Saul Estrin, Zhixiang Liang, Daniel Shapiro and Michael Carney

State capitalism, economic systems and the performance of state owned firms

Article (Accepted version)
(Refereed)

http://eprints.lse.ac.uk

State Capitalism, Economic Systems and the Performance of State Owned Firms

Saul Estrin*
London School of Economics
London, United Kingdom

Zhixiang Liang
John Molson School of Business
Concordia University
Montréal, Québec, Canada

Daniel Shapiro
Beedie School of Business
Simon Fraser University
Vancouver, British Columbia, Canada

Michael Carney
John Molson School of Business
Concordia University
Montréal, Québec, Canada
michael.carney@concordia.ca

*Corresponding author. Author order does not reflect contribution, which has been equal.

1

State Capitalism, Economic Systems and the Performance of State Owned Firms

Abstract

In this paper, we pursue two related research questions. First, we enquire whether state owned enterprises (SOEs) perform better than privately owned firms in a large variety of emerging markets. To test this, we develop a unique dataset using firm-level data from the World Bank Enterprise Survey (WBES), resulting in a sample of over 50,000 firms from 57 understudied countries including emerging capitalist, former socialist and state capitalist ones. Our results suggest that SOEs do display productivity advantages over private firms in these understudied economies. Our second research question asks whether the performance of state-owned firms in these understudied countries is context specific, namely whether performance depends on the institutional system to which a country is classified. We refer to these systems as configurations. In particular, we are interested in whether state owned firms perform better in "state capitalist" countries including China and Vietnam. We find empirical support for the argument that the "state led" configuration provides better institutional support for the ownership advantages of SOEs than others.

INTRODUCTION

There was a consensus in global economic policy making from the 1980s until perhaps the mid-1990s based around the view that privatization, liberalization, and macro-stability were at the core of economic success. This perspective, the Washington Consensus (Williamson, 1990), has since been widely criticised (Kolodko, 1999; Stiglitz, 2002; Rodrik, 2006), but behind the Consensus was a view about economic systems which to some extent retains its intellectual hold in many developed economies, namely that free market capitalism is the only system capable of generating sustained economic growth and efficiency. While capitalism is usually defined regarding private ownership of the means of production and free markets, according to Nuti (2018), an essential component of socialism is the dominance of public property and enterprise. For von Hayek (1944)) and Friedman (1962), the market economy provides the only resource allocation mechanism capable of generating economic efficiency and growth. This seemed to be borne out in practice as the socialist planning systems of Central and Eastern Europe collapsed under the weight of their internal contradictions after 1989. This seemed to suggest that the notion of the co-existence of equally efficient alternative economic systems was fundamentally flawed, and, as argued by Hayek, there was only a single economic system which satisfied the criterion of economic efficiency – the market system.

However, as Kolodko (2002) amongst others has pointed out, the process of transition from socialism to capitalism in Central and Eastern Europe does not provide convincing evidence in support of the Washington Consensus approach to policy. Furthermore, in recent years, there is also new evidence emerging which brings into the question the idea that there is only one systemic path to good economic performance: the rapid rise of the Chinese economy and other emerging markets, none of which conform to the

traditional view of a free market economy. Thus, for example, Chinese GDP rose from just over $200 billion in 1978, when Deng Xiaoping came to power, to more than $12,250 billion in 2017; surely evidence of sustained strong economic performance. Similar growth paths have been sustained, though for shorter periods, in socialist economies like Vietnam, as well as in state led capitalist ones like Korea and Singapore (Wade, 2002). Yet China cannot be considered a pure free market economy and is often referred to as "state capitalist" (*Economist*, January 21st, 2012) because of the central role played in the economy by state owned firms. Thus our analysis of the effects of economic systems needs to be extended explicitly to take into account the new institutional systems that are guiding the economies of Asia, Latin America, and Africa.

There is little doubt that one of the most important ways in which China and other successful emerging markets deviate from the free market paradigm concerns the role of the state in economic development (Wade, 2003; Musacchio and Lazzarini, 2014). This paper focuses on an important aspect of that by considering the performance effects of state ownership at the enterprise level. Given the successful economic performance of some state capitalist economies, it is no longer obvious that this will automatically be inferior to the performance of comparable privately owned firms. Unsurprisingly, the Washington Consensus argued consistently for the privatisation of state owned enterprises based on positive evidence about the impact of privatisation: thus Galal et al. (1994) estimated net welfare gains of 26 percent of sales in Britain, Chile, Malaysia, and Mexico. Similarly, La Porta and Lopez-de-Silanes (1999) found that privatized Mexican SOEs rapidly closed a large performance gap with industry-matched private firms. However, more recent work about transition economies and developing economies brings that conclusion into question, with performance effects being found to be highly context specific (Jomo, 2008; Estrin, Hanousek, Kocenda, Svjenar, 2009; Estrin and Pelletier, 2018).

