

SOE performance, reform and debt in Southeast and East Asia

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Introduction

- ▶ This paper
 - Examines state-owned enterprise (SOE) reform and restructuring strategies over the last three decades in selected Southeast and East Asian economies
 - Focus on People's Republic of China (PRC), the Republic of Korea (Korea), Thailand and Viet Nam economies
 - Identifies sources of concerns re relative performance of the SOE and non SOE sectors in the focus economies

Introduction (cont.)

- Considers strategies used to address underperformance—including corporatization, improvements to governance and other institutional strengthening, and restructuring
 - Includes analysis of the potential role of AMCs as facilitators of corporate restructuring
- Provides empirical evidence on the relative performance of SOEs and non SOEs
- Discusses potential for continued reform and provides policy recommendations

Continuing importance of SOEs (2010s)

▶ Globally

- SOEs produce around one-tenth of GDP (The Economist 2010)
- SOEs account for about 20% of global equity market capitalization (The Economist 2010)
- 10% of the largest firms had either part or full state ownership in 2012–13 (Christiansen and Kim 2014)
 - Top ten oil-and-gas firms, as measured by reserves, are SOEs (The Economist 2012b)

▶ SOEs share of GDP (Christiansen 2011)

- OECD: estimated average 15%
- Africa: in some countries over 50%
- In Asia, Eastern Europe, and Latin America: 15% on average

Continuing importance of SOEs (cont.)

- ▶ In the focus economies
 - The PRC's SOEs provided > 50% of its GDP (Szamosszegi and Kyle 2011), controlled 40.3% of total industrial assets, and generated 25.1% of industrial firm revenues (Christiansen and Kim 2014; National Bureau of Statistics 2015); the PRC had six of its SOEs ranked in the top 100 of Forbes global 2000 in 2013 and the largest five SOEs globally (Christiansen and Kim 2014)
 - Korea's national SOE sector is comprised of 59 enterprises, employed approximately 132,500 individuals, and had a value of \$232.2 billion as of 2012 (OECD 2014a)

Continuing importance of SOEs (cont.)

- The Thai State has $\geq 50\%$ ownership in 58 companies, that employed over 250,000, had assets of \$403.0 billion, revenue of \$157.1 billion, profits of \$8.1 billion, and contributed \$4.2 billion to government revenue in 2014 (OECD 2015a; Thailand Ministry of Finance 2016); Funding of loss-making SOEs has previously required an allocation of 3%–4% of the Thai Government's annual budget expenditures (OECD 2015a)
- Viet Nam's SOE sector employed 13.5% of the labour force produced 32.9% of GDP, controlled 30.9% of enterprise capital, paid 21.1% of total employee compensation, and provided 23.1% of Government revenues (General Statistics Office of Viet Nam 2015)

Drivers of SOE reform and restructuring

- ▶ Public policy shift towards greater reliance on market-based economics (Anglo-Saxon economies) (Farazmand, 2012; Thynne 2011; Wettenhall 2001)
- ▶ Fiscal consolidation and market deregulation in preparation for European Monetary Union (Euro and periphery economies) (Christodoulakis 2015)
- ▶ The 'Washington Consensus' (developing economies) (Williamson 1989)
 - Encouraged creation of private property-based, efficient, open, competitive markets (Lin 2015)
 - Supported by international financial institutions' policy and lending program criteria/conditionality of foreign aid (Chang 2007)

