Ownership and Performances of the State-owned Enterprises in China

: Evidence from the Listed Companies

in Shanghai and Shenzhen Stock Exchanges

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Contents

Research Motivation and Purpose

- Empirical analysis of the correlation between the ownership structure and the performances of the State-owned enterprises in China
  - Focusing on the corporate ownership structure
  - Investigating the effects of the recent corporate reform
- Constructing new dataset to deal with the weakness in the recent researches
  - Sophisticated data construction on the corporate ownership of the SOEs
  - Detailed data fields to understand the incentive schemes of SOEs

Background Issues of China's corporate reform

- Reinforced SOEs reform since mid of 1990's
  - Focusing on Large and medium size SOEs
  - Resolving the loss making SOEs' problem
  - Strategic re-arrangement of SOEs' position
  - Challenging the corporate governance

- Evolving Corporate Governance with the reform of state-owned asset management system
  - Decentralized Management System:
    - SOEs are classified as central and local SOEs.
    - Local government has its own autonomy and its own incentives in managing SOEs.
  - Three Hierarchical Management System:
    - Holding companies, group companies had been authorized in managing SOEs.
    - Political power and enterprise management to be separated.

Empirical Analysis(1): SOEs' Ownership Classification

- **Ownership Identity**: 4 Classifications by SOEs ultimate ownership type
  - Central government
  - Local Government
  - Non-Business Entity (school, public institute etc.)
  - Others (independent company, AMC etc.)

- **Ownership form**: 4 Classifications by SOEs management entity type
  - Local government (direct management)
  - Pure holding company
  - Mixed holding company
  - Others