We are also concerned with the relationship between the economic system and firm performance. Our analysis is undertaken primarily in the context of emerging markets, and we consider an array of understudied economies which do not fit comfortably within the categorisation of capitalist or socialist. As a result, we need to revisit the notion of economic system, and in doing this, we draw on recent work by institutional economists. Thus, in the Varieties of Capitalism (VOC) perspective (Hall & Soskice, 2001), it was argued that there were two fundamental systems within the market economy; Liberal Market (LME) such as the US and UK and Coordinated Market (CME) economies such as Germany or France. This classification of systems is based around institutional complementarities within countries that co-evolve with those of other countries to produce distinct governance configurations; unlike the socialist-capitalist distinction no single institutional characteristic, such as private ownership, is sufficient to define the system. However, the VOC approach remains highly Eurocentric and has not been systematically extended to consider the understudied emerging economies which are the subject of this paper.

It is not our purpose in this paper to create a new classification of economic systems into which the major new emerging economies can be comfortably fitted. Our objective is rather more modest; to isolate the impact of state ownership on firm performance and to explore whether this is sensitive to the institutional context. In particular, we are interested in the idea that firm performance is contingent on the economic system, so that for example state owned firms may perform well within systems which provide suitable institutional support, though they may perform less well in less sympathetic environments. We, therefore, draw on a pre-existing classification of economic systems for emerging markets, developed by Fainshmidt, Judge, Aguilera, and Smith, henceforth FJAS (2016). FJAS use the institutional structures in emerging economies to develop a categorisation that they term the

Varieties of Institutional Systems (VIS); a taxonomy comprising seven distinct, empirically derived national institutional systems called *configurations*.

We, therefore, pursue two related research questions. First, we enquire whether state owned enterprises (SOEs) perform better than privately owned firms in a large variety of emerging markets. To test this, we develop a unique dataset that combines the seven FJAS configurations with firm-level data from the World Bank Enterprise Survey (WBES), resulting in a sample of over 50,000 firms from 57 understudied countries, including emerging capitalist, former socialist and state capitalist ones. Our results suggest that SOEs do display productivity advantages over private firms in these understudied economies.

Our second research question asks whether the performance of state-owned firms in these understudied countries is context specific, namely whether performance is sensitive to which configuration the country in which the state owned firm is located belongs. In particular, we are interested in whether state owned firms perform better in the configuration, including China and Vietnam, which is termed "state capitalist."" We find empirical support for the argument that the state led configuration provides better institutional support for the ownership advantages of SOEs than all the others. Our findings also indicate that the configurations are important determinants of both private and state-owned firm performance.

In the next section, we consider the literature on the performance of state owned enterprises relative to privately owned ones (POEs) and discuss the recent evolution in thinking about economic systems leading to the development of the FJAS configuration. We present the data and methods in the third section and the results in the fourth. Finally, we draw our conclusions.

THE EFFECTS OF STATE OWNERSHIP ON ENTERPRISE PERFORMANCE AND THE MODERATING ROLE OF ECONOMIC SYSTEMS

This paper addresses two related empirical questions. The first concerns the relative performance of SOEs and POEs in emerging markets. There is already considerable evidence on this matter for developed economies which largely support the view that SOEs are less efficient (Boardman and Vining, 1989; Megginson and Netter, 2001). However, there is much less evidence for developing economies, and the findings concerning the associated question of the impact of privatisation are more ambiguous in the developing than developed economy context (Estrin and Pelletier, 2018). This leads us to explore the relative performance of SOEs and POEs in emerging economies. We are also interested in the contextual specificity of the relationship between enterprise performance and ownership structures. We undertake this analysis for emerging economies with the FJAS framework in which they identify a taxonomy of seven configurations of national economic systems. In this section, we summarise the literature about the performance effects of state ownership, and about the impact of the institutional system, with a particular emphasis on emerging economies.

Scholars usually argue that POES will outperform SOEs. To understand why one must compare company objectives and corporate governance under state and private ownership. A common argument is that the fundamental difference rests in their organisational objectives: POEs focus exclusively on profit, which leads to close attention to costs and customer demands. SOEs may be interested in profits too, but state owners may also expect managers to satisfy other objectives as well, often of a social or political type. Thus, the state may seek to create jobs in key political regions, or to hold down the prices of goods that have a significant effect

on the budgets of political supporters and managers may exploit the conflict to their private benefit for example via rent seeking. In general, conflicting objectives make it harder for the owners to specify targets and to monitor performance, and this then provides leeway for decision makers to pursue their personal gains. Hence inefficiencies can thrive because they are not a central concern of the owner, and managers can exploit the lack of clarity in company objectives to ensure an easy life for themselves and employees (Shleifer and Vishny, 1994).

This problem centres on the asymmetry of information held by managers and owners about the performance of the firm; outside owners – private or state – can never have full access to such information which is concentrated is in the hands of managers. Thus, it is hard for them to establish whether poor results are a consequence of unforeseen circumstances or managers exploiting firm profits for their purposes. Whenever ownership and control are separated, private benefits (firm-specific rents) can be siphoned out of the company by managers. However, the normal argument is that, relative to state ownership, a private ownership system places more effective limits on this behaviour via constraints from product and capital markets. These operate primarily by product market competition (Vickers and Yarrow, 1988) and through the markets for recruitment of managers and corporate control (Estrin and Perotin, 1991). The key constraint is seen to be the stock markets (Megginson, 2005). The quality of managerial decision-making and the extent of managerial discretion are an input in the choices of traders in equity markets, whose judgement on company performance is summarised in the share price. If the managerial team is thought to be incompetent or inefficient, the share prices will be reduced, putting pressure on managers to improve their performance. A persistently poor showing by a quoted company may also generate

external pressure by encouraging a take-over bid. Moreover, in the managerial market, individual performance and pay are largely assessed by share prices.