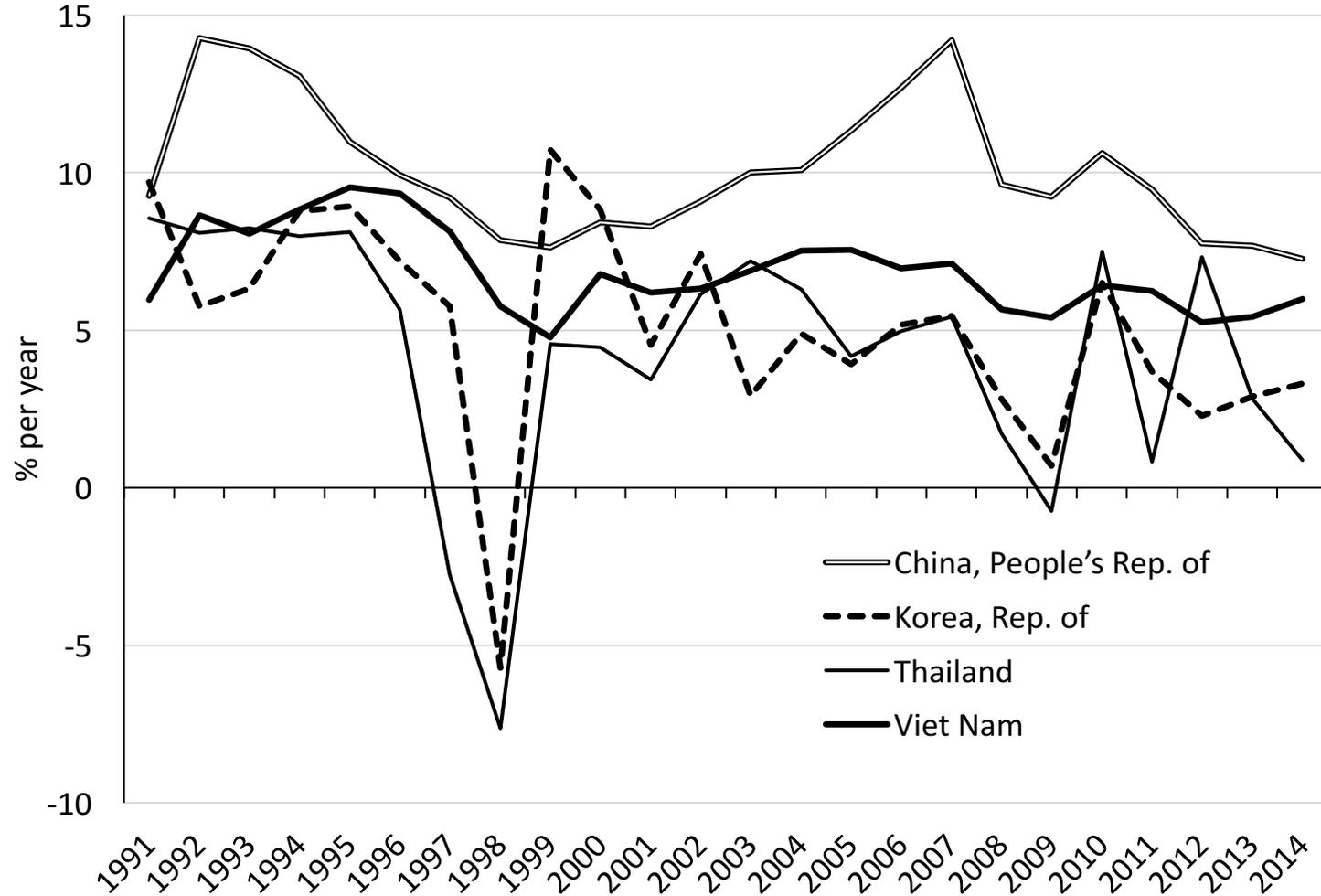
Drivers of SOE reform and restructuring (cont.)

- ▶ Systemic economic and financial crises and the market transition process (Claessens et al. 2014; Tang, Zoli, and Klytchnikova 2000)
 - For Southeast and East Asian economies the Asian Financial Crisis revealed
 - Economy-wide weaknesses in corporate finance and governance, and exposure of corporations to external shocks in the presence of high leverage (Kawai 2001)
 - Over-lending and poor risk management on the part of commercial banks manifesting in low productivity of many investments, non-performing loans (NPLs) and systemic bank problems (Dutttagupta and Cashin 2011; Faure 2002)

More recently (context)