Graph 1: Ownership Classification

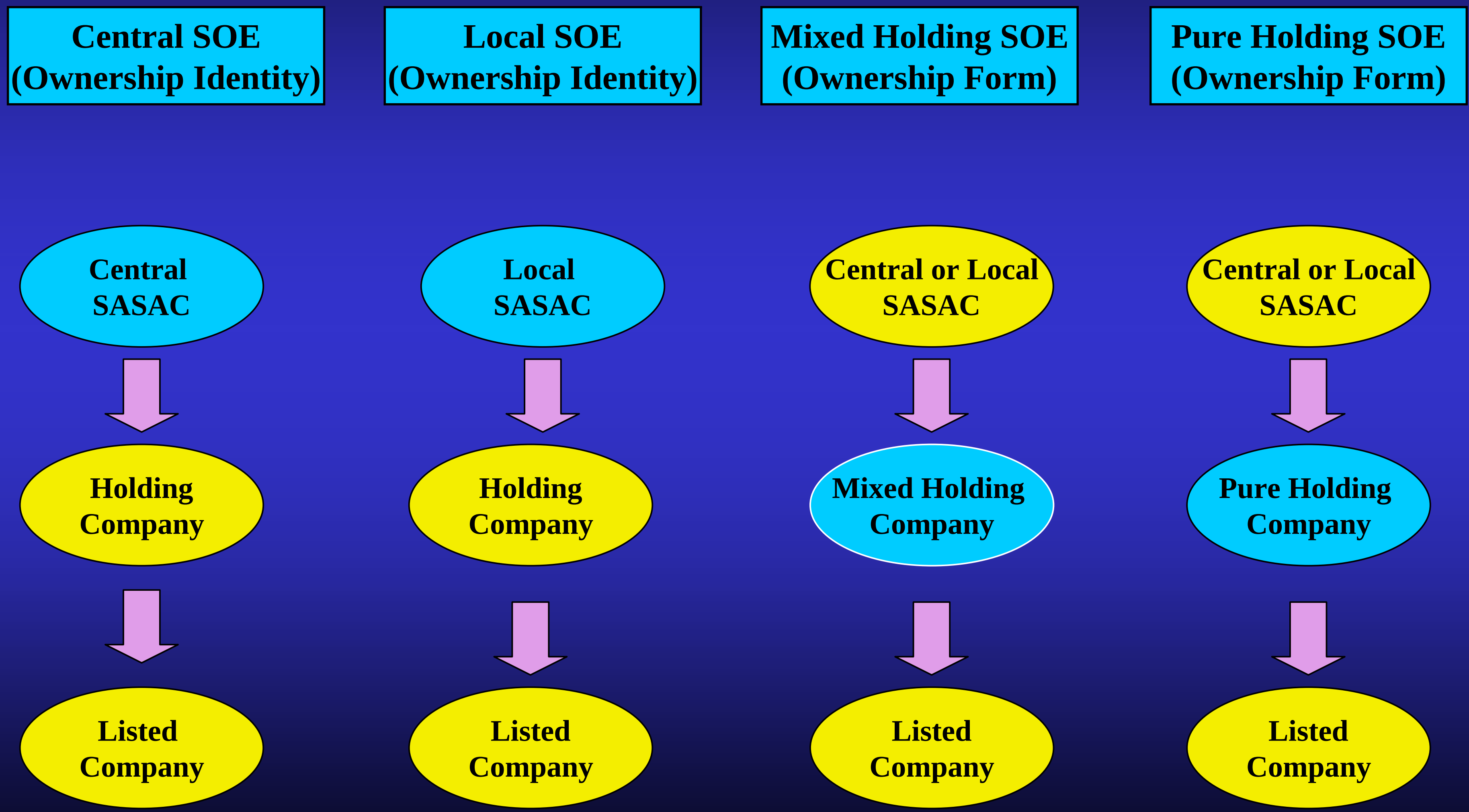

Table 1 : SOEs ownership classification (2004)

Ownership form / Ownership identity	Direct Management (by local government)	Indirect Management		
		Pure Holding Company	Mixed Holding Company	Others
Central government	0	5	179	14
Local Government	54	117	501	2
Others	0	2	19	0
Non-business entity	0	5	57	8

Empirical Analysis(2): Data

- Time periods: 1998-2004
  - New account standard was adopted since 1998
- Based on annual account reports of the listed companies in Shanghai, Shenzhen A stock Market
  - Using CAMAR Database
- Ownership classifications of individual companies
  - Based on shareholders report in the annual financial statement
- Other qualitative data field
  - ST, PT companies
  - Auditing opinions, etc.

$CP_{t+1}^{j} = C_1 + \alpha \cdot D_t^{j} + \beta \cdot CC_t^{j} + IP_{t+1}^{j} + \varepsilon_{t+1}^{j}$

Empirical Analysis(3): Models

- **Hypothesis**

  H1 : The performances of SOEs do not depend on the ownership identities

  H2 : The performances of SOEs do not depend on the ownership forms

- **Regression models**

$$CP_{t+1}^{j} = C_1 + \alpha \cdot D_t^{j} + \beta \cdot CC_t^{j} + IP_{t+1}^{j} + \varepsilon_{t+1}^{j}$$

CP_{t+1}^{j} : corporate performance of firm j at the period of $(t+1)$

C_1 : a constant term, D_t^{j} : a dummy vector of firm j

CC_t^{j} : a characteristics vector of firm j at the period of t

IP_{t+1}^{j} : the average performance of the industry

to which firm j belongs at the period of $(t+1)$

α , β : coefficient vectors

Table 2: explanatory variables

	variable	abbreviation	explanation
Dummy Variables	Central company	D_central	
	Direct-owned company	D_direct	
	Pure holding company	D_shell	
	Mixed holding company	D_prod	
	Other indirect-owned company	D_ind_others	
	Plural offices as CEO and chairman	D_bormg	
	Ownership change	D_own_ch	
	Audit opinion	D_ao	
	East coast region	D_ae	
Financial Ratios	Intangible asset ratio	intan	Intangible asset/total asset
	Distressed debt ratio	distr	Distressed debt/total asset
	Borrowing ratio	borr	Borrowings/total liabilities
	Subsidy ratio	subsidy	Subsidy/total sales
	Asset size	size	Log (asset size)
	Industry average	indavg	Industrial Average of dependent variable

Empirical Analysis(4): Empirical Results

- **Ownership Identity**
  - **Central SOEs' operating profit to total asset**
    - **higher when only ownership variables are considered**
    - **but this significance becomes phased out once other characteristics are controlled.**
  - **Local Gov't Directly Owned SOEs' net profit to total asset**
    - **Significantly Lower than other ownerships**
- **Ownership Forms**
  - **Pure Holding Companies' operating profit to total asset, operating profit to total sales**
    - **Significantly Lower than other ownerships**
    - **Implying that more transparent governance structures could raise corporate performance.**