It is normally argued (Estrin et al., 2009) that it is hard for the state to imitate these market-based constraints. State owned firms are usually not subject to capital market disciplines, so neither the competitively driven informational structure nor the market based governance mechanisms can operate. SOEs in Europe were traditionally managed by civil servants and did not compete in the wider managerial market. Managers are also held to a soft budget constraint (Kornai, 1990) that goes with the political determination of resource allocation was also seen as a further source of incentive problems since managers did not have to bear the consequences for their actions.

However, even this brief description makes clear that the mechanisms underlying the advantages of POEs compared with SOEs are context specific and may be highly sensitive to institutional arrangements. For example, the existence of an effective market for corporate control relies upon a high level of development and sophistication of capital markets. In many emerging economies, capital markets, in particular, are seriously underdeveloped, being reliant on other critical institutional characteristics such as the rule of law and the protection of private property rights and the evidence suggests that this is far from guaranteed (Khanna and Palepu, 2010; Hoskisson, Wright, Filatotchev & Peng, 2013; Gugler, Peev & Segalla, 2013). Thus the principal mechanism ensuring the superior performance of POEs may not be operational in many emerging markets contexts. In that case, the relative performance of SOEs and POEs depends upon detailed governance arrangements, but the fact that state ownership is highly concentrated while private ownership may not provide one line of argument that the balance of advantage could sometime rest with SOEs.

9

In this paper, we focus on the impact of national institutional context with reference to the economic system – the VIS configurations- rather than concerning particular institutions or countries. National institutional systems provide the formal and informal rules of the game to which domestic and foreign firms must adapt their governance and ownership structures (North, 1994). However, why should differences in institutional systems explain firm performance (Aguilera & Crespi-Cladera, 2016)? The VOC literature (Hall & Soskice, 2001) identifies a social democratic economic model of capitalism in north European countries as a viable alternative architecture of national competitiveness to liberal market economies and propose two principal mechanisms linking firm performance and institutional system. The reason first concerns institutional complementarity. An economy has several institutional spheres, notably the financial sector, the labor, and industrial relations regime, and the educational and skills training systems. Institutional variation arises from the way different national institutional systems achieve cohesion and ways of 'hanging together' to support high-performing firms and achieve high economic growth (Peck & Zhang, 2013). These institutional complementarities within countries can co-evolve with those of other countries to produce distinct governance configurations.

The second key concept is isomorphism. Each variety of capitalism is said to produce an 'emblematic firm' (Boyer, 2005), an organisational form particularly well adapted to its national institutional system. The emblematic firm in the Liberal Market Economy (LME), as we have already seen, is a capital market-governed, managerially controlled, shareholder value-maximizing firm. More recently, emerging market scholars propose the diversified business group as the emblematic form of corporate organization in the high-performing Asian economies (Carney, Gedajlovic, & Yang, 2009). Arguably, the SOE may be the emblematic firm in state capitalist systems (Masuccchio, Lazzarini, Aguilera, 2015). The institutional system, therefore, supplies firms with 'institutional

capital' so that firms fit, or become isomorphic with, prevailing modes of institutional functioning. National institutional systems will differ in the way they influence the structure of emblematic firms, and their capacity to accommodate non-emblematic firms, and isomorphic processes in different configurations, therefore, result in varied forms of comparative institutional advantage (Schneider, Schulze-Bentrop & Paunescu, 2010). Thus, as firms strive to access resources in their local environment, they are likely to develop similar practices adapted to their particular institutional configuration (Hall & Soskice, 2001).

The VOC framework was based on a detailed study of a few developed economies, and the framework does not adequately capture the full international heterogeneity amongst institutional configurations (Globerman and Shapiro, 2002). Applying fuzzy set analysis to multiple measurements of national institutional characteristics, FJAS (2016) extended the notion of the institutional system from a typology to an empirically based taxonomy, which explicitly included emerging, developing and transition countries. The full VIS classification of nine national systems, or *configurations*, is presented in Table 1; the first two are the VOC traditional LME and CME economies, containing developed European and Anglo-Saxon economies. Our research considers only the latter seven configuration, which were developed to cover the understudied economies of Eastern Europe, Asia, Latin America, and Africa. Our proposition is that firm performance will be influenced by the configuration to which a country belongs, in addition to standard performance effects at the firm and national level. Thus, the way that enterprises might resolve internal contradictions and internalise external effects might be very different, for example, in the emerging LME (henceforth configuration 1 because, as shown in Table 2, we do not cover the LME and CME configurations of VIS in our work) and state-led (configuration 5) configurations respectively. Private firms probably represent the emblematic firms in the former and SOEs in the latter (Shapiro and Globerman, 2012). Other VIS

configurations may also have settled into a stable institutional equilibrium; for example, the family-led configuration (configuration 2 in Table 2) is dominated by powerful rent-seeking business groups, which resist institutional developments that challenge their rents (Carney, Duran, van Essen & Shapiro, 2017).

