 2006). Meanwhile, our result supports the finding from Kokko and Thang (2014) that in developing countries credit-constrained domestic private firms face limited access to technology.

Financing is a key ingredient of a firm's performance. Table 2 compares the sources of financing for the operations of SOEs and private firms in the five countries. The statistics show that in all countries except China, the percentage of SOEs that have a line of credit or a loan from a financial institution is higher than that of private firms. This is in line with our proposed hypothesis as well as Fan and Kalemli-Özcan (2016) and Pincus (2016) who documented that SOEs tend to have easier access to bank loans and capital. Furthermore, the study shows that the easing of credit constraints due to financial reforms makes SOEs less likely to obtain bank loans but makes private entrepreneurs more likely to obtain bank loans, reducing their need for self-finance (Fan and Kalemli-Özcan, 2016).

Furthermore, for SOEs, state-owned banks or government agency is the major source of financing, with a share of at least 50%. For China, India and Indonesia, the figures are 100%,

| | China | | India | | Indonesia | | Malaysia | | Vietnam | |
|--|-------|---------------|-------|---------------|-----------|---------------|----------|---------------|---------|---------------|
| | SOEs | Private firms | SOEs | Private firms | SOEs | Private firms | SOEs | Private firms | SOEs | Private firms |
| Percentages of firms that have an internationally recognized quality certification (b8) | 87.2% | 60.3% | 83.3% | 44.4% | 83.3% | 19.9% | 50.0% | 28.3% | 73.3% | 16.6% |
| Percentages of firms that have newly or significantly improved products or services during the last three years (h1) | – | – | 33.3% | 41.5% | 33.3% | 12.1% | 0.0% | 10.0% | 60.0% | 30.1% |
| Percentages of firms that have newly or significantly improved methods of manufacturing products or offering services during the last three years (h3) | – | – | 33.3% | 47.9% | 33.3% | 12.6% | 0.0% | 26.4% | 40.0% | 31.9% |
| Percentages of firms that have newly or significantly improved organizational structures or management practices during the last three years (h5) | – | – | 50.0% | 44.2% | 33.3% | 6.8% | 0.0% | 23.2% | 40.0% | 17.1% |
| Percentages of firms that have newly or significantly improved marketing methods during the last three years (h6) | – | – | 50.0% | 46.9% | 50.0% | 13.6% | 0.0% | 33.2% | 40.0% | 29.2% |
| Percentages of firms that spend on formal research and development activities during the last three years (h7) | – | – | 83.3% | 30.2% | 16.7% | 5.3% | 0.0% | 20.0% | 46.7% | 21.8% |
| Percentages of firms that provides formal training to its employees for the development/introduction of new/significantly improved products or services and processes during the last three years (eah15) | – | – | – | – | 33.3% | 12.4% | 50.0% | 28.0% | 53.3% | 24.9% |
| Percentages of firms that purchase or license any patented or non-patented inventions or other types of knowledge for the development of new/significantly improved products or services and processes during the last three years (eah16) | – | – | – | – | 16.7% | 6.8% | 25.0% | 21.4% | 20.0% | 3.8% |

Source(s): Authors' Calculations based on 2018 World Bank Enterprises Survey Data

Table 1. Innovation comparison between SOEs and private firms across selected emerging Asian countries

| | | Percentages of firms that have a line of credit or a loan from a financial institution (k8) | Percentages of firms that were granted the most recent loan by (k9)* | | | | Percentages of firms that require collateral for the financing of the most recent line of credit or loan (k13)* |
|-----------|---------------|---|--|--|---------------------------------|-------|---|
| | | | Private commercial banks | State-owned banks or government agency | Non-bank financial institutions | Other | |
| China | SOEs | 14.89% | 0% | 100% | 0% | 0% | 42.86% |
| | Private firms | 30.45% | 15.80% | 77.62% | 4.80% | 0.50% | 73.07% |
| India | SOEs | 33.33% | 0% | 100% | 0% | 0% | 50% |
| | Private firms | 15.56% | 21.86% | 75.65% | 1.04% | 0.20% | 80.14% |
| Indonesia | SOEs | 33.33% | 0% | 100% | 0% | 0% | 50% |
| | Private firms | 32.12% | 45.97% | 50% | 3.55% | 0% | 87.68% |
| Malaysia | SOEs | 50% | 50% | 50% | 0% | 0% | 0% |
| | Private firms | 37.15% | 72.16% | 20% | 5.68% | 1.08% | 47.03% |
| Vietnam | SOEs | 60% | 44.44% | 55.55% | 0% | 0% | 88.89% |
| | Private firms | 48.01% | 54.78% | 41.19% | 1.49% | 1.91% | 92.99% |

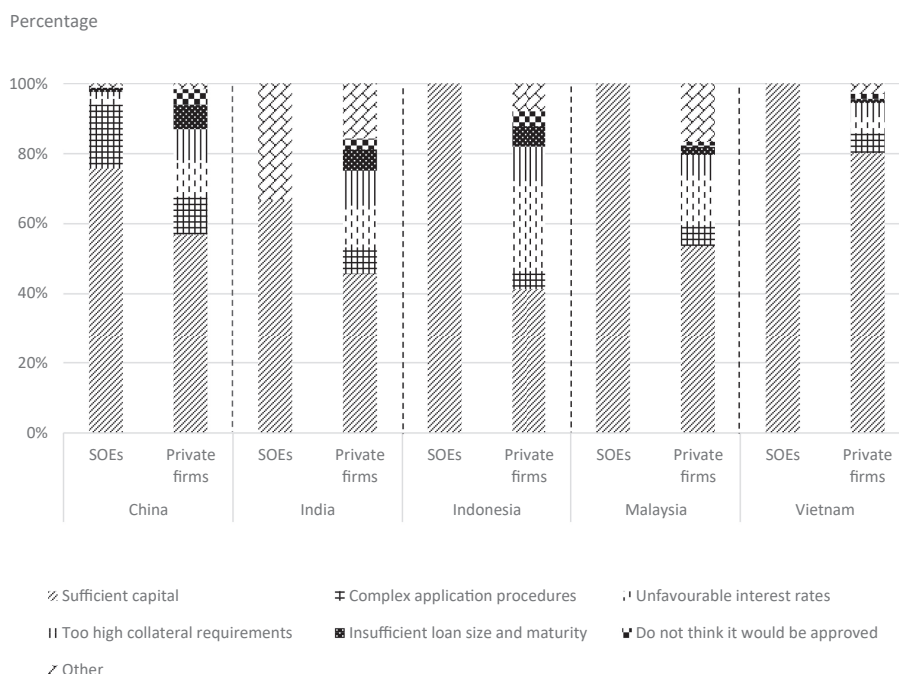
Note(s): Percentages are calculated based on number of firms responded (not leaving blank answers)
Source(s): Authors' calculations based on 2018 World Bank Enterprises Survey Data