Empirical Analysis(5): Empirical Results

- **Operating profit vs Net Profit**
  - Profit measures normalized by total assets and total sales are different.
  - Net profit ratios are not significantly different between different ownership types
    - Implying that net profit ratio are more likely to be manipulated.
  - The operating profits to sales in pure holding companies are significantly higher, but their significance is phased out when considering net profit to sales.
    - Suggesting that the net profit propping is widely done by the other ownerships

- **Control Variables**
  - NPL asset ratios and borrowing ratios have negative effects on profitability
  - The east coast dummy and industry average profitability have expected effects
  - Audit opinions have positive effects on profitability
    - Implying that firms on an audit opinion are likely to do window dressing and their performances are manipulated high.

Concluding Remarks

- The positive effects of Corporate reform on the firm performance
  - More transparent governance have positive effects on the profitability.
    - The performances of the pure holding companies are superior.
    - The performances of the directly owned companies are inferior.

- The inconsistency of profit measures in China
  - Net profits and operating profits are not consistent in evaluating corporate performances.
  - Profit Manipulation through propping and tunneling should be realized.
  - Careful handling and interpretation of individual profit measures are needed in the corporate evaluation of Chinese enterprises.

Table 4: Regression Results on One-year Ahead Ratio of Operating Profits to Total Assets

	(1)	(2)	(3)	(4)
Intercept	10.589*** (0.142)	10.656*** (0.146)	-0.715 (2.539)	-7.058*** (2.429)
Dummy_Central	1.187*** (0.287)	1.205*** (0.288)	0.319 (0.279)	0.382 (0.264)
Dummy_Direct	-0.217 (0.358)	-0.174 (0.361)	0.242 (0.348)	0.127 (0.329)
Dummy_Pure	0.582* (0.327)	0.590* (0.327)	0.919*** (0.313)	1.250*** (0.295)
Dummy_Ind_Others	0.467 (1.166)	0.384 (1.166)	0.384 (1.116)	-1.263 (1.049)
Dummy_Own_Ch		-1.295 (0.843)	-0.455 (0.810)	-0.516 (0.760)
Dummy_ Mgmt		-0.517 (0.356)	-0.626* (0.340)	-0.488 (0.320)
Dummy_Audit			2.697*** (0.404)	2.744*** (0.382)
Intangible Ratio			-0.002 (-0.020)	-0.012 (0.019)
Nonperforming Ratio			-0.042*** (0.013)	-0.041*** (0.012)
Borrowing Ratio			-0.083*** (0.004)	-0.073*** (0.004)
Subsidy Ratio			-0.054*** (0.013)	-0.048*** (0.012)
Asset Size			0.630*** (0.119)	0.481*** (0.114)
Dummy_EC				1.034*** (0.202)
Industry Avg				0.697*** (0.027)
Adj-R2	0.004	0.004	0.093	0.202
F-statistic	5.44	4.38	42.12	87.49
No. of Observation	4824	4824	4820	4775

Note: *** significant within 1%; ** significant within 5%; * significant within 10%, Std.Errors in parenthesis

Table 5: Regression Results on One-year Ahead Ratio of Net Profits to Total Assets

	(1)		(2)		(3)		(4)	
Intercept	1.690***	(0.423)	1.835***	(0.434)	-5.766	(7.768)	-3.603	(7.857)
Dummy_Central	0.431	(0.855)	0.791	(0.853)	-0.182	(0.855)	-0.242	(0.860)
Dummy_Direct	-4.741***	(1.067)	-5.104***	(1.071)	-4.274***	(1.065)	-4.392***	(1.072)
Dummy_Pure	-0.547	(0.973)	-0.522	(0.968)	0.226	(0.957)	0.466	(0.958)
Dummy_Ind_Others	1.118	(3.468)	0.724	(3.454)	0.271	(3.413)	-0.151	(3.407)
Dummy_Own_Ch			-16.673***	(2.497)	-15.053***	(2.478)	-15.191***	(2.474)
Dummy_ Mgmt			1.015	(1.055)	0.796	(1.040)	0.636	(1.044)
Dummy_Audit					6.552***	(1.236)	6.413***	(1.246)
Intangible Ratio					-0.297***	(0.061)	-0.306***	(0.062)
Nonperforming Ratio					-0.310***	(0.041)	-0.306***	(0.041)
Borrowing Ratio					-0.055***	(0.013)	-0.055***	(0.013)
Subsidy Ratio					0.021	(0.040)	0.014	(0.040)
Asset Size					0.265	(0.364)	0.006	(0.372)
Dummy_EC							0.396	(0.659)
Industry Avg							1.119***	(0.142)
Adj-R2	0.003		0.012		0.041		0.054	
F-statistic	5.50		11.26		18.36		20.39	
No. of Observation	4824		4824		4820		4775	