DATA AND METHODS

Our dataset has three dimensions – firm; country; and time. The information about firms derives from the World Bank Enterprise Survey (WBES) (http://data.worldbank.org/data-catalog/enterprise-surveys); an enterprise database[1] collected by surveys of over 120,000 firms in more than 130 countries across Asia, Latin America, Eastern and Central Europe, and Africa between 2006 and 2016 (World Bank, 2011). The World Bank conducted the surveys at different dates with some countries having only one wave (e.g., Brazil and India), most having two and a few having three (e.g., Bulgaria and DR Congo).

The VIS typology of institutional systems in Table 1 includes many of the countries surveyed by WBES[2]; of the 68 countries in VIS, the WBES dataset covers 57. Table 2 lists them and shows how their classification into the seven VIS configurations (*configs*), as well as providing information about the number of firms in each country sample. Using these 57 countries gives us a maximum sample of over 86,000 firms, but we exclude micro-firms (fewer than 10) for the comparison of SOEs and POEs, reducing the sample to around 55,000 firms. We also cannot analyse all of the configurations because we do not have data about any country in configuration 4 (centralized tribe) in the WBES sample. We use dummy variables to allocate each of the 57 countries in the sample to

---

[1] The sampling is random with replacement and stratified to be country representative with respect to firm size, business sector, and geographic region.
[2] The classification is based on data collected from a panel of experts which is analysed to identify seven institutional systems that categorize governance arrangement for 68 understudied countries.

the appropriate one of the six available VIS configurations as in Table 2. In our regressions, we always use as our point of reference

configuration 5, emergent liberal market economies (ELMEs); this represents for our sample of understudied economies the

institutional system closest to the traditional Anglo-Saxon governance model.

-Tables 1 & 2: about here-

Our measure of firm performance is labor productivity (*LPROD*), defined in the WBES as real sales per worker. We analyse

state ownership (*SOE*) regarding majority ownership and so load it as a dummy variable taking the value unity when the state owns

more than 50% of the equity in the firm. We control for other factors likely to influence firm performance. The most important of

these at the country level is the level of national economic development which we measure as GDP per capita (*GDPpc*) measured in

logs. We also control in these developing countries for FDI and the impact of spillovers from developed economies using country-

level data on the source of FDI, namely the percentage of the *FDI stock* derived from developed economies, also measured in logs.

Because of these potential external effects from foreign owned firms, we expect firm performance to be higher the greater the

percentage of FDI to a host economy from developed economies.

We also employ two firm-level controls for company performance, entered in logs. Thus, we include a measure of *firm size*

and *firm age*; larger firms and mature firms are typically associated with higher levels of productivity (Hall & Weiss, 1967; Moen,

1999). We also include industry and time fixed effects. We report variable definitions and sources for all dependent and independent

variables in Table 3.

Comment [AP1]: Do you
account M&A over the pe
other types of ownership
For instance, if a company
state-owned, or privatised
many co's does that conce

-Table 3: about here-

We report descriptive statistics in Table 4 and correlation coefficients in Table 5. We find in Table 4, which reports descriptive statistics that the average firm employs around 110 workers and is 18 years old. Most firms focus on their domestic market (the share of exports averages 7.5% sales). Some 5% of firms in the sample are state-owned, and another 5% are (majority) foreign owned. On average, around one-third of FDI derives from other emerging and developing countries. Table 5 reveals that the correlation coefficients between the independent variables are almost all rather small, mostly well below 0.3, suggesting that multicollinearity is not a serious issue in our data[3].

-Tables 4 & 5 about here-

Our model is therefore:

$$\text{Ln (LPROD)} = a_1 + a_2 \ln(\text{firm age}) = a_3 \ln(\text{firm size}) + a_4 (\text{FDI stock}) + a_5 \ln(\text{GDPpc}) + a_6 \sum_{1=1..6}(\text{Config})_i + a_7 \text{SOE} + a_8 \text{SOE}*\sum_{i=1..6}(\text{Config})_i + \sum \text{industry dummies} + \sum \text{time dummies.} \quad (1)$$

---

[3] One exception is the positive correlation between FDI stock from developed economies and GDP per capita. However, in unreported regressions we find that omission of the former does not influence the results concerning the hypotheses, so we include both variables in our reported regressions.

14

We estimate five models using OLS. In the first, we include the control variables excluding configs; for model 2 we add the five is configuration dummy variables (configs 1, 2, 3, 6, and 7) and for model 3 we include only the control variables and the SOE majority dummy. Model 4, then includes all five configurations dummies and SOE as well as the control variables. Finally, in model 5, we add the five interaction terms between the configuration dummies and SOE. The test of the performance effect of state ownership depends on the sign and significance of a_7, while the impact of institutional systems depends on a_6. The moderating effects of the institutional system on SOE performance relative to POEs comes from the coefficients on the coefficient a_8.