Table 2.
Financing the operations: comparison between SOEs and private firms across selected emerging Asian countries

only state-owned banks or government agencies provide credit to SOEs in those countries. Our result is consistent with Healey (2014) who found that state-owned banks remain major lenders for Indian SOEs, which can borrow more easily from state-owned banks than other banks. Furthermore, banks seem to be more comfortable lending to SOEs than to private firms since the borrowings of SOEs are often backed by explicit or implicit government guarantees. State-owned banks are also the top source of loans for private firms in China, India and Indonesia, followed by private commercial banks. The reverse is true for Malaysian and Vietnamese private firms. They received their most recent loans mostly from private commercial banks, followed by state-owned banks or government agencies. Non-bank financial institutions and other sources play virtually no role in financing SOEs and account for less than 5.7% of the loans to private firms. It is not surprising that the percentage of SOEs that require collateral for obtaining loans is less than that of private firms for all five countries.

Our finding is in line with the evolution of the financial system in China, where a series of market-oriented reforms were implemented starting in 1978. The post-reform financial system is dominated by financial intermediaries, especially four state-owned banks, while the capital market is still at a relatively early stage of development with the limited scale of direct finance (Chen, 2006). Loans are regarded as the primary source of external funding for Chinese firms. On the other hand, direct finance through bond and stock markets still plays a relatively limited role although it is expanding rapidly. In particular, the access of the corporate sector to the bond market is limited since this market is essentially reserved for the central government to raise funds (Chen, 2006).

As shown in Figure 1, in all five countries, the major reason why SOEs and private firms did not apply for any line of credit or loan is that they have sufficient capital and do not need



Note(s): SOE = state-owned enterprises. Percentages are calculated based on the number of firms responded (not leaving blank answers)

Source(s): Authors' Calculations based on 2018 World Bank Enterprises Survey Data

Figure 1. The main reason why firms did not apply for any line of credit or loan

to take loans. For Chinese SOEs, complex application procedures are the second biggest obstacle, followed by unfavorable interest rates. This is also true for private firms in China and Vietnam. For private firms that did not apply for any line of credit or loan in India, Indonesia and Malaysia, unfavorable interest rates are the second biggest constraint, followed by excessive collateral requirements. In the case of Malaysia, complex application procedures also came into play.

Our finding for Indonesia is in line with the [Farida et al. \(2015\)](#) study, which finds that high interest rates are a major drawback of loan schemes available to local micro-enterprise households in Indonesia. The schemes were launched to meet the country's financial inclusion goals. Furthermore, our finding for Malaysia is consistent with [Ramlee and Berna \(2013\)](#), which finds that unaffordable market interest rates are the main deterrent to participating in the formal financial sector for micro and small enterprises in Malaysia.

Meanwhile, our finding for Vietnam is consistent with the results of a survey of business trends of 2014 announced by the General Statistics Office of Vietnam ([GSO, 2014](#)). The survey finds that complex and time-consuming application procedures are a major reason why 23% of enterprises could not get a bank loan. If this problem of inefficient administration is not resolved, the large amount of capital requirements would be wasted, despite the relatively low level of interest rates in Vietnam. The finding for China is also in line with the [Li et al. \(2016\)](#) study which finds that the high percentage of credit-constrained rural households from Jiangxi province could be explained by complex loan application procedures and lending processes.

Table 3 compares the performance of SOEs versus private firms in dealing with government regulations. Before discussing the results, it is important to mention that apart from the Enterprise Surveys, the World Bank has another survey titled “Doing Business Surveys” that assesses the business climate and includes the issue of dealing with government regulations. The principal difference between the two surveys is that Doing Business Surveys focus on *de jure* processes whereas Enterprise Surveys concentrate on *de facto* practice. The assumption underlying the Doing Business Surveys is compliance and no deals. That is, firms fully comply with the rules and that no direct or third-party facilitation (monetary or otherwise) is involved. Furthermore, the respondents of the World Bank’s Doing Business Surveys are local experts, not firms. On the other hand, the Enterprise Surveys report the experiences of firms, and firms are explicitly questioned about how they make deals (for example, payment of bribes and time spent with officials). It turned out that these two opposite assumptions explain the large gaps found between the two sources of data (Hallward-Driemeier and Pritchett, 2015). Many firms in Enterprise Surveys report engaging in a wide variety of influence-gaining activities in their dealing with government regulations.

For most countries, except China, there was a higher percentage of SOEs that were visited or inspected by tax officials compared to private firms. In China, India and Malaysia, SOEs face a higher number of visits by or meetings with tax officials. The opposite is observed for Indonesia and Vietnam. Many SOEs refused to reveal whether they were expected to give an informal gift or payment related to an import license or an operating license, resulting in insufficient data for analysis. While several private firms also refused to answer this question, responses from private firms showed that a substantial proportion (14–27%) gave an informal gift or payment for an import and/or operating license in all five countries. Furthermore, compared to SOEs, private firms are more likely to be expected to give an informal gift or payment related to construction-related permits in all five countries.

While these findings do not show clear support for our proposed hypothesis, they are consistent with the fact that most of these countries had a very poor record in ease of doing business. According to the World Bank’s Doing Business Indicators report, as of 2015, China, India, Indonesia, Malaysia and Vietnam ranked 84th, 130th, 109th, 18th and 90th, respectively, out of 189 countries in terms of the ease of doing business (Figure 2). Furthermore, corruption is also pervasive in these economies. The alarming level of corruption is shown by Transparency International’s Corruption Perceptions Index (2015). In particular, China, India, Indonesia, Malaysia and Vietnam ranked 83rd, 76th, 88th, 54th and 111th, respectively, out of 167 countries. It is widely believed that corruption is a significant factor behind weak investment and productivity performance.