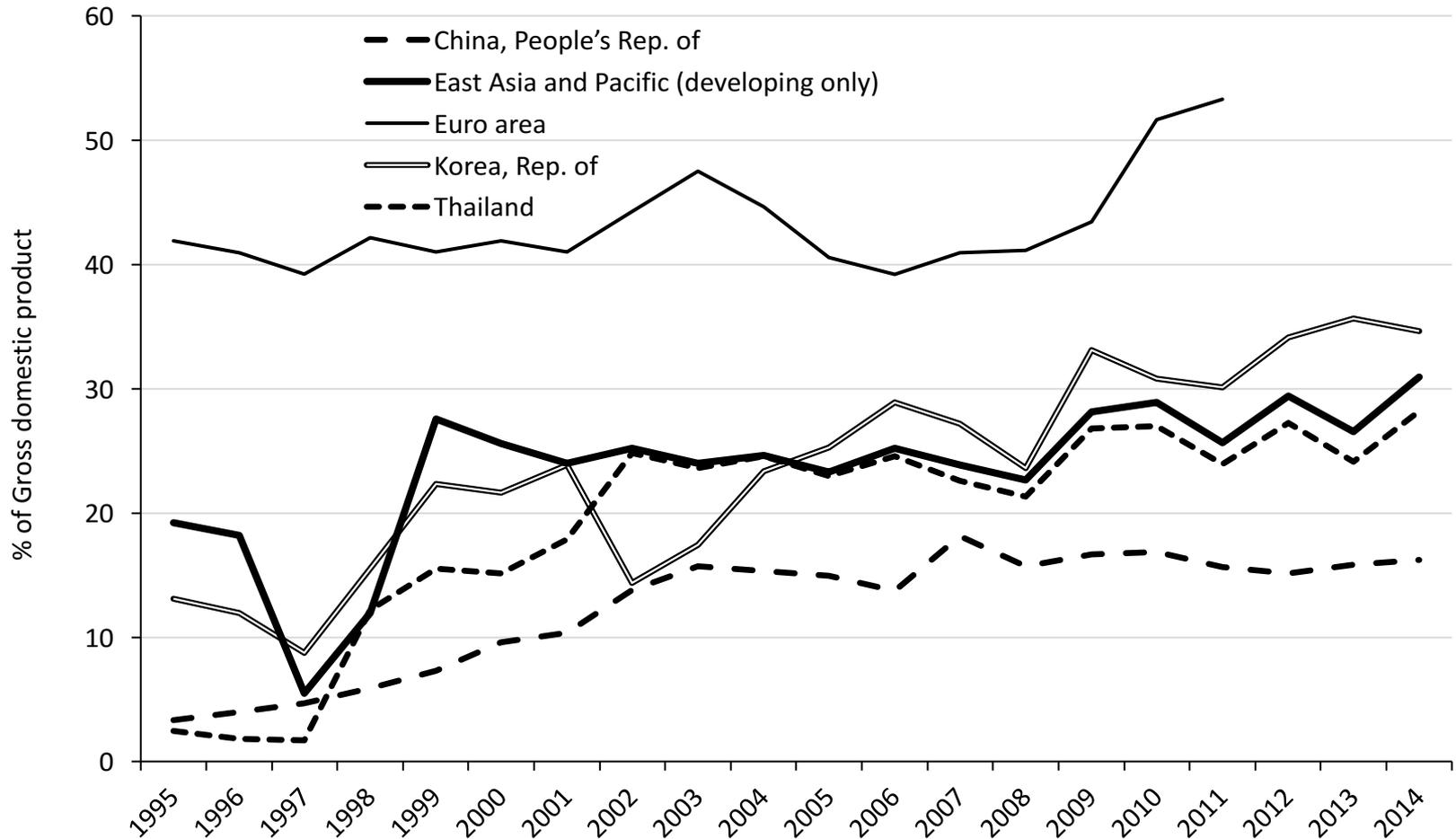
- ▶ Reduced and more volatile growth outcomes following GFC and ESDC
 - Increases in public sector debt (e.g. Truman 2013)
 - Desire to unlock value available through reform and restructure of SOE assets (i.e. PRC and Viet Nam)
- ▶ Budgetary provisions to SOE sector (including Korea and Thailand) (Business Korea 2013; Parpart 2015)
 - Size of contributions/drains on public budget
- ▶ Concerns over high levels of leverage in the SOE sector
 - Potential fiscal liabilities associated with implied or actual government guarantees

Growth in Real Purchasing Power Parity (PPP) GDP Southeast and East Asian Focus Countries, 1991–2014 (% a year, 2011 international \$)



Source: World Bank, World Development Indicators database (accessed 18 March 2016).