RESULTS

We report our results in Table 5, models 1-5. We have just under 55,000 observations across 57 countries in our sample, and in our full specification, we explain some 22% of the variation in the dependent variable. We note from model 1 that the control variables are all significant with the expected sign, and from model 2 that firm performance is significantly influenced by location within a particular configuration. In particular, the omitted configuration, number 4 (emergent LME) is the most supportive of productivity at the firm level, followed by configs 1 (state led) and 5 (collaborative). There is a second cluster of configurations with performance effects quite similar to each other but significantly worse than configs1 and 5, namely configs 7 (hierarchically coordinated); 2 (fragmented) and finally 3 (family led). This ranking of the productivity effects of configurations does not change in the different specifications.

The coefficient on state ownership is found to be positive and significant in all the models in which it is included. This indicates that in our sample of understudied economies, state ownership is found to increase labour productivity, all other things equal. This result holds when the SOE dummy is entered without configs in model 3, and with configs in model 4. The coefficient and standard error on the SOE variable are not significantly altered by the inclusion of the config dummies.

Model 5 allows us to simultaneously consider the productivity effects of state ownership and the moderating impact of configurations and tells a more complex story than our analysis hitherto. In this model, we do not find that state owned firms have a higher level of labour productivity than private ones; the SOE dummy indicates that there is no significant difference between SOEs and POEs regarding productivity. However, as previously, productivity is found to be higher in larger and older firms, and in countries with higher level of development (GPPpc) and with greater FDI from developed economies (% of FDI stock). Furthermore, productivity remains significantly affected by the institutional system of the country in which the firm is located. However, in model 5 we also identify the configuration for which the SOE may be considered the "emblematic firm". Thus, while the coefficient on the SOE dummy is insignificant in model 5, it is not when interacted with the "state led" configuration dummy. In short, in our sample of

understudied economies, SOEs and POEs do not display significantly different levels of labour productivity, and this holds in every configuration except the state led one. However, in the state led configuration (config 1), productivity is higher in state owned firms[4].

CONCLUSIONS

In this paper, we first advance the literature on both state ownership and national institutional systems by focusing on the impact of these systems on the performance of firms from emerging and developing economies. We test and validate FJAS's (2016) taxonomy of institutional systems and demonstrate that the configurations provide an independent and statistically significant explanation of the variation in firm performance across countries. Furthermore, FJAS's varieties of institutional systems perspective introduce for understudied countries a new element that is conspicuously absent from the VOC perspective, namely a more prominent role for the state.

Secondly, our results shed light on the kinds of institutional arrangements that will support better enterprise performance. With its depiction of path-dependent institutional change (Hall & Thelan, 2009), the comparative capitalism literature has emphasized institutional continuity and the persistence of variety in capitalist structures (Jackson & Deeg, 2008). This characterization may be appropriate in the context of mature institutional settings, but less so in understudied countries which comprise a wide array of transitional, socialist, and authoritarian regimes. Our ranking results shed some preliminary and admittedly tentative light on these debates, suggesting a range of distinctive trajectories of institutional change and firm performance. For example, our evidence points

---

[4] We consider in unreported regressions the results from a broader sample including all the small firms (< 10 workers). This increased the sample size by around 30%, and more so in fragmented and family-led configurations. We re-estimated models 4 and 5 on these samples, and the results were extremely similar in all key respects.

to three relatively high-performing configurations: emergent LMEs (config 2), in which firms rank first in productivity, collaborative agglomerations (config 6) and state led (config 1). The latter finding might be a shock to strong beleivers of the Washington Consensus, but perhaps less so to observers of the rise of China and other state led economies in East Asia and elsewhere. We characterize the developmental trajectories of this configurations in dynamic terms where relatively strong-states are proactive in building complementarities to address institutional contradictions and seeking to develop a coherent market-based institutional framework. In these settings, where markets and other selection mechanisms are intensified, and domestic firms are incentivized to adapt and improve their practices, high levels of performance can be achieved. Strong states retain what Evans' (1989) describes as embedded autonomy, and avoid dependence upon powerful oligarchs or family elites. The prominent role of the state is suggestive of a government policy choice favoring export-oriented development, a well-trodden path for late-industrializing states (Amsden, 1991). Importantly, state led countries do not appear to be converging on either the CME or LME varieties of capitalism; instead, it may represent an alternative, hybridized form of state capitalism. Many of the countries in these configurations are relatively stable single-party states with long time horizons and incentives to adopt open trade policies that improve long-term economic performance. The implication is that state leadership of the economy becomes a permanent feature of these economic systems.

We conclude by acknowledging some limitations of this study and providing some further guidance for future research. Our study faces limitations at both the theoretical and empirical levels. Commencing with theory, we have followed the literature in basing our classification of institutional systems upon taxonomies, which derive their classificatory distinctions from empirically observed clusters of characteristics, rather than from an underlying conceptualization as would be the basis for a typology. Given that

18

understudied economies are typically evolving rapidly and are often subject to significant institutional changes, sometimes related to revolution, civil war or major economic and social development (Collier, 2007), our taxonomy may provide an unstable basis for long-term analysis. Furthermore, we have chosen to base our study on the VIS classification, with our contribution primarily focused on exploring the complex inter-relationships among institutional systems, enterprise governance system, and firm performance. While our research has provided some evidence of the validity of the VIS taxonomy in explaining firm performance in understudied economies, future researchers may wish to revisit the taxonomy itself to explore whether cluster analysis based on a richer characterization of institutions can provide an equally valid but more fine-grained specification of institutional systems in understudied economies.