For instance, despite the overall success of Chinese economic reforms, high levels of corruption remain an obstacle to doing business in China. This is attributable to an inadequate legal system and traditions such as “*guanxi*”, which loosely translates to personal connections, relationships or social networks (Hwang, 2004). *Guanxi* has long been considered essential in Chinese business practices as well as other domains of life, society and polity. To warm up relationships, gifts are offered to the counterparty or government officials. Once the gift is accepted, there is a high possibility (which likely positively correlates with the amount of the gift) that the receiver would return the favor given by, for example, granting official permission or license (Li, 2011a).

The labor performance of SOEs versus private firms is compared in Table 4. With regard to the average number of years of education for a typical permanent full-time production worker, the figures of SOEs and private firms are quite close to each other in China, Indonesia and Vietnam. On the other hand, the figures for SOEs in India (12.5 years on average) are significantly higher than those for private firms (9.75 years on average). This pattern also holds for the proportion of full-time permanent workers who completed secondary school. In China, Indonesia and Vietnam, these figures of SOEs and private firms are similar to each

| | Percentages of firms that were visited or inspected by tax officials over the last year (f3) | Average number of times the firms were either inspected by tax officials or required to meet with them (f4)* | Percentages of firms that are required or expected an informal gift or payment related to an import license (f12)* | Percentages of firms that are required or expected an informal gift or payment related to an operating license (f15)* | Percentages of firms that are required or expected an informal gift or payment related to construction-related permit (g4)* | Percentages of firms that are required or expected an informal gift or payment related to electrical connection (c5)* | Percentages of firms that are required or expected an informal gift or payment related to water connection (c14)* |
|-----------|--|--|--|---|---|---|---|
| China | SOEs 23.91% Private firms 68.36% | 3.36 2.45 | 0% 7.91% (many refusals) | 25% 13.88% (1 refusal) | 16.67% 18.97% | 12.5% 5.64% | 40.0% 4.35% |
| India | SOEs 66.67% | 10.67 | No answer | 0% (only 1 answer) | 0% | No answer | No answer |
| Indonesia | Private firms 50.29% SOEs 100% | 4.04 1.6 | 15% (many refusals) 0% (only 1 answer) | 4.52% (many refusals) 0% (2 refusals) | 37.70% 0% | 41.23% No answer | 33.75% No answer |
| Malaysia | Private firms 31.74% SOEs 50% | 1.91 2 | 1.91% No answer | 16.84% (many refusals) 0% (only 1 answer) | 19.23% 0% | 22.45% 0% | 25% 100% |
| Vietnam | Private firms 23.69% SOEs 66.67% | 1.78 1.71 | 26.58% No answer | 22.01% (many refusals) 0% (only 1 answer) | 20.88% 0% | 6.9% No answer | 28.95% 0% |
| | Private firms 48.01% | 2.09 | 23.53% | 16.22% | 23.91% | 14.43% | 4.26% |

Note(s): Percentages are calculated based on number of firms responded with specific numbers (not leaving blank answers)
Source(s): Authors' calculations based on 2018 World Bank Enterprises Survey Data

Table 3.
Dealing with government regulations: comparison between SOEs and private firms across selected emerging Asian countries

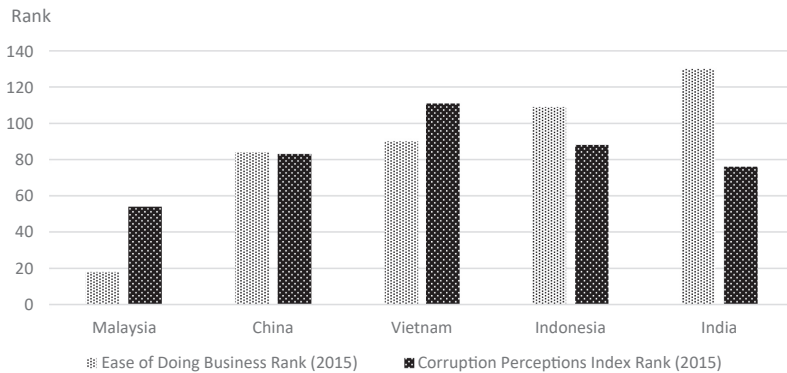


Figure 2.
Ease of doing business
and corruption, 2015

Note(s): Ease of Doing Business ranking considers 1= most easy to do business; Corruption Perception Index Rank considers 1 = most corrupt

Source(s): World Bank’s Ease of Doing Business Report 2015 and Transparency International Corruption Perceptions Index 2015

other. In contrast, the gap is quite wide for India and Malaysia. A significantly higher proportion of SOEs has full-time permanent workers with minimum secondary school education (77.5%) compared to private firms (50.8%) in India. The reverse is true for Malaysia, where the corresponding figures are 61.5% for SOEs and 79.2% for private firms.

Regarding the provision of formal training programs for permanent, full-time employees, SOEs in most countries except Malaysia seem to invest more than their private counterparts. Specifically, the figures for SOEs are very high for China and India (100% for India and approximately 95% for China), moderately high for Indonesia with about 67%, followed by Vietnam (33.33%) and Malaysia (25%). Table 5 shows that the primary focus of formal training programs varies across countries. In Malaysia, the highest percentages of both SOEs and private counterparts focus on work ethic and commitment. This could be explained by Islamic principles since Malaysia is a Muslim-majority country. Our result is consistent with Ramalu *et al.* (2016) who indicated that Islamic work ethic has become the most influential factor in shaping Malaysian work value systems and workplace behavior. In Vietnam, both types of firms concentrate on technical skills (other than IT), vocational and job-specific skills, which are also the central themes of training programs for the majority of private firms in Indonesia. For Indonesian SOEs, the most popular themes of formal training programs are interpersonal and communication skills.

SOEs and private firms that do not have formal training programs for their employees do not see a need for such investments (See Figure 3). For Indonesian and Vietnamese SOEs, the second biggest factor is the lack of relevant training programs while for Malaysian SOEs, it is the lack of external agencies that can provide training. For Indonesian and Malaysian private firms, the second-biggest constraint is the high cost of training programs while for Vietnamese private firms, it is the lack of relevant training programs. Our finding is consistent with the findings from Nguyen *et al.* (2011) for Chinese and Vietnamese firms. Vietnamese employers often favor acquiring modern equipment and expanding factories rather than training and developing workers. Furthermore, the quality of general education is inadequate for the needs of employers.

