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CrossRef DOI of original article:

1	The Relationship between Ownership Identity, Ownership
2	Concentration, and Firm Performance: Evidence from China
3	Krishna Reddy
4	Received: 1 January 1970 Accepted: 1 January 1970 Published: 1 January 1970
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6 7	Abstract This study compares the performance of stateowned firms, local government SOEs, and

privately-owned firms in China. Using panel data comprising 13,273 firm-year observations for
the period 2005-2012 and OLS, 2SLS, and difference-in-difference regression, we report that
the identity of the largest shareholder does matter. Our results show that the listed, central

<sup>11</sup> government-owned SOEs? operating costs are similar to those of local government owned

<sup>12</sup> SOEs and privately-owned firms. Our results suggest that ownership concentration matters in

<sup>13</sup> China, that is, central government shareholding is an important determinant of state owned

<sup>14</sup> firms? performance. The policy implication of this study is that helping-hand and

<sup>15</sup> protectionist policies have helped stateowned firms to prosper in by creating an uncompetitive

<sup>16</sup> market and ineffective legal infrastructure.

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18 Index terms— privatized SOEs, ownership concentration, ownership identity, tobin?s Q, efficiency

## <sup>19</sup> 1 Introduction

he success of China's transition to a market economy depended on whether state ownership reform can achieve efficiency gains as expected. According to Shleifer and Vishny (1994), the efficiency gains from privatization can only be realized if control rights are passed from the state to private investors. In this regard, China's policymakers have tried to reconcile continuing state ownership with market-orientated economic reforms to make state control more effective (Hassard, Morris, Sheehan & Xiao, 2010).

The Chinese authorities established the Stateowned Assets Supervision and Administration Commission 25 26 (SASAC) in 2003 to restructure its state assets management system. According to Stiglitz (1999), commercialized 27 state ownership might bring advantages in countries with weak institutional environments but these benefits tend to be associated with political connections or a "helping hand" from governments. In consequence, the transition 28 to a free competitive market economy is likely to be impeded (Stiglitz, 1999;Bortolotti, Fantini & Siniscalco, 2001). 29 Leng (2009) argued that governments have the financial incentives to promote SOEs' development by imposing 30 policy barriers against potential competitors because Author: Postgraduate Business, Toi Ohomai Institute of 31 Technology, Rotorua, New Zealand. e-mail: krishna.reddy@xtra.co.nz governments act as owners and regulators, 32 especially in the Chinese context. If SOE expansion is undertaken by means of preferential treatment by the 33

state, ownership reforms may fail to realize efficiency gains, as intended (Hassard et al., 2010).

However, whether state sector ownership reform in China has been successful in improving performance is 35 not well understood since no studies (to our knowledge) have focused on the effects of state ownership on firms' 36 37 performance over the last decade. Accordingly, this study is motivated by the SASAC reform in China and we 38 aim to address four important research questions. First, did SASAC reform in China improve the efficiency of 39 government and local government-owned firms? If it did, does the type of ownership matter? That is, do different types (identities) of the large shareholders contribute to a higher level of economic efficiency in publicly listed 40 firms? Does the controlling shareholder influence the profit-maximizing strategy of SOE-listed firms? Do listed 41 central government-owned SOEs perform better than the local government-owned SOEs and privately-owned 42

43 firms?

This study contributes to the literature in several ways. First, this is the first study undertaken after China's SASAC reform in 2003 that focuses on central versus local government ownership. Since the government has

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 $_{46}$  the fiscal incentives to boost SOEs' performance through policy protection or preferential treatment, we are

47 interested in finding out whether the state's helping hand has affected SOE performance. Second, the study 48 supplements the literature on the relationship between ownership structure and firms' value by focusing on more

recent institutional changes undertaken in China. Prior researchers have focused either on the legal share type

or artificial ownership classifications as proxies for real owner type. The drawback of the legal share type is that

51 it fails to determine who the real controlling shareholder is. On the other hand, artificial ownership classification

52 leads to unrealistic inferences concerning firms categorized as belonging to one ownership type when they have

<sup>53</sup> different interests and motivations (Chen et al., 2009;Leng, 2009). Third, this study extends the limited research

on the ownership-performance nexus in China by using a wider set of measures as proxies for a firm's operating

<sup>55</sup> efficiency. Prior studies have used either accounting ratios (ROA) or market indicators (Tobin's Q) as proxies <sup>56</sup> for firm performance. Using a series of indicators allows for capturing the potential differences in performance of

57 different types of ownership in a more logical manner.