On the empirical side, we have benefitted from the World Bank's vast data collection exercise at the enterprise level on understudied economies. However, the WBES dataset also imposes some limitations. Most importantly, though there are a few countries surveyed three times, the bulk of the dataset comprises either single year observations or observations from only two waves. This has made it impossible to use empirical methods that distinguish between firm-level, country-level, and configuration effects. Future work may, therefore, need to seek either panel data for understudied economies or focus primarily on the countries with three waves to explore these distinctions. Furthermore, the data do have certain limitations, concerning performance and ownership measures, and future research should investigate ways to improve these measures. Our analysis would, in particular, be improved by using a measure of total factor productivity.

In summary, we propose and find evidence for the argument that, when we turn our attention to understudied economies, state owned firms can perform better than private ones, though only in the right institutional environment. We have found this "right institutional environment" to be the one referred to within the VIS classification as "state led," and unsurprisingly it includes some of the successful economies of East Asia such as China. Thus in economic systems in which the state acts as the pivotal coordinator of economic activity and provides the support and complementarities generating economic development, state owned firms are more productive than private ones. We have not in this paper considered the mechanisms whereby the state provides support to SOEs in state-led economies, and this may include state-provided subsidies, preferred access to critical input resources, and monopoly power in output markets. This is an important topic for future research.

20

BIBLIOGRAPHY

Aguilera, R. V., & Crespi-Cladera, R. (2016). Global corporate governance: On the relevance of firms' ownership structure. *Journal of World Business*, 51(1), 50-57.

Amsden, A. H. (1991). Diffusion of development: The late-industrializing model and greater East Asia. *American Economic Review*, 81(2), 282-286.

Boardman, A., and A. Vining. 1989. "Ownership and Performance in Competitive Environments: A Comparison of the Performance of Private, Mixed, and State-Owned Enterprises." *Journal of Law and Economics* 32 (1): 1–33.

Carney, M., Gedajlovic, E., & Yang, X. (2009). Varieties of Asian capitalism: Toward an institutional theory of Asian enterprise. *Asia Pacific Journal of Management*, 26(3), 361-380.

Carney, M., Duran, P., van Essen, M., Shapiro, D. (2017). Family firms and national competitiveness: does family firm prevalence matter? *Journal of Family Business Strategy* online.

Collier, P. (2007). *The Bottom Billion*. Oxford: Oxford University Press.

Estrin, S., and Perotin, V., (1991): "Does Ownership Always Matter", *International Journal of Industrial Organization*, Vol. 9, pp. 55-72.

Estrin, S., Hanousek, J., Kočenda, E., & Svejnar, J. (2009). The effects of privatization and ownership in transition economies. *Journal of Economic Literature*, 47(3), 699-728.

Estrin, S. & Pelletier, A. (2018). Privatization in Developing Countries: What Are the Lessons of Recent Experience? *World Bank Economic Review*, 2018, 33, 65-102.

Evans, P. (1995). *Embedded Autonomy: States and Industrial Autonomy* Princeton: Princeton University Press.

Fainshmidt, S., Judge, W. Q., Aguilera, R. V., & Smith, A. (2016). Varieties of institutional systems: A contextual taxonomy of understudied countries. *Journal of World Business*. online

21

Friedman, M., (1962), Capitalism and Freedom, Chicago: University of Chicago Press.

Galal, A., L. Jones, Tandon, P. and Vogelsang, I. (1994). *Welfare Consequences of Selling Public Enterprises*. Oxford: Oxford University Press.

Globerman S, and Shapiro D. (2002). Global foreign direct investment flows: The role of governance infrastructures. *World Development* 30(11): 1899-1919.

Gugler, K., Peev, E., & Segalla, E. (2013). The internal workings of internal capital markets: Cross-country evidence. *Journal of Corporate Finance, 20*, 59-73.

Hall, P. A., & Soskice, D. W. (2001). *Varieties of capitalism: The institutional foundations of comparative advantage.* Oxford: Oxford University Press.

Hall, P. A., & Thelen, K. (2009). Institutional change in varieties of capitalism. *Socio-Economic Review*, 7(1), 7-34.

Hall, M., & Weiss, L. (1967). Firm size and profitability. *The Review of Economics and Statistics*, 49(3), 319-331.

Hayek, von F.A. (1944). *The Road to Serfdom.* London: Routledge.

Hoskisson, R. E., Wright, M., Filatotchev, I., & Peng, M. W. (2013). Emerging multinationals from mid-range economies: The influence of institutions and factor markets. *Journal of Management Studies*, 50(7), 1295-1321.

Jackson G. & Deeg. R. (2008). Comparing capitalisms: understanding institutional diversity and its implications for international business, *Journal of International Business Studies, 39, 4*, 540-561.

Jomo, K. S. (2008). "A Critical Review of the Evolving Privatization Debate." In *Privatization: Successes and Failures*, edited by G. Roland, 199–212. New York: Columbia University Press.

Khanna, T., & Palepu, K. G. (2010). *Winning in emerging markets: A road map for strategy and execution.* Harvard Business Press.

22

Kolodko, G. (1999). Transition to a market economy and sustained growth. Implications for the post-Washington consensus, *Communist and Post-Communist Studies* 32 (3), 233-261.