In many developing Asian countries, institution-based technical vocational education and training (TVET) capacity is insufficient to meet the training needs even for the new entrants to the labor force (Ra *et al.*, 2015). For instance, the current capacity of India’s training system

| | China | | India | | Indonesia | | Malaysia | | Vietnam | |
|--|-------|---------------|--------|---------------|-----------|---------------|----------|---------------|---------|---------------|
| | SOEs | Private firms | SOEs | Private firms | SOEs | Private firms | SOEs | Private firms | SOEs | Private firms |
| Average number of years of education of a typical permanent full-time production worker (I9a)* | 9.9 | 10.2 | 12.5 | 9.8 | 11.0 | 10.68 | 11.3 | 8.83 | 10.7 | 10.66 |
| Average percentages of full-time permanent workers who completed secondary school (I9b) | 59.1% | 60.1% | 77.5% | 50.8% | 66.5% | 70.1% | 61.5% | 79.2% | 97.1% | 92.2% |
| Percentages of firms that have formal training programs for its permanent, full-time employees (I10) | 94.7% | 84.7% | 100.0% | 42.4% | 66.7% | 12.7% | 25.0% | 30.9% | 33.3% | 24.6% |
| Percentages of firms that terminate any permanent full-time workers due to lack of the required skills (eal12) | – | – | – | – | 0.0% | 6.5% | 0.0% | 12.8% | 20.0% | 25.1% |
| Percentages of firms that terminate any permanent full-time workers due to poor performance (eal13) | – | – | – | – | 16.7% | 9.7% | 0.0% | 24.2% | 26.7% | 28.5% |

Note(s): Percentages are calculated based on number of firms responded with specific numbers (not leaving blank answers)

Source(s): Authors' calculations based on 2018 World Bank Enterprises Survey Data

Table 4.
Labor performance:
comparison between
SOEs and private firms
across selected
emerging Asian
countries

can only accommodate the training needs of approximately 13 million new entrants into the labor force every year (Panth, 2013). This low capacity of the country's training system is due to the low level of overall public spending on TVET. Less than 5% of total GDP is allocated to the education budget in South Asia (Panth, 2013). Furthermore, firms are not willing to make up for the shortfalls in the training capacity of TVET providers. Consequently, in many Asian countries, especially in transition economies where SMEs and informal sector jobs account for a significant portion of total employment, employers provide employees with very limited on-the-job training. Such underinvestment can be explained by many factors, including rapid economic restructuring, poor investment climate and the risk of newly trained employees being poached by competitors (Ra et al., 2015).

Table 5.
Labor performance:
comparison between
SOEs and private firms
across selected
emerging Asian
countries

| | | Percentages of firms that have primary focus of the formal training programs, related to (eall10b)* | | | | | | | |
|-----------|---------------|---|--|----------------|---------------------------|-------------------------|-------------------------------|---|-------|
| | | Managerial and leadership skills | Interpersonal and communication skills | Writing skills | Work ethic and commitment | Foreign language skills | Computer or general IT skills | Technical skills (other than IT), vocational or job-specific skills | Other |
| China | SOEs | - | - | - | - | - | - | - | - |
| | Private firms | - | - | - | - | - | - | - | - |
| India | SOEs | - | - | - | - | - | - | - | - |
| | Private firms | - | - | - | - | - | - | - | - |
| Indonesia | SOEs | 0% | 50% | 0% | 25% | 0% | 25% | 0% | 0% |
| | Private firms | 7.19% | 11.38% | 0% | 13.77% | 2.40% | 8.38% | 55.69% | 1.20% |
| Malaysia | SOEs | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% |
| | Private firms | 9.09% | 7.79% | 0.32% | 40.91% | 1.30% | 2.92% | 37.01% | 0.32% |
| Vietnam | SOEs | 0% | 0% | 0% | 0% | 0% | 0% | 100% | 0% |
| | Private firms | 8.30% | 9.54% | 0% | 3.73% | 0.83% | 1.66% | 73.03% | 2.49% |

Note(s): Percentages are calculated based on number of firms responded with specific numbers (not leaving blank answers)
Source(s): Authors' calculations based on 2018 World Bank Enterprises Survey Data



Figure 3. Labor performance: Comparison between SOEs and private firms across selected emerging Asian countries

Note(s): SOE = state-owned enterprises. China and India do not have data during the survey period. Percentages are calculated based on the number of firms responded with specific numbers (not leaving blank answers)

Source(s): Authors' Calculations based on 2018 World Bank Enterprises Survey Data

4. Concluding observations

In this study, we analyze and compare the performance of SOEs versus private firms in five middle-income Asian countries – China, India, Indonesia, Malaysia and Vietnam. To do so, we focus on a number of key performance indicators, namely internationally recognized quality innovation, product and/or service innovation, financing of operations, dealing with government regulations and labor performance. The analysis was conducted using data from the World Bank's Enterprise Surveys for the five countries for the 2012–2015 period. The evidence points to performance gaps between SOEs and private firms in innovation performance, operational financing and bribery activities in dealing with government regulations.

However, more significantly, SOEs and private firms face common challenges in doing business in those countries. These include limited access to financing and a lack of professional training programs. Our most significant finding is that in middle-income Asian countries, there is plenty of scope for improving the business climate for *both* SOEs and private firms. Such an improvement will significantly improve the performance and

efficiency of both types of firms. We now discuss the most significant findings that emerge from our comparative analysis, along with potential policy implications associated with those findings.

First, we find that SOEs seem to innovate more than private firms. In this context, policymakers in the five countries may learn from the experiences of Japan. Success in innovation transformed Japan into one of the world's leading economies and technology powerhouses. Competitive challenges from the newly industrialized economies, China and other Asian countries spurred the innovation that remains the key to the country's international competitiveness. Private firms in general and equity-financed small firms, in particular, have proven adept at developing new ideas and bringing them to the market. However, in contrast to SOEs, these private firms face a range of obstacles when they seek to bring new products and processes to the market (National Research Council, 2009). Public policies are thus needed to mitigate this problem by reducing the structural challenges and financial difficulties facing such innovative firms so that national innovative capacity can be strengthened (National Research Council, 2009). Strong technological and digital innovation capabilities enhance the firm's capacity to cope with crises, even unprecedented crises such as the coronavirus pandemic.