The remainder of the paper is organized as follows. Section 2 provides a brief background to China's enterprise reform, in particular the SASAC reform, and also discusses ownership types among China's listed firms. Section 3 provides the literature review and introduces the hypotheses. Section 4 describes the data and research method

<sup>61</sup> used. Section 5 presents the empirical results and Section 6 provides the conclusion and policy implications.

## 62 **2** II.

## <sup>63</sup> 3 China's Enterprise Reforms and Ownership Structure

The Chinese government announced the "Grasping the large, letting go the small" policy in 1997. The aim was to distinguish different types of traditional SOEs, then assign disparate economic objectives to them (Leung & Cheng, 2013). The "Grasping the large" scheme refers to the actions taken by the state as an owner to strengthen its control over central SOEs as well as over large, local, state firms, which are scattered among strategic industries, such as energy, telecommunications, civil aviation, defense, transportation, publication, metallurgy, and heavy machinery (Leung & Cheng, 2013). In contrast, the "Letting go the small" scheme emphasizes the complete privatization of small to medium-sized SOEs.

Despite preliminary positive results achieved by partial privatization, attempts to improve corporate gover-71 nance in SOEs were faced with challenges (Leng, 2009). The major drawback was that ownership was distributed 72 over various state agencies, reflecting inconsistent responsibilities among different government departments and 73 conflicting supervision systems (Hassard et al., 2010). Although the central government was the sole owner of 74 75 all state assets prior to 2003, it exercised direct control and supervision only of the largest SOEs (central SOEs). On the other hand, the local governments were able to actively control local SOEs within their jurisdictions, they 76 77 did not have the formal status of "owner" and all-important decisions on major transactions by local SOEs were 78 made by the central government (Hassard et al., 2010). As a result, the central government enjoyed the sales 79 revenue from the privatized local state firms and was considered to be the major cause of the conflict of interest (Leng, 2009) in stateowned assets in China. 80

The separation of ownership and control existed not only at different levels of government but also among multiple government agencies (Chen et al., 2009). Various government agencies with different, sometimes conflicting, objectives were responsible for some part of SOEs' business operations. None of these agencies, however, assumed ultimate responsibility for firms' performance (Leng, 2009).

To strengthen SOE corporate governance practices, the State Council established the Stateowned Assets 85 Supervision and Administration Commission (SASAC) in 2003 which redefined the relationship between SOEs and 86 87 governments (Mattlin, 2009). First, the central government separated the central, provincial, and municipal SOEs 88 and granted control rights to SASAC offices at the respective administrative levels (Mattlin, 2009). Second, the SASAC centralized functions that formerly were distributed among different institutions and Party organizations 89 (Leng, 2009). Third, local governments were granted de facto ownership rights for local SOEs (Leng, 2009), 90 and local SASACs at provincial and city levels handled SOEs within their respective jurisdictions and reported 91 directly to local governments. 92

Between 1992 and 2004, Chinese listed firms operated under a unique ownership classification system, which 93 divided equity into tradable and nontradable shares. As a result, China's listed enterprises held up to 60% (on 94 an average basis) of non-tradable shares, and most of these were owned by the government (Jiang, Laurenceson, 95 & Tang, 2008). The artificial splitting of shares led to significant agency problems between holders of non-96 tradable and tradable shares. For example, the controlling shareholders of listed SOEs were not interested in 97 98 stock price movements and consequently, minority individual investors suffered from irregular fluctuation in the 99 share price (Leng, 2009). Furthermore, managers of SOEs tended to pursue objectives that were not related 100 to profit maximization. As a result, the expropriation of minority shareholders' interests was widespread and 101 the principal-agent problem was further exacerbated by the existence of multiple principal-agent problems (Yu, 2013). To deal with the corporate governance failures arising from non-tradable shares, the Chinese authorities 102 enacted the Split Share Structure Reform in 2005 (Jiang et al., 2008). 103

As a result, the ownership structure of Chinese SOEs has changed dramatically since 2004. By the end of 2012, there were 113 large SOEs, commonly known as the central SOEs (SOECG), owned and directly controlled by the central government. SOECGs are supervised by SASAC and since SOECG chairmen are selected on the basis 107 of their ability, many of them got promoted to positions at the ministerial level . Since the central government 108 is the ultimate shareholder of these listed enterprises, incentives serve to impose policies and laws that enhance 109 government objectives rather than misappropriate profits or assets (Cheung, Rau, & Stouraitis, 2010).