Note: *** significant within 1%; ** significant within 5%; * significant within 10%, Std.Errors in parenthesis

Table 6: Regression Results on One-year Ahead Ratio of Operating Profits to Total Sales

	(1)		(2)		(3)		(4)	
Intercept	23.230***	(0.305)	23.259***	(0.315)	25.692***	(5.634)	9.031*	(5.228)
Dummy_Central	-1.869***	(0.618)	-1.826***	(0.619)	-1.512**	(0.621)	-1.175**	(0.571)
Dummy_Direct	0.881	(0.770)	0.849	(0.776)	0.137	(0.772)	0.212	(0.711)
Dummy_Pure	0.559	(0.702)	0.563	(0.702)	0.391	(0.694)	1.120*	(0.635)
Dummy_Ind_Others	4.697*	(2.504)	4.631*	(2.505)	4.706*	(2.475)	3.513	(2.258)
Dummy_Own_Ch			-2.084	(1.811)	-2.772	(1.798)	-2.377	(1.640)
Dummy_ Mgmt			0.013	(0.765)	-0.117	(0.755)	-0.357	(0.692)
Dummy_Audit					3.043***	(0.897)	3.395***	(0.826)
Intangible Ratio					0.445***	(0.045)	0.302***	(0.042)
Nonperforming Ratio					-0.046	(0.029)	-0.023	(0.027)
Borrowing Ratio					-0.028***	(0.009)	-0.023**	(0.009)
Subsidy Ratio					0.168***	(0.029)	0.092***	(0.027)
Asset Size					-0.252	(0.264)	-0.366	(0.246)
Dummy_EC							-1.072**	(0.435)
Industry Avg							0.950***	(0.031)
Adj-R2	0.002		0.002		0.031		0.194	
F-statistic	3.81		2.76		13.90		82.88	
No. of Observation	4824		4824		4820		4775	

Note: *** significant within 1%; ** significant within 5%; * significant within 10%, Std.Errors in parenthesis

Table 7: Regression Results on One-year Ahead Ratio of Net Profits to Total Sales

	(1)	(2)	(3)	(4)
Intercept	-21.312 (23.139)	-17.156 (23.854)	-685.091 (431.925)	-608.192 (439.623)
Dummy_Central	19.999 (46.783)	19.437 (46.886)	1.190 (47.580)	-4.337 (48.122)
Dummy_Direct	19.999 (46.783)	-67.833 (58.797)	-58.593 (59.218)	-63.708 (60.032)
Dummy_Pure	-72.843 (58.342)	-69.176 (53.199)	-58.638 (53.241)	-61.935 (53.623)
Dummy_Ind_Others	-69.662 (53.187)	7.813 (189.722)	16.813 (189.787)	23.327 (190.661)
Dummy_Own_Ch		-8.423 (137.153)	35.573 (137.812)	44.044 (138.466)
Dummy_Mgmt		-42.854 (57.934)	-47.188 (57.867)	-48.484 (58.423)
Dummy_Audit			359.479*** (68.737)	366.775*** (69.717)
Intangible Ratio			-0.269 (3.420)	-0.489 (3.491)
Nonperforming Ratio			-1.030 (2.289)	-1.034 (2.316)
Borrowing Ratio			-0.308 (0.760)	-0.339 (0.768)
Subsidy Ratio			1.046 (2.260)	0.705 (2.276)
Asset Size			16.718 (20.271)	9.813 (20.830)
Dummy_EC				40.460 (36.730)
Industry Avg				7.750** (3.514)
Adj-R2	-0.000	-0.000	0.005	0.006
F-statistic	0.90	0.69	2.85	2.90
No. of Observation	4824	4824	4820	4775

Note: *** significant within 1%; ** significant within 5%; * significant within 10%, Std.Errors in parenthesis