

INTERNET APPENDIX

State Controlling Shareholders and Payout Policy

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FIGURE IA.1

An Illustrating Example of CSOE Business Groups in China

- The Ownership Structure of China Resources National Corporation at the 2013 Fiscal Year End

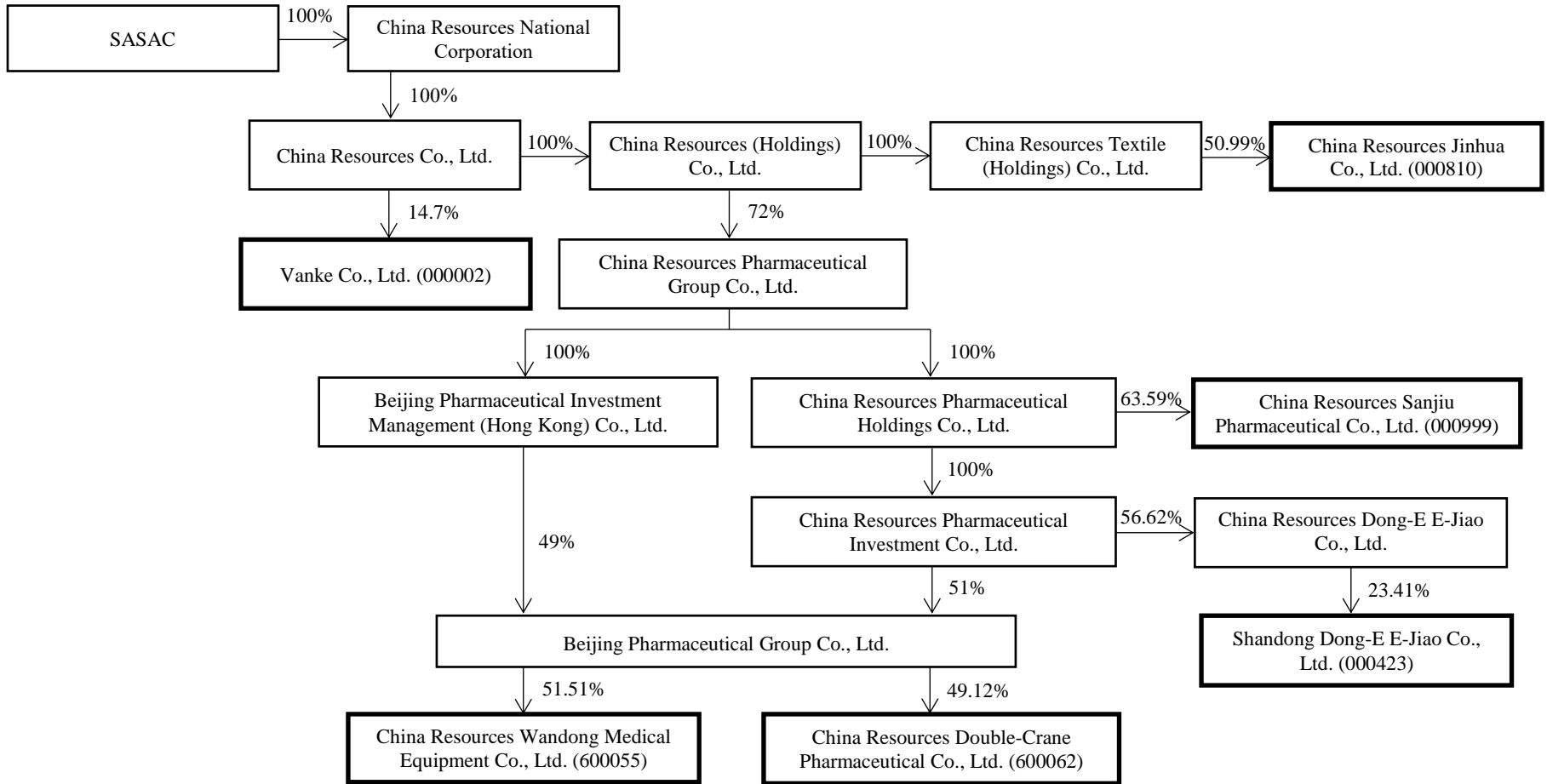


Figure IA.1 presents the ownership structure of the pyramidal business group with China Resources National Corporation as the controlling shareholder, as of the 2013 fiscal year end. In this business pyramid, China Resources National Corporation, set up by the SASAC and fully owned by the central government, is a parent Central State-owned Enterprise (parent CSOE). Included in the State Capital Operation Program, the China Resource National Corporation should return 5% of its net income to the central government during the period 2007 to 2010. Starting in Year 2011, the proportion of its returning-profit increases to 10%. The proportion is further increased by an additional 5% to reach 15% in 2014. The business pyramid is consisting of both public and private firms. There are six listed CSOEs in our empirical sample: (1) Vanke Co., Ltd; (2) Shandong Dong-E E-Jiao Co., Ltd; (3) China Resources Jinhua Co., Ltd; (4) China Resources Sanjiu Pharmaceutical Co., Ltd; (5) China Resources Wandong Medical Equipment Co., Ltd; and (6) China Resources Double-Crane Pharmaceutical Co., Ltd.