Local SOEs constitute the largest group of controlling shareholders of listed state-invested companies in China 110 (Leung & Cheng, 2013). The SASAC reform in 2004 enabled local governments to implement aggressive policies 111 or bylaws to boost the development and performance of local SOEs (SOELGs). Some researchers have reported 112 that SOELGs improved performance after 2004 (Leng, 2009; Cheung et al., 2010), while others argue that local 113 governments have a strong financial incentive to undermine minority shareholders' interests, especially when 114 faced with difficult budgetary constraints or revenue inducements (Hassard et al., 2010). Since it is difficult to 115 enforce laws and regulations at the provincial and municipal levels, the SOELGs are subject to weaker supervision 116 and management (Chen et al., 2009). As the ultimate shareholders of the SOELGs, local governments tend to 117 vary widely in their behavior. On the one hand, SOELGs are the local governments' instrument for generating 118 revenue (Mattlin, 2009) but on the other, local governments may expropriate revenue due to the fact they are 119 both owners and regulators (Leng, 2009). 120

By allowing the "natural person" to be the dominant shareholder of listed firms in China since 2001, the total number of listed companies controlled by private investors increased from less than 10 to 1431 by the end of July 2013, accounting for 57.94% of all listed firms in capital markets. 1 The majority of these firms are listed on China's two main boards and by the end of 2012, 325 listed firms conducted their IPOs in the newly established growth enterprise market (ChiNext). 2

#### 126 **4 III.**

Literature Review, Theory and Hypotheses (Wang et al., 2010). As a result, the principal-agent and principalprincipal agency problems are widespread (Shen, 2008).

The proponents of the helping hand hypothesis argue that firms that have close ties with the government can benefit from political connections (Fisman, 2001;Faccio, 2006). The specific benefits of government ownership include access to favorable terms for loans from state-owned banks, a higher IPO offering price, governmentsponsored bailouts, favorable government contracts, lower taxation, and receiving special licensing powers (Sapienza, 2004;Goldman, Rocholl, & So, 2009;Leng, 2009).

SOEs in the strategic industries 3 sector receive preferential treatment from the government (Cheung et al., 134 2010). Since this sector has a strict ban on private and foreign investors, SOEs with monopolistic features enjoy 135 windfall profits in these industries (Mattlin, 2009; Jiang & Lin, 2012). In addition to enjoying a strong influence 136 137 on the market as a result of the government's protectionist policies, these SOEs also receive a disproportionately large share of the loans provided by the large state banks (Liu, Uchida, & Yang, 2012). 4 Researchers investigating 138 139 the ownershipperformance nexus have reported a negative relationship between residual state shares and firm 140 Given their soft budgetary constraints, SOEs have tended to expand the scale of their state assets, in some cases 141 by overinvesting or by instigating a series of mergers and acquisitions. Consequently, the revenue and size of SOEs have increased dramatically (Mattlin, 2009). 142

In contrast, local government-owned SOEs and privately controlled firms do not operate on the same playing
field and often face capital starvation and regulatory impediments in their routine business activities (Leng,
2009;Chen et al., 2010). Based on the helping hand hypothesis, we propose our first hypothesis as follows:

146 H1. Listed SOECGs have a higher level of liquidity compared to SOELGs and PRIVATEs.

The debate regarding state ownership inefficiencies is highlighted by the property rights theory and the political 147 interference hypothesis (Martin & Parker, 1997; Villalonga, 2000; Shleifer & Vishny, 1994). The proponents of the 148 property rights theory posit that property rights are clearly defined in the private sector but not in the public 149 150 sector and in consequence, private owners have a stronger incentive to effectively reduce their production costs and actively monitor the performance of management ?? McCormick & Meiners, 1988). Shleifer and Vishny (1997) 151 argued that state ownership leads to principal-principal and principalagent agency problems because government 152 tends to pursue many different objectives and not solely value maximization (Shleifer & Vishny, 1997). As a 153 result, state-owned enterprises tend to suffer from problems such as higher costs and lower efficiency (Stiglitz, 154 1999).155

performance (Xu & Wang, 1999 H2. Listed SOEs (SOECGs) have higher profitability than SOELGs and privately owned firms. H3. Listed SOEs (SOECGs) have higher operating costs than SOELGs and privately owned firms.