Kolodko, G. (2002). *From shock to therapy: the political economy of postsocialist transformation*, Oxford: Oxford University Press.

Kornai, J. (1990): *The Road to a Free Economy. Shifting from a Socialist System: The Example of Hungary*, New York: W. W. Norton and Budapest: HVG Kiadó.

La Porta, R., & Lopez-de-Silanes, F. (1999). "Benefits of Privatization-Evidence from Mexico." *Quarterly Journal of Economics* 114 (4): 1193–242.

Musacchio, A. & Lazzarini, S. (2014) *Reinventing State Capitalism: Leviathan in Business, Brazil and Beyond.* 1st ed. Cambridge, Mass.: Harvard University Press.

Musacchio, A., & Lazzarini, S. G & Aguilera, R. V. (2015). New varieties of state capitalism: Strategic and governance implications. *Academy of Management Perspectives*, 29(1), 115-131.

Megginson W. (2005): *The Financial Economics of Privatization*, Oxford University Press, New York.

Megginson, W. & Netter, J. (2001). "From State to Market: A Survey of Empirical Studies on Privatization." *Journal of Economic Literature* 39 (2): 321–89.

Moen, Ø. (1999). The relationship between firm size, competitive advantages and export performance revisited. *International Small Business Journal*, 18(1), 53-72.

North, D. C. (1994). Economic performance through time. *American Economic Review, 84,* 359-68.

Nuti, D.M. (2018). *The Rise, Fall and Future of Socialism*, EACES Conference 2018 Keynote Address

Rodrik, D. (2006). Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform. *Journal of Economic Literature, 44* (4): 973-987.

Shapiro, D. & Globerman, S. (2012). "The International Activities and Impacts of State-Owned Enterprises" in **Sovereign Investment:**

Concerns and Policy Reactions, Karl P. Sauvant, Lisa Sachs and Wouter P.F. Schmit Jongbloed (editors), Oxford University Press, 2012 (Chapter 5).

Shleifer, A. & Vishny, R. (1994): "Politicians and Firms." *Quarterly Journal of Economics 46*: 995-1025

Schneider, M. R., Schulze-Bentrop, C., & Paunescu, M. (2010). Mapping the institutional capital of high-tech firms: A fuzzy-set analysis of capitalist variety and export performance. *Journal of International Business Studies*, 41(2), 246-266.

Stiglitz, J.E. (1998) "More Instruments and Broader Goals: Moving Toward the Post-Washington Consensus," the 1998 WIDER Annual Lecture, Helsinki, January 1998, reprinted Chapter 1 in *The Rebel Within*, Ha-Joon Chang (ed.), London: Wimbledon Publishing Company, 2001, pp. 17-56.

Wade, R. (2003) *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*. Princeton, NJ: Princeton University Press.

Williamson, J. (1990) "What Washington Means by Policy Reform," Chapter 2 in *Latin American Adjustment: How Much Has Happened?* John Williamson (ed.), 1990, Washington: Institute for International Economics.

Vickers, J., and G. Yarrow. (1988). *Privatization: An Economic Analysis*. Cambridge, MA: MIT Press.

World Bank (2011), *Understanding the Questionnaire*. Available from: https://www.enterprisesurveys.org/~/media/GIAWB/EnterpriseSurveys/Documents/Methodology/Questionnaire-Manual.pdf. (Accessed: 19 October 2017).

Table 1: FJAS (2016) VIS Configurations in 68 Understudied Countries

Summary of classification Scheme

Market-based (LME)*	Collaborative (CME)*	State-Led	Fragmented with Fragile State	Family-Led	Centralized Tribe	Emergent LME	Collaborative Agglomerations	Hierarchically Coordinated
Australia	Austria	Argentina	Angola	Algeria	Bahrain	Botswana	Czech Republic	Bulgaria
Canada	Belgium	Bangladesh	Cameroon	Azerbaijan	Iran	Chile	Estonia	Georgia
Ireland	Denmark	Belarus	D.R. Congo	Brazil	Kuwait	Hong Kong	Hungary	Jordan
New Zealand	Finland	China	Egypt	Colombia	Qatar	Israel	Latvia	Kazakhstan
Switzerland	France**	India	Ethiopia	Mexico	Saudi Arabia	Namibia	Lithuania	Korea (South)
UK	Germany	Indonesia	Ghana	Morocco	UAE	Singapore	Poland	Lebanon
USA	Italy**	Malaysia	Kenya	Nigeria		South Africa	Slovak Republic	Romania
	Japan	Mongolia	Rwanda	Peru			Slovenia	Taiwan
	Netherlands	Pakistan	Senegal	Tunisia				Turkey
	Norway	Philippines	Sudan	Yemen				Ukraine
	Portugal**	Russia	Tanzania					
	Spain**	Sri Lanka	Uganda					
	Sweden	Thailand						
		Venezuela						
		Vietnam						

* These economies have been classified by Hall and Soskice (2001) and subsequent literature. The LME group corresponds to the compartmentalized system in Whitley's NBS, and the CME encompasses various subtypes of collaborative systems included in NBS such as collaborative, highly coordinated, and coordinated industrial district.