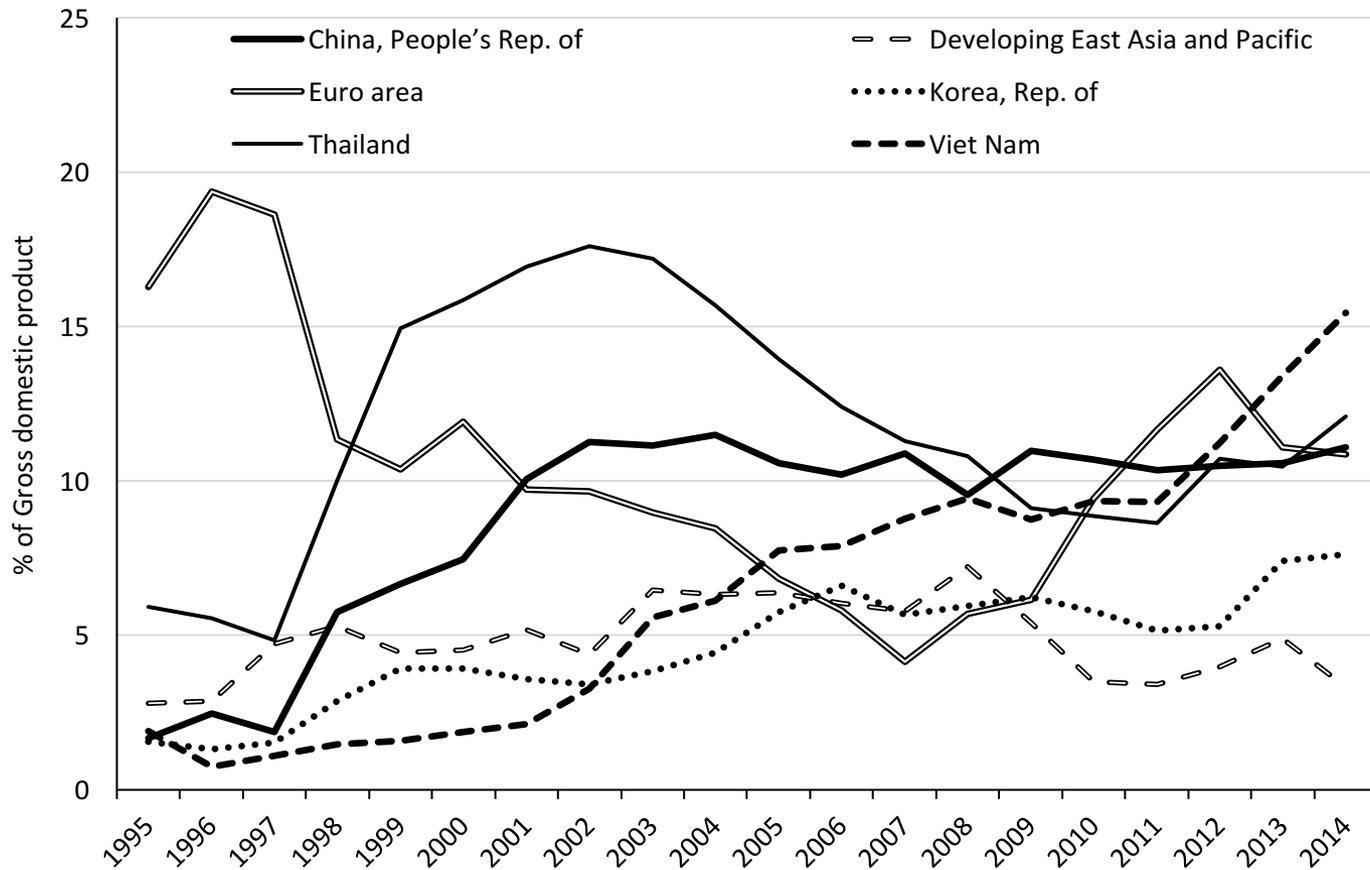
Outstanding public debt securities to GDP by Selected Country and Region, 1995–2014 (% of GDP)



GDP = gross domestic product.

Source: World Bank, Global Financial Development Database (accessed 18 March 2016).

Credit to government and state owned enterprises to GDP by Selected Country and Region, 1995–2014 (% of GDP)



GDP = gross domestic product.

Source: World Bank, Global Financial Development Database (accessed 18 March 2016).