Prior research has reported that the largest shareholder has both a positive and negative effect on firm 159 performance. Corporate governance literature has identified block shareholding as an influential mechanism to 160 mitigate principal-agent problems and reduce the "free-rider" phenomenon of small investors (Shleifer & Vishny, 161 162 1997; Claessens & Djankov, 1999). However, if the largest shareholder is also the controlling shareholder, a collision 163 of control rights with cash flow rights is likely to occur. Consequently, the conflict of interest between the largest shareholder and minority shareholders will be exacerbated (Fama & Jensen, 1983;Morck, Shleifer & Vishny, 1989). 164 Frye and Shleifer (1997) and Shleifer and Vishny (1998) argued that when the government acts as the dominant 165 shareholder in public firms, the wealth of minority shareholders is misappropriated by authorities swayed by 166 political considerations and the corrupt behavior of politicians. This view is known as the interest entrenchment 167 hypothesis. Xu (2004) reported that on average, the largest shareholder-owned 46% of SOEs prior to the 2005 168

Split Share Structure Reform. Having a large stake in SOEs, the largest shareholder (government) reserves the 169 right to appoint firm directors and top managers and in this way, can exert considerable influence on the firm's 170 operational activities (Chen et al., 2008). Given China's inadequate legal infrastructure and its poor shareholder 171 172 protection regime, prior researchers have reported that the wealth of minority investors is misappropriated when the state's shareholding goes beyond a certain level (Wei & Varela, 2003;Ng et al., 2009;Yu, 2013). Furthermore, 173 researchers point out that different types (identities) of the largest shareholder are also associated with tunneling 174 behaviors. Leng (2009) argued that public companies connected to local governments always subvert minority 175 shareholders' interests by asset stripping or self-serving activities in most MBO transactions. Cheung et al. (2010) 176 provided empirical evidence of local government's "grabbing hand," a ploy by which local authorities influence the 177 SOEs they control in order to steal or transfer minority shareholders' wealth through related party transactions. 178 In contrast, SOEs supervised by the central government provide a "helping hand" to protect minority partners' 179 interests during the same process. This is referred to as the interest alignment hypothesis. According to Leng 180 (2009), Chinese stock investors view central government-controlled SOEs (also known as blue-chip companies in 181 the market) as a safer investment as they have the ability to secure the value of their portfolios. Arguably, local 182 government-controlled SOEs experience a more negative reaction from the market and have lower market value 183 compared to central SOEs and private firms (Zou, Wong, Shum, Xiong, & Yuan, 2008; Chen et al., 2009). Based 184 185 on the above, we argue that SOEs connected to the central government have a higher market value compared 186 to privately listed firms and SOEs connected to local governments. Therefore, we propose our fourth and fifth 187 hypotheses as follows:

188 H4. Listed SOECGs have a higher market value than privately controlled firms.

H5. Listed SOECGs have a higher market value than SOELGs. Shleifer and Vishny (1986) argued that dispersed small shareholders are reluctant to monitor management because the cost of monitoring is greater than the benefits. As a result, monitoring is only undertaken by the company's controlling shareholder or other non-controlling block shareholders (Shleifer & Vishny, 1986;Pound, 1988). Smith (1996) and Woidtke (2002) pointed out that non-controlling institutional shareholders such as mutual funds and pension funds usually act as an effective mechanism for monitoring managerial inertia and so mitigate the typical principalagent problems in countries such as the US and the UK. This is referred to as the interest alignment hypothesis.

However, research on this issue in China has received little attention. A plausible reason may be that the 196 majority of previous researchers have used legal type shares as a proxy for companies' ownership structure, not 197 distinguishing between the controlling shareholder and other important blockholders. Consequently, the effect 198 of non-controlling shareholders on performance is not well understood in the Chinese context. Song, Zhang, and 199 Li (2004), reported a positive relationship between non-controlling shareholders and firms' market value using 200 a 3-year sample for the period 1999-2001. However, it is not clear whether this relationship still holds after 201 the numerous institutional changes that have taken place in China since 2004. Therefore, we propose our sixth 202 hypothesis as follows: 203

H6. The presence of non-controlling blockholders in Chinese listed firms has a positive effect on the market value of these firms.