Second, the results suggest that in emerging Asia, unaffordable interest rates and excessively complex procedures are major obstacles for firms to access financing options from the formal financial system. Hence, financial development and financial inclusion should be further promoted, especially in India, Indonesia and Malaysia. Along with efforts to improve the soundness and efficiency of the banking system, which continues to dominate Asia's financial systems, equity and bond markets should be developed. Financial development can bring down the cost of capital and improve the access of both SOEs and private firms to reasonably priced credit. At the same time, efforts must be made to promote financial inclusion, particularly to improve the access of SMEs to formal finance at a reasonable cost. Liquidity support and government assistance are especially important for SMEs during COVID-19. Without such public intervention, the pandemic could have caused a three-fold increase in aggregate SME bankruptcy rates in 17 OECD countries (Gourinchas *et al.*, 2020).

For Vietnam and China, administrative procedures related to the loan application and lending processes should be simplified and made straightforward to facilitate access to finance of private firms in general and SMEs in particular. Due to excessively complex application procedures for business loans, many micro-enterprises tend to rely on personal loans to finance their business operations. Consequently, these enterprises are required to pay much higher interest rates. As a result, more cost-effective financing options remain underutilized. This is evident in the Shi (2017) study which examined SMEs in China. The study found that complex loan application procedures and long cycles are a major reason that this group of enterprises relies on private lending. Fortunately, the use of technology in financial services picked up during the COVID-19 pandemic, thereby mitigating the complex application problem.

Third, the results indicate that informal gifts are generally expected for private firms in dealing with government regulatory agencies. High and growing informal payments to public officials contributed to the deterioration of manufacturing firms' productivity in India (Sen, 2017). This suggests that a higher level of bribery impedes the labor productivity of an average firm. Furthermore, firms that bribe officials are shown to experience lower productivity than other firms (Sen, 2017). The negative influence of bribe taxes on firm performance is also documented in previous studies at both the micro (for instance, De Rosa *et al.*, 2015; Kochanova, 2012) and macro levels (for example, Campos *et al.*, 2010; Mauro, 1995). Vershinina *et al.* (2014) found that informal gift imposes a heavy financial burden on financially constrained small and micro businesses with already scarce resources. Furthermore, most significantly, the necessity of paying a bribe might discourage start-ups and entrepreneurship, dampening broader

economic dynamism. Corruption can act as a prohibitive tax on risk-taking by innovative entrepreneurs who could develop new products and technological processes.

Anti-corruption legislation is now increasingly enforced in China, Vietnam and elsewhere in Asia but much more needs to be done to fundamentally tackle the virus of corruption. For instance, *Guanxi*-related gifts can be considered bribery by foreign companies according to national and international anti-corruption laws. The Anti-Unfair Competition Law in China provides regulation on *Guanxi*-related gifts and hospitality to some extent, but enforcement has been poor and thus needs to be strengthened further.

Fourth, technical knowledge and soft skills are identified as key priorities in training programs provided by employers to employees. However, only a relatively small number of firms, especially private firms, were reported to have such official training programs that are tailored to their needs. Lack of relevant training programs and high training costs are major obstacles that prevent firms from offering formal training programs to their employees. Relatively low rates of access to various types of TVET can diminish economic competitiveness and cause skills mismatches (Ra *et al.*, 2015). A 2013 International Labour Organization (ILO) survey of Association of Southeast Asian Nations (ASEAN) Employers on skills and competitiveness documented the lack of vocational training as the second greatest source of skills gaps (Emerging Markets Consulting, 2014). Many Asian countries are saddled with inefficient education and training systems, a problem that was exacerbated by COVID-19 (Daniel, 2020). Policymakers need to address this challenge by working with businesses and other stakeholders to implement medium-to long-term solutions. These include expanding online and technology-based teaching and learning as well as developing appropriate accreditation, assessment and vocational qualification systems to bring about improvements in the quality, relevance, efficiency and equity of national education and vocational training systems.

Notes

1. See <https://english.ckgsb.edu.cn/knowledges/state-owned-enterprise-reform-china/>
2. While the nature of the industry may affect the performance of a firm, due to data unavailability, we do not have enough data to make a comparison of performance across firms in the same industry or the average performance of firms across industries.
3. See: <https://www.enterprisesurveys.org/en/about-us/frequently-asked-questions>

References

- Adamchik, V.A. and Bedi, A.S. (2000), "Wage differentials between the public and the private sectors: evidence from an economy in transition", *Labour Economics*, Vol. 7 No. 2, pp. 203-224.
- Amighini, A.A., Rabellotti, R. and Sanfilippo, M. (2013), "Do Chinese state-owned and private enterprises differ in their internationalization strategies?", *China Economic Review*, Vol. 27, pp. 312-325.
- Baccini, L., Impullitti, G. and Malesky, E.J. (2019), "Globalization and state capitalism: assessing Vietnam's accession to the WTO", *Journal of International Economics*, Vol. 119, pp. 75-92.
- Belloc, F. (2014), "Innovation in state-owned enterprises: reconsidering the conventional wisdom", *Journal of Economic Issues*, Vol. 48 No. 3, pp. 821-848.
- Bhatt, P.R. (2016), "Performance of government linked companies and private owned companies in Malaysia", *International Journal of Law and Management*, Vol. 58 No. 2, pp. 150-161.
- Bilgin, M.H., Marco Lau, C.K. and Demir, E. (2012), "Technology transfer, finance channels, and SME performance: new evidence from developing countries", *The Singapore Economic Review*, Vol. 57 No. 3, pp. 12500-12520.
- Billon, S. and Gillanders, R. (2016), "State ownership and corruption", *International Tax and Public Finance*, Vol. 23 No. 6, pp. 1074-1092.