Need for Continued SOE Reform

- ▶ View that SOE business performance is less efficient than that of a private firm (e.g. Megginson and Netter 2001)
- ▶ Case for continued state ownership is likely to be valid for only a small range of industries and only where inadequacies in institutional environments remain unaddressed (Perotti 2003; Shleifer 1998)

Need for Continued SOE Reform

- ▶ Potential fiscal liabilities that SOEs may impose on governments (Polackova 1998, 1999; IMF 2012; Allen and Vani 2012)
 - Frequently receive government budgetary resources
 - Explicit or implicit government guarantee of their debt
 - May undertake quasi-fiscal operations for the government

Need for Continued SOE Reform

- ▶ Weak budget constraints associated with direct and indirect subsidies, concessional treatment by government providing a cost or information advantage over the private sector, and relaxation of or exemption from regulatory requirements (Christiansen and Kim 2014; Faccio et al. 2006; Kowalski et al. 2013; Robinett 2006)

Data and Stylized Facts

- ▶ Key to explore if SOE operations are less efficient than non SOEs
 - Use ROA (function of Turnover (efficiency) and margins (pricing power))
- ▶ Data are drawn from the Bureau van Dijk Orbis database
 - Companies with operating revenue of \$10 million or greater, and values for this variable for 2006–2014 were selected for the PRC, Republic of Korea, and Thailand to increase comparability
 - For Viet Nam, Orbis information on SOE classification (the state or public authority as ultimate controller) was less complete
 - Information on ultimate ownership/control of Vietnamese enterprises was augmented through inspection of controlling company websites

Gearing by Form of Control, Selected Economies, 2006–2014

Year	PRC		Korea		Thailand		Viet Nam	
	SOE	Non-SOE	SOE	Non-SOE	SOE	Non-SOE	SOE	Non-SOE
2006	90.46	65.50	79.00	111.85	67.18	78.68	-	-
2007	86.58	60.01	79.15	116.34	63.09	71.77	-	-
2008	92.16	63.41	157.71	116.71	92.41	72.72	180.53	131.45
2009	99.30	65.45	130.16	107.21	103.02	61.65	164.71	147.28
2010	106.75	87.77	118.32	103.62	94.84	64.08	165.32	146.97
2011	112.39	75.77	166.66	102.18	97.04	74.55	169.13	151.09
2012	110.76	87.53	143.05	101.50	94.85	81.74	149.84	130.13
2013	92.36	70.59	142.18	101.44	146.87	73.99	147.32	125.74
2014	90.86	65.44	189.51	96.21	133.36	74.92	136.19	118.11

Source: Bureau van Dijk Orbis; authors' calculations.

Notes: Gearing, measured as the debt-to-equity ratio; state-owned or controlled enterprise (SOE); and enterprises not owned or controlled by the state (Non-SOE).

Performance (ROA) by Sector and Control, Selected Countries, 2006–2014 Average

Sector	PRC		Korea		Thailand	
	SOE	Non-SOE	SOE	Non-SOE	SOE	Non-SOE
Banks	4.46		-0.47	-2.49	0.93	2.77
Chemicals, rubber, plastics, non-metallic products	4.41	6.59	7.10	6.51	36.87	10.23
Construction	5.19	4.68	-3.69	6.97		7.14
Food, beverages, tobacco	13.14	8.53		5.26		9.42
Gas, Water, Electricity	3.44	3.19		7.30	42.94	10.40
Hotels & restaurants	4.94	5.87		3.39		7.51
Insurance companies	0.40	0.64	10.82	1.54		6.94
Machinery, equipment, furniture, recycling	3.50	6.44	1.19	5.65		9.45
Metals & metal products	3.43	5.14		4.80		5.74
Other services	6.20	6.26	9.16	5.21		10.86
Post & telecommunications	4.70	2.74		6.25		5.88
Primary sector	8.75	4.01		4.92	15.81	5.97
Publishing, printing	7.72	6.78	6.02	7.36		8.56
Textiles, wearing apparel, leather	0.90	5.10		3.92	-1.39	4.68
Transport	6.98	5.61	1.23	5.88	6.85	10.69
Wholesale & retail trade	5.16	5.34	6.93	7.70	4.55	8.94
Wood, cork, paper	6.88	3.72		4.59	26.62	4.78
Average ROA (PLBT)	4.93	6.03	4.13	5.91	16.36	8.82
Average Assets (\$ '000)	8,338,607	1,023,282	2,580,209	584,815	4,347,251	163,357
Average Herfindahl-Hirschman index (HHI)	821.17	415.54	1,032.81	780.85	1,902.07	490.59
Number of observations (firm-year)	2,268	17,208	180	32,895	144	17,748

Source: Bureau van Dijk, Orbis; authors' calculations.