Foreign shareholders of Chinese listed firms tend to be financial institutions based in Europe, Hong Kong, 206 Japan, and North America ?? Chen, Firth & Rui, 2006). Boubakri, Cosset, and Guedhami (2002) and D'Souza, 207 Megginson, and Nash (2002) argued that the presence of foreign shareholders is associated with superior 208 performance by privatized firms. Bai, Liu, Lu, and and argued that listed firms that have foreign institutional 209 investors as shareholders experience a higher market valuation because of transparent financial disclosure 210 requirements and enhanced monitoring procedures brought by sophisticated foreign investors. Therefore, we 211 propose our seventh hypothesis as follows: H7. The presence of foreign investors in listed firms has a positive 212 effect on their market valuation. 213

214 IV.

## <sup>215</sup> 5 Data and Methodology a) Sample Selection

Data was collected from China's Stock Market and Accounting Research Database (CSMAR). The initial sample 216 included 1246 firms trading in either of two stock exchanges in China for the period 2005 -2012. We have 217 taken great care in identifying the major shareholder and the other top 10 shareholders for each listed firm in 218 the sample. To determine the true owner of the shares, we carefully checked the prospectus data of each firm 219 through SINA Finance (http://finance. sina.com.cn/stock) and the CNINF website (www.cninfo.com.cn) which 220 is the official disclosure platform for firms in China. By merging these data with the CSI ownership classification 221 222 scheme developed by China Securities Index Ltd., we finally confirm the real identity of the dominant (or largest) 223 shareholder for each company and have reclassified each according to the different shareholder types: (i) central 224 governmentowned SOEs (SOECGs); (ii) local government-owned SOEs (SOELGs); (iii) privately owned firms 225 (PRIVATE), and (iv) ownership unclear (PCHINEXT).

However, a number of exclusions apply to the dataset used. First, financial firms and companies for which operating performance data were not available were removed from our dataset. Second, we winsorized firm performance variables using a similar method to that of and Erkens, Hung, and Matos (2012) 5 However, privately controlled companies listed on ChiNext (China's growth enterprise market) tend to have three blockholders, although the second holds only about onethird of the shares held by the largest blockholder (the median for the largest shareholder is 32.12%, and for the second 12.86%, respectively). Since the largest shareholder is the controlling shareholder, we adopt the method used by Song et al. (2004) to define the non-controlling blockholders as shareholders ranked from 2 to 10 in the tier of the top 10 shareholders.

to remove the effect of outliers in our dataset. Third, because some "shell companies" are traded on China's stock markets as vehicles for investors' grey activities, we removed those also to ensure the overall validity of the dataset. Our final sample consists of 13,273 firm-year observations, comprised of 5449 (51.05%) firm-year observations where PRIVATE is the major controlling shareholder, 4911 (36.99%) observations from SOELGs, 2135 (16.09%) observations from SOECGs, and 778 (5.86%) observations from PCHINEXTs.

Table I Panel A reports the shareholdings of the three largest shareholders. According to Panel A, the median 239 holding of the largest shareholder is 34.94%, that of the second largest investor is 6.88%, and the third is 2.66%. 240 Since blockholders own 5% or more of a firm's shares, a typical Chinese firm has only one or two blockholders and 241 the largest shareholder tends to be the dominant one. These results suggest that the single largest shareholder 242 has a major influence on the operations of Chinese listed firms. Our results hold for SOECGs and SOELGs, as 243 well as PRIVATE firms in China. II show that the state still retains ownership control in strategic sectors (on 244 average 48.29%), 7 8 Although all shareholders have equal voting rights (one share, one vote), in practice the 245 largest shareholder always gains unbridled control over firms (Chen et al., 2009). Chen et al. argued that on 246 247 average, all block shareholders who attend general meetings account for 95% of voting shares and the largest 248 shareholder controls 84% of the shares present at these meetings. In other words, a typical Chinese listed firm has one shareholder with enough votes to exercise control and a few non-controlling blockholders who are able 249 to implement effective monitoring activities of the controlling parties' behavior. 250