FIGURE IA.2
Pre-reform Parallel Trend and Post-reform Dynamic Effects

Figure IA.2 plots the estimated coefficients, and the 95% confidence intervals, of indicators of years around the initiation of a listed CSOE receiving treatment (i.e., the profit-returning ratio of its parent CSOE becomes positive). We estimate equation (4.2) in the manuscript:

(4.2) $D/M_{i,t} = \alpha_i + \alpha_t + \delta_1 \text{BEFORE}^1_{i,t} + \delta_2 \text{AFTER}^0_{i,t} + \delta_3 \text{AFTER}^1_{i,t} + \delta_4 \text{AFTER}^2_{i,t} + \delta_5 \text{AFTER}^{3+}_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t}$,
 where D/M is defined as annual cash dividends divided by market capitalization at the end of the year. BEFORE¹ is a dummy variable, coded one in the year prior to the controlling shareholder being mandated to return profits to the state, and zero otherwise. AFTER⁰ (AFTER¹, AFTER²) is a dummy variable, coded one for the year (the year after, the second year after) the controlling shareholder is mandated to return profits to the state, and zero otherwise. AFTER³⁺ is a dummy variable, coded one for more than two years after the controlling shareholder is mandated to return profits to the state, and zero otherwise. Control variables in Table 3 (in the manuscript) and fixed effects for firm and year are also included. Variable definitions are outlined in Appendix 2 (in the manuscript).