Notes: Return on assets, based on profit/loss before tax (ROA_PLBT); state-owned or controlled enterprise (SOE); and enterprises not owned or controlled by the state (Non-SOE).

Performance (ROA) by Sector and Control, Viet Nam, 2008–2014 Average

Sector	SOE	Non-SOE
Banks	1.39	0.82
Chemicals, rubber, plastics, non-metallic products	7.45	5.81
Construction	3.35	3.70
Food, beverages, tobacco	3.50	6.69
Gas, Water, Electricity	4.70	6.24
Hotels & restaurants	0.34	3.82
Insurance companies	6.64	2.84
Machinery, equipment, furniture, recycling	0.75	6.13
Metals & metal products	6.34	4.29
Other services	9.15	5.36
Post & telecommunications	13.97	0.89
Primary sector	5.54	4.94
Publishing, printing	6.11	3.12
Textiles, wearing apparel, leather	5.90	5.23
Transport	2.52	4.47
Wholesale & retail trade	4.84	6.17
Wood, cork, paper	5.98	6.52
Average ROA (PLBT)	4.91	5.46
Average Assets (\$ '000)	386,018.09	42,212.57
Average Herfindahl-Hirschman index (HHI)	1,550.89	1,154.72
Number of observations (firm-year)	2,429	23,702

Source: Bureau van Dijk, Orbis; authors' calculations.

Notes: Return on assets, based on profit/loss before tax (ROA_PLBT); state-owned or controlled enterprise (SOE); and enterprises not owned or controlled by the state (Non-SOE).

Regression Modelling

$$\begin{aligned} \text{ROA}_{it} = & \alpha + \beta \text{SOE}_{it} + \sum_{k=1}^3 \lambda_k \text{CONTROLS}_{it} + \sum_{I=1}^3 \theta_I \text{CONTROLS}_{it} \times \text{SOE}_{it} \\ & + \sum_{n=1}^{19} \phi_n \text{INDUSTRY}_n + \sum_{t=1}^7 \varphi_t \text{YEAR}_t + \varepsilon_{it} \end{aligned}$$

- ▶ SOE a dummy variable, captures the impact of being a state-invested firm
- ▶ The firm's share in sector revenue (Rev_Share) provides a firm-specific indicator of market power of firms in the sample data
- ▶ Herfindahl-Hirschman index (HHI) a revenue-based measure of industry concentration in the sample data
- ▶ Firm size (Size), measured as the log of revenues for the firm

Summary of Random Effects Regressions, By Country

Variables	PRC	Korea	Thailand	Viet Nam
SOE	-6.214** (2.965)	15.199* (8.198)	12.301 (21.145)	-6.949*** (2.229)
Size	-0.677*** (0.127)	-0.259 (0.097)	0.329* (0.175)	0.321*** (0.079)
Rev_Share	29.744*** (10.088)	-2.613 (3.426)	2.305 (10.206)	2.810 (3.162)
HHI	-0.002** (0.001)	0.000 (0.000)	-0.002** (0.001)	0.000*** (0.000)
Size#SOE1	0.382* (0.227)	-1.442* (0.677)	-0.384 (2.046)	0.536** (0.224)
Rev_Share#SOE1	-26.196** (10.637)	18.590** (7.845)	-14.194 (16.087)	6.268 (6.376)
HHI#SOE1	0.002*** (0.000)	0.002* (0.001)	0.000 (0.002)	0.000 (0.000)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Firm-Year Observations	16,100	29,250	15,841	12,171
No. of Groups	2,161	3,660	1,985	3,703
R-squared	0.022	0.017	0.029	0.025

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1, 2-tailed z statistics. PRC, Korea and Thailand results are based on unbalanced panel data, 2006 to 2014. For Viet Nam unbalanced panel data, 2008 to 2014.

Average Treatment Effect of SOE on ROA (Propensity Score Matching)

	PRC	Korea	Thailand	Viet Nam
Coefficient	-1.624	1.743	15.419	-2.127
Standard Error	0.297	0.720	2.605	0.380
P > z 	0.000	0.016	0.000	0.000
Firm-Year Obs.	18,255	32,908	17,823	15,905
Min. Matches	5	5	5	5

Notes: 2-tailed z statistics.