** These economies are often classified as unique subtypes of collaborative systems where there is more state dominance and, in some cases, relatively liberal labor relations (Schneider, 2013; Hall & Thelen, 2009; Grosvold & Brammer, 2011).

Table 2: World Bank Enterprise Survey Sample Countries within the VIS Configuration Structure and Number of Firms in each Country

Config1		Config2		Config3		Config5		Config6		Config7	
State-led		Fragmented/ fragile state		Family led		Emergent LME		Collaborative Agglomerations		Hierarchically coordinated	
Country	Freq.	Country	Freq.	Country	Freq.	Country	Freq.	Country	Freq.	Country	Freq.
Argentina	2,117	Angola	785	Azerbaijan	770	Botswana	610	Czech Republic	504	Bulgaria	1,596
Bangladesh	2,946	Cameroon	363	Brazil	1,802	Chile	2,050	Estonia	546	Georgia	733
Belarus	633	DR Congo	1,228	Colombia	1,942	Israel	483	Hungary	601	Jordan	573
China	2,700	Egypt	2,897	Mexico	2,960	Namibia	909	Latvia	607	Kazakhstan	1,144
India	9,281	Ethiopia	1,492	Morocco	407	South Africa	937	Lithuania	546	Lebanon	561
Indonesia	2,764	Ghana	1,214	Nigeria	4,567			Poland	997	Romania	1,081
Malaysia	1,000	Kenya	1,438	Peru	1,632			Slovak	543	Turkey	2,496
Mongolia	722	Rwanda	453	Tunisia	592			Slovenia	546	Ukraine	1,853
Pakistan	2,182	Senegal	1,107	Yemen	830						
Philippines	2,661	Sudan	662								
Russia	5,224	Tanzania	1,232								
Sri Lanka	610	Uganda	1,325								
Thailand	1,000										
Venezuela	820										
Vietnam	2,049										
Total	36,709	Total	14,196	Total	15,502	Total	4,989	Total	4,890	Total	10,037

Table 3: Definitions and Sources of Variables

Variable	Definition	Source
Productivity (Log)	Labor productivity is real sales (using GDP deflators) divided by full-time permanent workers	WBES
Export (% of total sales that are exported directly)	Sales exported directly as percentage of total sales.	WBES
Firm Age(Log)	Year firm began operation to year of survey conducted	WBES
Firm Size (Log)	Log of number of permanent workers	WBES
% of FDI stock from Developed Economies (Log)	Percentage of FDI from developed countries to source economy	UNCTAD's Bilateral FDI Statistics
GDP per Capita (Log)	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. The variable is loaded in logs.	World Bank World Development Indicators

Table 4: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Labor Productivity(Log)	13.60	2.79	-3.40	29.00
Export (% of total sales that are exported directly)	7.548	22.06	0	100
Firm Age	17.72	14.91	0	210
Firm Size	112.5	514.9	0	37772
% of FDI stock from Developed Economies	64.73	24.01	0	99
GDP per Capita	5597.76	5338.56	246.803	36281.2

Table 5: Regression Results; Base Sample Excludes Small Firms

Variable	Labor Productivity(Log) as Dependent Variable				
	Model 1	Model 2	Model 3	Model 4	Model 5
Firm Age (Log)	0.050**	-0.012	0.045**	-0.016	-0.015
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Firm Size (Log)	0.081**	0.053**	0.075**	0.048**	0.049**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
% of FDI stock	0.267**	0.393**	0.276**	0.402**	0.409**
	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)
GDP per Capita	-0.863**	-1.090**	-0.862**	-1.093**	-1.096**
	(0.015)	(0.021)	(0.015)	(0.021)	(0.021)
Con1 (State led)		-1.822**		-1.835**	-1.849**
		(0.061)		(0.061)	(0.061)
Con2 (Fragmented)		-2.917**		-2.925**	-2.925**
		(0.070)		(0.070)	(0.070)
Con3 (Family led)		-3.066**		-3.074**	-3.076**
		(0.056)		(0.056)	(0.056)
Con6 (Collaborative)		-1.910**		-1.914**	-1.914**
		(0.071)		(0.071)	(0.071)
Con7 (Hierarchically)		-2.861**		-2.857**	-2.853**
		(0.063)		(0.063)	(0.063)
SOE majority			1.323**	1.276**	-1.485
			(0.137)	(0.132)	(1.234)
SOE* Con1					3.368**
					(1.245)
SOE* Con2					1.515
					(1.300)
SOE* Con3					1.376
					(1.317)
SOE* Con6					2.293
					(1.359)
SOE* Con7					0.886
					(1.342)
Constant	18.724**	24.546**	18.768**	24.618**	24.659**

	(0.191)	(0.251)	(0.191)	(0.251)	(0.251)
Industry Control	Yes	Yes	Yes	Yes	Yes
Year Control	Yes	Yes	Yes	Yes	Yes
Obs	54,985	54,985	54,985	54,985	54,985
F	367.80	472.78	358.92	462.39	404.77
Adj R-squared	0.157	0.221	0.159	0.222	0.223

Note: Figures in parentheses are standard errors. *** denoted statistical significance at the 99.9% level; ** denoted statistical significance at the 99% level; * denoted statistical significance at the 95% level.