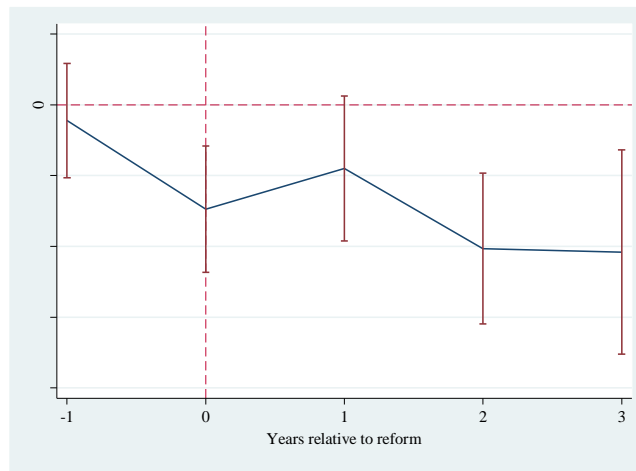


TABLE IA.1
Addressing Econometric Concerns of Multiple-period DiD Estimates

Table IA.1 reports results for analyses addressing econometric concerns over multiple-period DiD estimates. Panel A presents the yearly breakdown of sample firms (listed CSOEs) by their treatment year. Panel B follows Cenig et al. (2019) and performs stacked DiD regressions. We identify two major treatment events in Panel A: the 2007 treatment (52.23%) and the 2011 treatment (30.57%). For each event, we create a data set by pairing the treated firms with non-SOEs. We stack the two data sets and perform DiD regressions for the baseline model (with or without covariates in Columns 1 and 2) and the event-study model (Column 3). Panel C follows Callaway and Sant’Anna (2021) and estimate granular ATTs. Working under either the unconditional- or conditional parallel trend assumption, we report ATT estimates (coefficients on the PR indicator) for each event period and the sample weighted average. e indexes the number of years relative to the treatment year. In both panels, the dependent variable is D/M, defined as annual cash dividends divided by market capitalization at the end of the year. The variable of interest, PR, is a dummy variable coded one if the controlling shareholder, i.e., parent CSOE, is mandated to return profits to the state in the current year, and zero otherwise. Control variables in Table 3 (in the manuscript) are included but are unreported for brevity. Fixed effects for firms and years are included. In Panel B, T -statistics reported in parentheses are computed based on standard errors adjusted for firm-level clustering. Variable definitions are outlined in Appendix 2 (in the manuscript). *, ** and *** indicate statistical significance at 10%, 5% and 1% levels respectively, using two-tailed student t -tests. In Panel C, standard errors in parentheses are computed using the bootstrap approach proposed in Callaway and Sant’Anna (2021).

Panel A: Treatment Timing Distribution of Sample CSOEs

Treated year	Firms	Percent
2007	164	52.23%
2008	16	5.10%
2009	17	5.41%
2010	12	3.82%
2011	96	30.57%
2012	1	0.32%
2013	5	1.59%
2014	3	0.96%
Total	314	100%

Panel B: Stacked DiD Regressions

Variables	Dep. Var = D/M		
	(1)	(2)	(3)
PR	-0.003*** (-4.98)	-0.003*** (-4.81)	
BEFORE ¹			0.001 (0.95)
AFTER ⁰			-0.003*** (-3.43)
AFTER ¹			-0.003*** (-3.38)
AFTER ²			-0.004*** (-4.51)
AFTER ³			-0.002*** (-2.68)
Control Variables	No	Yes	Yes
Firm effects	Yes	Yes	Yes
Year effects	Yes	Yes	Yes
No. of obs.	8,598	8,598	8,598

Adj. R^2	0.536	0.559	0.559
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Panel C ATT Estimates of Callaway and Sant'Anna (2021)

Partially aggregated								
Unconditional Parallel Trend Assumption								
Event study effects	$e = 0$	$e = 1$	$e = 2$	$e = 3$	$e = 4$	$e = 5$	$e = 6$	$e = 7$
	-0.0032	-0.0035	-0.0045	-0.0031	-0.0045	-0.0068	-0.0050	-0.0070
	(0.0008)	(0.0009)	(0.0009)	(0.0009)	(0.0017)	(0.0017)	(0.0017)	(0.0016)
Simple weighted average	-0.0044 (0.0010)							
Conditional Parallel Trend Assumption								
Event study effects	$e = 0$	$e = 1$	$e = 2$	$e = 3$	$e = 4$	$e = 5$	$e = 6$	$e = 7$
	-0.0012	-0.0030	-0.0029	-0.0016	-0.0019	-0.0062	-0.0047	-0.0063
	(0.0010)	(0.0012)	(0.0011)	(0.0012)	(0.0022)	(0.0023)	(0.0024)	(0.0021)
Simple weighted average	-0.0031 (0.0013)							