PRC, Korea and Thailand results are based on unbalanced panel data, 2006 to 2014.

For Viet Nam unbalanced panel data, 2008 to 2014.

Summary re Relative SOE Performance

- ▶ Evidence of relative underperformance of SOE sector in both PRC and Viet Nam
 - Based on large sample of comparative firms with high presence of SOE and non-state competition by industry sector
 - Suggests considerable potential benefit from SOE restructuring
- ▶ Results for Thailand and Korea suggest SOEs may outperform non-state sector, but caveats
 - Conclusions limited by small number of SOEs in sample
 - Lack of direct competition in many sectors (especially Thailand)
 - Growth in SOE sector assets have outpaced growth in internal funding leading to growth in levels of gearing in SOE sectors

SOE reform alternatives

- ▶ Corporatization and reform of governance
 - Strong element in East Asian focus economies
 - Frequently seen as prelude to privatization or equitization
 - Considerable progress but
 - SOEs' ROA lower than cost of capital, constraining growth; resistance to reform; and concerns over corruption at, and abuse of monopoly power by, SOEs (PRC)
 - Increases in SOE use of debt even in the presence of strengthened management autonomy and accountability of SOEs (Korea)
 - Greater transparency, but targets of performance agreements frequently not met by SOEs (Thailand)
 - Poorly defined business mandates, complicated management structures, and poor strategy have reduced financial performance (Viet Nam)

▶ Privatization

- Increased interest due to perceived improvements to performance, efficiency, and political independence (Thailand)
 - Reduces pressure for subsidization/guarantee of SOE financing
- Transfers of SOE assets to foreign and private ownership via full privatization have provided the largest increases in operating efficiency and profitability (e.g. PRC)

▶ Equitization

- Major focus where continued government involvement in large firms and strategic industry sectors desired (PRC, and more recently Viet Nam)
- Process slowed in the presence of political resistance of SOE managers, and where investor concerns over the high and often controlling levels of government equity maintained after equitization, remain (Viet Nam)
 - Requires substantial institutional development in terms of addressing the rights of SOE owners, financial monitoring and transparency, corporate debt management, SOE sales (e.g. Viet Nam)

Where do AMCs fit?

- ▶ In the focus economies, the major function of AMCs has been the purchase, operation, and management of assets associated with NPLs acquired from banking sectors
 - Centralized AMCs have proven to be successful vehicles in resolving NPAs and in assisting in the reform of SOE assets
 - Reflects high level of political support for AMCs as agents of restructuring, not just vehicles for rapid NPL disposition (Korea and PRC)
 - Supported by central role taken by the governments in the development process, and desire of transition economies' governments to create and maintain a large internationally competitive SOE sector as a vehicle for achieving growth outcomes (PRC and Viet Nam)
 - Enhanced by operation under the close scrutiny of the public, public sector, and international financial institutions (Korea)

- ▶ Most effective where
 - NPA problems are pervasive, and where business cultures or legal and other institutional infrastructures are less developed (PRC)
 - Legal reforms or special powers to resolve NPAs has been required to manage financial crises (Korea, PRC, and Thailand)
- ▶ May be better placed to engage in longer-term strategies to maximize recovery of value from NPAs
 - Undertaking restructuring of business sectors (Korea and Viet Nam), balance sheet restructuring (Korea and PRC), and facilitating equitization of SOEs by IPO (PRC)
 - Catalyst for legal reform of bankruptcy and NPL collection procedures (Thailand)
 - Holding onto assets to achieve better pricing in the presence of market recovery (Korea)

- ▶ Form part of the solution for reorganisation of large SOE sectors
 - Potential to operate with economies of scale and scope
 - Development and application of specialist skills in corporate workouts and asset sales (Korea, PRC, and Thailand)
 - Reduction transactions costs, and problems associated with asymmetric information, through use of internal rather than external markets to facilitate asset transfer between enterprises (PRC)
 - Role in developing capital markets through providing a supply of secondary securities (Korea)
 - Additional barrier between the government owner and SOE management, changing the nature of the principal-agent problem

Thank You

Questions/Comments/Suggestions welcomed