- Buge, M., Egeland, M., Kowalski, P. and Sztajerowska, M. (2013), "State-owned enterprises in the global economy: reason for concern?", VOX CEPR Policy Portal, available at: <https://voxeu.org/article/state-owned-enterprises-global-economy-reason-concern> (accessed 8 August 2018).
- Campos, N., Dimova, R. and Saleh, A. (2010), "Whither corruption? A quantitative survey of the literature on corruption and growth", IZA Discussion Paper No. 5334, Institute for the Study of Labor, Bonn.
- Chang, S.J., Chung, C.N. and Mahmood, I.P. (2006), "When and how does business group affiliation promote firm innovation? A tale of two emerging economies", *Organization Science*, Vol. 17 No. 5, pp. 637-656.
- Chen, H. (2006), "Development of financial intermediation and economic growth: the Chinese experience", *China Economic Review*, Vol. 17 No. 4, pp. 347-362.
- Chen, X., Xie, E. and Van Essen, M. (2021), "Performance feedback and firms' R&D frequency: a comparison between state-owned and private-owned enterprises in China", *Asian Business and Management*, Vol. 20 No. 2, pp. 221-258.
- Choi, S.B., Lee, S.H. and Williams, C. (2011), "Ownership and firm innovation in a transition economy: evidence from China", *Research Policy*, Vol. 40 No. 3, pp. 441-452.
- Chun, R. (2009), "Ethical values and environmentalism in China: comparing employees from state-owned and private firms", *Journal of Business Ethics*, Vol. 84 No. 3, pp. 341-348.
- Corruption Perceptions Index (2015), available at: <https://www.transparency.org/cpi2015> (accessed 22 November 2018).
- Daniel, J. (2020), "Education and the COVID-19 pandemic", *Prospects*, Vol. 49 No. 1, pp. 91-96.
- De Rosa, D., Gooroochurn, N. and Gorg, H. (2015), "Corruption and productivity: firm level evidence", *Journal of Economics and Statistics*, Vol. 235 No. 2, pp. 115-138.
- Ding, Y., Zhang, H. and Zhang, J. (2007), "Private vs state ownership and earnings management: evidence from Chinese listed companies", *Corporate Governance: An International Review*, Vol. 15 No. 2, pp. 223-238.
- Emerging Markets Consulting (2014), *Survey of ASEAN Employers on Skills and Competitiveness*, ILO, Bangkok, May, available at: https://www.ilo.org/wcmsp5/groups/public/-/asia/-/ro-bangkok/-/sro-bangkok/documents/publication/wcms_249982.pdf.
- Fan, J. and Kalemli-Özcan, Ş. (2016), "Emergence of Asia: reforms, corporate savings, and global imbalances", *IMF Economic Review*, Vol. 64 No. 2, pp. 239-267.
- Fan, C.S., Lin, C. and Treisman, D. (2009), "Political decentralization and corruption: evidence from around the world", *Journal of Public Economics*, Vol. 93 Nos 1-2, pp. 14-34.
- Farida, F., Siregar, H., Nuryartono, N. and Intan, E.K. (2015), "Micro enterprises' access to people business credit program in Indonesia: credit rationed or non-credit rationed?", *International Journal of Economic Perspectives*, Vol. 9 No. 2, pp. 57-70.
- Fauzi, H., Rahman, A.A., Hussain, M.M. and Priyanto, A.A. (2010), "Corporate social performance of Indonesian state-owned and private companies", *Handbook of Business Practices and Growth in Emerging Markets*, pp. 455-482.
- Feng, T.L., Jing, R.T. and Wang, G.F. (2010), "An empirical study on political capital and the accession to loan from state-owned banks of Chinese private enterprises", *Forecasting*, Vol. 29 No. 3, pp. 26-31.
- Feng, Q., Jaussaud, J. and Liu, X. (2014), "State-owned versus private enterprises in China: adoption of modern HRM practices", *The Globalization of Chinese Business*, Chandos Publishing, pp. 51-68.
- Frazier, M.W. (2006), "State-sector shrinkage and workforce reduction in China", *European Journal of Political Economy*, Vol. 22 No. 2, pp. 435-451.

- Fryxell, G.E. and Lo, C.W. (2001), "Organizational membership and environmental ethics: a comparison of managers in state-owned firms, collectives, private firms and joint ventures in China", *World Development*, Vol. 29 No. 11, pp. 1941-1956.
- General Statistics of Vietnam (GSO) (2014), "Statistical yearbook of Vietnam 2014", available at: http://www.gso.gov.vn/default_en.aspx?tabid=515&idmid=&ItemID=15197 (accessed 20 November 2018).
- Girma, S., Gong, Y. and Görg, H. (2009), "What determines innovation activity in Chinese state-owned enterprises? The role of foreign direct investment", *World Development*, Vol. 37 No. 4, pp. 866-873.
- Gourinchas, P.O., Kalemli-Özcan, S., Penciakova, V. and Sander, N. (2020), *Covid-19 and SME Failures (No. W27877)*, National Bureau of Economic Research, Cambridge, MA, September, Revised May 2021, available at: https://www.nber.org/system/files/working_papers/w27877/w27877.pdf.
- Gupta, A. and Kumar, S. (2020), "Comparing the performance of public and private enterprises: case for a reappraisal—evidence from India", *International Journal of Public Sector Management*, Vol. 34 No. 1, pp. 87-100.
- Hakkala, K. and Kokko, A. (2007), *The State and the Private Sector in Vietnam*, The European Institute of Japanese Studies, Stockholm.
- Hale, G. and Long, C. (2011), "Chapter 13: what are the sources of financing for Chinese firms?", *The Evolving Role of Asia in Global Finance*, Emerald Group Publishing, pp. 313-339.
- Hallward-Driemeier, M. and Pritchett, L. (2015), "How business is done in the developing world: deals versus rules", *Journal of Economic Perspectives*, Vol. 29 No. 3, pp. 121-140.
- Healey, D. (2014), "Competitive neutrality and its application in selected developing countries", *United Nations Conference on Trade and Development*, UNCTAD Research Partnership Platform Publication Series, Geneva.
- Herve-Mignucci, M., Wang, X., Nelson, D. and Varadarajan, U. (2015), "Slowing the growth of coal power in China: the role of finance in state-owned enterprises", Climate Policy Initiative, December, available at: <http://climatepolicyinitiative.org/wp-content/uploads/2015/12/Slowing-the-Growth-of-Coal-Power-in-China-%E2%80%93-the-Role-of-Finance-in-State-Owned-Enterprises.pdf> (accessed 8 August 2018).
- Holz, C.A. (2002), "Long live China's state-owned enterprises: deflating the myth of poor financial performance", *Journal of Asian Economics*, Vol. 13 No. 4, pp. 493-529.
- Hu, F. and Leung, S.C. (2012), "Top management turnover, firm performance and government control: evidence from China's listed state-owned enterprises", *The International Journal of Accounting*, Vol. 47 No. 2, pp. 235-262.
- Hwang, K.K. (2004), "Social connections in China: institutions, culture, and the changing nature of Guanxi", *Contemporary Sociology*, Vol. 33 No. 5, pp. 572-573.
- Kochanova, A. (2012), "The impact of bribery on firm performance: evidence from Central and Eastern European countries", CERGE-EI Working Paper 473, The Center for Economic Research and Graduate Education - Economics Institute, Prague.
- Kokko, A. and Thang, T.T. (2014), "Foreign direct investment and the survival of domestic private firms in Viet Nam", *Asian Development Review*, Vol. 31 No. 1, pp. 53-91.
- Kowalski, P., Büge, M., Sztajerowska, M. and Egeland, M. (2013), "State-owned enterprises: trade effects and policy implications", OECD Trade Policy Paper, No. 147, OECD Publishing.
- Lardy, N. (2014), *Markets over Mao: The Rise of Private Business in China*, Peterson Institute for International Economics, Washington, DC.
- Lardy, N. (2018), *States Strike Back*, Peterson Institute for International Economics, Washington, DC.
- Le, T.H. and Tran-Nam, B. (2018), "Trade liberalization, financial modernization and economic development: an empirical study of selected Asia-Pacific countries", *Research in Economics*, Vol. 72 No. 2, pp. 343-355.