TABLE IA.2
Additional Analyses and Robustness

Table IA.2 reports regression results of additional analyses. Panel A analyzes whether the program’s effect in reducing listed CSOEs’ dividends is stronger when group managers serve the evaluation year. The first column indicates the subsample including treated firm-years (RATIO>0) wherein group managers serve their evaluation years and non-treated firm-years (RATIO=0). The second column indicates the subsample including treated firm-years (RATIO>0) wherein group managers do not serve their evaluation years and non-treated firm-years (RATIO=0). Panel B performs robustness analyses by employing alternative measures of dividend payout. D/E measures a firm’s dividend payout ratio, defined as annual cash dividends divided by net income during the current year (with loss firms excluded). D/S measures a firm’s dividend to sales ratio, defined as annual cash dividends divided by sales during the current year. Panel C analyzes whether the program’s effect in reducing listed CSOEs’ dividends is stronger when the central government has greater fiscal deficit. DEFICIT is defined as the difference between the central government’s annual fiscal expenditure and its annual fiscal income, deflated by the latter. Panel D performs robustness analyses by excluding observations where controlling shareholders’ voting rights are less than 20%. Panel E performs subsample analyses based on group-level financial flexibility. We follow Hadlock and Pierce (2010) and compute SA_INDEX for each CSOE group-year. For each listed CSOE, we calculate SA_INDEX as $-0.737 \times \text{SIZE} + 0.043 \times \text{SIZE}^2 - 0.040 \times \text{AGE}$. SIZE is the natural logarithm of inflation-adjusted book assets (Million RMB); AGE is the number of years since a firm’s listing date. We then construct the group-level SA_INDEX by computing the size-weighted mean of all listed CSOEs’ SA_INDEX values within the group. A higher value of SA_INDEX suggests greater financial constraint (or lower financial flexibility). The ‘*Low Financial Flexibility*’ subsample includes listed CSOEs of groups with group-level SA_INDEX greater than or equal to the sample mean. The ‘*High Financial Flexibility*’ subsample includes listed CSOEs of groups with group-level SA_INDEX lower than the sample mean. Across all panels, D/M is defined as annual cash dividends divided by market capitalization at the end of the year. RATIO is the percentage of the parent CSOE’s consolidated net income that is mandated by the government in the current year. Fixed effects for firms and years are included. *T*-statistics reported in parentheses are computed based on standard errors adjusted for firm-level clustering. Variable definitions are outlined in Appendix 2 (in the manuscript). *, ** and *** indicate statistical significance at 10%, 5% and 1% levels respectively, using two-tailed student *t*-tests.

Panel A Political Evaluation and Managerial Incentives

Variables	D/M	
	Group Managers in Evaluation Years (1)	Group Managers Not in Evaluation Years (2)
RATIO	-0.043*** (-2.86)	-0.022** (-2.35)
Control Variables	Yes	Yes
Firm Effects	Yes	Yes
Year Effects	Yes	Yes
No. of obs.	1,763	2,617
Adj. R^2	0.550	0.544

Panel B Robustness Using Alternative Measures of Dividends

Variables	D/E	D/S
	(1)	(2)
RATIO	-0.756*** (-2.97)	-0.047* (-1.88)
Control Variables	Yes	Yes
Firm Effects	Yes	Yes
Year Effects	Yes	Yes
No. of obs.	3,065	3,077
Adj. R^2	0.315	0.621

Panel C Fiscal Deficit and The Program's Effect on Dividends

Variables	D/M
RATIO	-0.322*** (-2.75)
DEFICIT* RATIO	-0.468** (-2.53)
Control Variables	Yes
Firm effects	Yes
Year effects	Yes
No. of obs.	3,077
Adj. R^2	0.544

Panel D Robustness Analyses Requiring Controlling Shareholders' Ultimate Voting Rights $\geq 20\%$

Variables	D/M
RATIO	-0.023** (-2.11)
Control Variables	Yes
Firm effects	Yes
Year effects	Yes
No. of obs.	2,689
Adj. R^2	0.549

Panel E Conditional Analyses on Group-level Financial Flexibility

Variables	<i>Low</i> Group Financial Flexibility	<i>High</i> Group Financial Flexibility
	(1)	(2)
RATIO	-0.042*** (-3.10)	0.014 (0.97)
Firm effects	Yes	Yes
Year effects	Yes	Yes
No. of obs.	1,430	1,416
Adj. R^2	0.587	0.508
P value of Chow test		0.003

References of Internet Appendix

- Callaway, B., and P. H. Sant'Anna. "Difference-in-Differences with Multiple Time Periods." *Journal of Econometrics*, 22 (2021), 200–230.
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- Hadlock, C. J., and J. R. Pierce. "New Evidence on Measuring Financial Constraints: Moving Beyond the KZ Index." *Review of Financial Studies*, 23 (2010), 1909–1940.