- Le, T.H., Kim, J. and Lee, M. (2016), "Institutional quality, trade openness, and financial sector development in Asia: an empirical investigation", *Emerging Markets Finance and Trade*, Vol. 52 No. 5, pp. 1047-1059.
- Le, T.H., Chuc, A.T. and Taghizadeh-Hesary, F. (2019), "Financial inclusion and its impact on financial efficiency and sustainability: empirical evidence from Asia", *Borsa Istanbul Review*, Vol. 19 No. 4, pp. 310-322.
- Le, T.H., Taghizadeh-Hesary, F. and Nguyen, C.P. (2021), "Obstacles to doing business in Asia: cross-country analysis for state-owned enterprises and private firms", *Reforming State-Owned Enterprises in Asia: Challenges and Solutions*, pp. 297-321.
- Li, L. (2011a), "Performing bribery in China: guanxi-practice, corruption with a human face", *Journal of Contemporary China*, Vol. 20 No. 68, pp. 1-20.
- Li, X. (2011b), "Sources of external technology, absorptive capacity, and innovation capability in Chinese state-owned high-tech enterprises", *World Development*, Vol. 39 No. 7, pp. 1240-1248.
- Li, M., Lien, J.W. and Zheng, J. (2021), "Optimal subsidies in the competition between private and state-owned enterprises", *International Review of Economics and Finance*, November, Vol. 76, pp. 1235-1244.
- Li, C., Lin, L. and Gan, C.E. (2016), "China credit constraints and rural households' consumption expenditure", *Finance Research Letters*, Vol. 19, pp. 158-164.
- Lin, J.Y. (2021), "State-owned enterprise reform in China: the new structural economics perspective", *Structural Change and Economic Dynamics*, September, Vol. 58, pp. 106-111.
- Locke, S. and Duppati, G. (2014), "Agency costs and corporate governance mechanisms in Indian state-owned companies and privately owned companies-a panel data analysis", *Corporate Ownership and Control*, Vol. 11 No. 4, pp. 8-17.
- Lu, C.Q., Siu, O.L., Au, W.T. and Leung, S.S. (2009), "Manager's occupational stress in state-owned and private enterprises in the People's Republic of China", *The International Journal of Human Resource Management*, Vol. 20 No. 8, pp. 1670-1682.
- Mauro, P. (1995), "Corruption and growth", *Quarterly Journal of Economics*, Vol. 110 No. 3, pp. 681-712.
- Münich, D., Svejnar, J. and Terrell, K. (2005), "Returns to human capital under the communist wage grid and during the transition to a market economy", *Review of Economics and Statistics*, Vol. 87 No. 1, pp. 100-123.
- Nagale, A.S. (2017), "Performance differential between India's state owned ratna companies and private owned enterprises", *International Journal of Economics and Financial Issues*, Vol. 7 No. 6, p. 138.
- National Research Council (2009), *21st Century Innovation Systems for Japan and the United States: Lessons from a Decade of Change: Report of a Symposium*, The National Academies Press, Washington, DC. doi: [10.17226/12194](https://doi.org/10.17226/12194).
- Nguyen, T.T. and Van Dijk, M.A. (2012), "Corruption, growth, and governance: private vs. state-owned firms in Vietnam", *Journal of Banking and Finance*, Vol. 36 No. 11, pp. 2935-2948.
- Nguyen, T.N., Truong, Q. and Buyens, D. (2011), "Training and firm performance in economies in transition: a comparison between Vietnam and China", *Asia Pacific Business Review*, Vol. 17 No. 1, pp. 103-119.
- Panth, B. (2013), "Skills training and workforce development with reference to underemployment and migration", in Maclean, R., Jagannathan, S. and Sarvi, J. (Eds), *Skills Development for Inclusive and Sustainable Growth in Developing Asia-Pacific*, Springer, Dordrecht, pp. 195-212.
- Phan, D. and Coxhead, I. (2013), "Long-run costs of piecemeal reform: wage inequality and returns to education in Vietnam", *Journal of Comparative Economics*, Vol. 41 No. 4, pp. 1106-1122.
- Pincus, J. (2016), "Vietnam: in search of a new growth model", *Southeast Asian Affairs*, No. 1, pp. 379-397.

- Poncet, S., Steingress, W. and Vandenbussche, H. (2010), "Financial constraints in China: firm-level evidence", *China Economic Review*, Vol. 21 No. 3, pp. 411-422.
- Ra, S., Chin, B. and Liu, A. (2015), *Challenges and Opportunities for Skills Development in Asia: Changing Supply, Demand, and Mismatches*, Asian Development Bank, Mandaluyong, available at: <https://www.adb.org/sites/default/files/publication/176736/challenges-and-opportunities-skills-asia.pdf> (accessed 22 November 2018).
- Ramalu, S.S. and Rashid, Z.M. (2016), "Islamic work ethic and organizational citizenship behaviour: a study among civil servants in Malaysia", *South East Asia Journal of Contemporary Business, Economics and Law*, Vol. 11 No. 2, pp. 52-61.
- Ramasamy, B., Ong, D. and Yeung, M.C. (2005), "Firm size, ownership and performance in the Malaysian palm oil industry", *Asian Academy of Management Journal of Accounting and Finance*, Vol. 1, pp. 181-104.
- Ramlee, S. and Berma, B. (2013), "Financing gap in Malaysian small-medium enterprises: a supply-side perspective", *South African Journal of Economic and Management Sciences*, Vol. 16 No. 5, pp. 115-126.
- Sen, K. (2017), "Does institutional quality matter for firm performance? Evidence from India", *South Asia Economic Journal*, Vol. 18 No. 2, pp. 184-213.
- Shahab, Y., Ntim, C.G. and Ullah, F. (2019), "The brighter side of being socially responsible: CSR ratings and financial distress among Chinese state and non-state owned firms", *Applied Economics Letters*, Vol. 26 No. 3, pp. 180-186.
- Shi, Y. (2017), "Research on problems and countermeasures of small and medium sized enterprises financing", *DEStech Transactions on Social Science, Education and Human Science*, (Aeme).
- Singh, O. (2019), "State ownership and performance of firm: evidence from India", *Public Sector Economics*, Vol. 43 No. 2, pp. 195-217.
- Sun, Q. (2018), "Explaining the state-owned enterprise wage premium in China: is it unobserved heterogeneity?", *Economic and Political Studies*, Vol. 6 No. 2, pp. 135-157.
- Sutiyono, W. (2007), "Human resource management in state-owned and private enterprises in Indonesia", *Bulletin of Indonesian Economic Studies*, Vol. 43 No. 3, pp. 377-394.
- Tang, F.F., Xi, Y., Chen, G. and Wang, R. (2006), "Ownership, corporate governance, and management in the state-owned hotels in the People's Republic of China", *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 47 No. 2, pp. 182-191.
- Vershinina, N., Rodionova, Y., Kitching, J. and Barrett, R. (2014), "Are regulatory interventions seen as an obstacle or an enabler to SME performance and growth in transition economies: a study of gendered perceptions?", ISBE, available at: <https://www.dora.dmu.ac.uk/bitstream/handle/2086/10483/ISBE%202014%20NV%20YR%20JK%20RB%20final%20revisions.pdf?sequence=1&isAllowed=y> (accessed 22 November 2018).
- VNR500 (2017), "Top 500 largest corporations in Viet Nam 2017", available at: <http://vnr500.com/vn/Cong-bo-Bang-xep-hang-VNR500-%E2%80%93-Top-500-Doanh-nghiep-lon-nhat-Viet-Nam-nam-2017-7504-1006.html>.
- Wu, J., Wang, C., Hong, J., Piperopoulos, P. and Zhuo, S. (2016), "Internationalization and innovation performance of emerging market enterprises: the role of host-country institutional development", *Journal of World Business*, Vol. 51 No. 2, pp. 251-263.
- Yu, M. (2019), "The status of China's market economy and structural reforms: the issues behind the US-China trade war", *Asian Economic Papers*, Vol. 18 No. 3, pp. 34-51.
- Yu, H., Nahm, A.Y. and Song, Z. (2020), "The power source of Chinese state-owned enterprise leaders, investigation of local core officials, and corporate investment behavior", *Journal of the Asia Pacific Economy*. doi: [10.1080/13547860.2020.1782039](https://doi.org/10.1080/13547860.2020.1782039).

| | | China | India | Indonesia | Malaysia | Vietnam |
|---------------------------------|--|--------|--------|-----------|----------|---------|
| Number of firms | | 2,700 | 9,281 | 1,320 | 1,000 | 996 |
| <i>Percentage of indicators</i> | | | | | | |
| Size of locality | City with population over 1 million | 98.63% | 38.79% | 72.27% | 22.70% | 80.99% |
| | Over 250.000 to 1 million | 0.41% | 32.24% | 22.80% | 40.60% | 0.20% |
| | 50.000 to 250.000 | 0.96% | 23.36% | 3.86% | 29.20% | 1.01% |
| Size of firm | Less than 50.000 | 0.00% | 5.61% | 1.06% | 7.50% | 17.81% |
| | Micro <5 | 0.00% | 0.00% | 0.00% | 0.00% | 0.70% |
| | Small ≥ 5 and ≤ 19 | 36.70% | 33.62% | 34.62% | 38.30% | 38.35% |
| | Medium ≥ 20 and ≤ 99 | 35.19% | 43.75% | 34.70% | 32.20% | 34.54% |
| Ownership | Large ≥ 100 | 28.11% | 22.64% | 30.68% | 29.50% | 26.41% |
| | SOEs | 3.57% | 0.12% | 0.61% | 0.90% | 1.51% |
| | Private firms | 96.43% | 99.88% | 99.39% | 99.10% | 98.49% |
| Firm's current legal status | Shareholding company with shares trade in the stock market | 2.04% | 2.18% | 0.76% | 8.41% | 3.94% |
| | Shareholding company with non-traded shares or shares traded privately | 5.11% | 8.30% | 0.23% | 19.22% | 18.08% |
| | Sole proprietorship | 48.04% | 47.40% | 54.17% | 24.12% | 44.04% |
| | Partnership | 8.59% | 19.38% | 36.67% | 39.44% | 2.32% |
| | Limited partnership | 34.15% | 19.79% | 8.18% | 8.81% | 23.13% |
| | Other | 2.07% | 2.96% | 0.00% | 0.00% | 8.48% |

Table A1.
Descriptive statistics
of the data

Source(s): Authors' Calculations based on the World Bank's Enterprise Surveys

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