In contrast, the state holds a relatively smaller proportion of shares (around 37.16%) in SOEs that belong to 251 other sectors, similar to the largest shareholders' equity holdings in privately controlled firms. These findings 252 provide support for the view that the recent privatization process in China was largely influenced by the "Grasping 253 the large, letting go the small" policy, which allowed the state to retain control of the strategic sectors of the 254 economy. ??009), the proxies for the performance measures adopted in this study are ROA, CFOA, OCS, SPROD, 255 and Tobin's Q. Return on Assets (ROA) is equal to operating income 9 Table III reports the list of dependent 256 and independent variables used in this study and also their estimation method. divided by total assets. Net cash 257 flows to total assets (CFOA) is equal to net sales minus the cost of goods sold, minus selling and administrative 258 expenses, minus tax expenses plus net debt repayment plus depreciation plus amortization expenses plus net 259 borrowing divided by total assets (Ghosh, 2001;. Operating costs to total sales (OCS) is equal to the direct cost 260 of goods plus selling and administrative expenses divided by total assets (Chen et al., 2008). Sales per employee 261 (SPROD) is equal to net sales divided by the number of employees. Tobin's Q is the performance measure and 262 is equal to the market value divided by total assets. 263

ROA and CFOA reflect on a firm's accounting income and cash flow, respectively. CFOA is also used as a 264 scalar to reveal firms' operating cash flow. To investigate the operating efficiency of listed companies, this study 265 uses operating costs to sales (OCS) as a proxy for a firm's efficiency. Shleifer (1998) argued that state-owned 266 firms tend to suffer from overstaffing and low productivity problems. Consequently, we use the ratio of net sales 267 to the number of employees (SPROD) to capture the effect of productivity. Tobin's Q is the market measure. 268 9 Since net income is prone to manipulation in China, we have used operating earnings instead ?? Chen et 269 Second, we empirically examine whether the largest shareholder identity contributes positively to a firm financial 270 performance. Following Chen et al. (??009), we have undertaken OLS regression after controlling for year fixed 271  $effects \ as \ follows: OpPerformit = a0 + a1DSOECGit + a2DSOELGit + a3DPRIVATEit + ?1SIZEit + ?2LEVit + a3DPRIVATEit + a3DPRIVATEI + a3DPRIVA$ 272 + ?3IORAit + ?4DEVELOPIit + ?it(1) 273

Where OpPerformit is a set of performance measures described in section 4.2; DSOECG is a dummy variable coded 1 for firm years where the largest shareholder is a SOECG; DSOELG is a dummy variable coded 1 for firm years where the largest shareholder is a SOELG; DPRIVATE is a dummy variable coded 1 for firm years where the largest shareholder is a private investor.

The owner-type dummy variable is intended to capture the differences in operating performance between 278 SOECG, SOELG, and PRIVATE controlled firms (PCHINEXT is treated as the omitted ownership type in 279 regression equation (1)). In this study, we have used the natural logarithm of the book value of total assets at 280 the end of the year as a proxy for SIZE. SIZE controls for potential economies of scale or the effect of size. LEV is 281 the ratio of total debts to total assets at the end of the year and captures the underlying capital structure effect. 282 Hutchinson and Gul (2003) argued that firm performance can be influenced by the investment opportunity set it 283 faces. Accordingly, we have used the total assets growth ratio (IORA) as a proxy to control for a firm's investment 284 opportunity set. Finally, there are significant differences in regional development, and the study controls for the 285 regional effect by using the geoeconomic dummy variable DEVELOPI. Following, China is reclassified into two 286 regions based on the average GDP per capita for the period 2005-2012 and the study recognizes the provinces 287 with higher average GDP per capita as the relatively developed regions. 11 11 The cities of Beijing, Shanghai, 288 and Tianjin, and the provinces of Shandong, Jiangsu, Zhejiang and Guangdong belong to the relatively developed 289 regions of China in terms of their higher average GDP per capita over the 8 sampling years. From 2011, some 290 of these regions had a GDP per capita above US\$10,000 US and the rest of these provinces' GDP per capita is 291 close to this standard as well. 292

Hence, DEVELOPI is a dummy variable coded 1 if the company is headquartered in one of these provinces. 293 The results of equation (1) are reported in Table ??. 294

Third, we examine whether the proportion of shares owned by the largest investor has the sort of bearing on 295 firms' financial performance as does their identity. Reddy et al. (2010) argued that the largest owner may better 296 align the incentives of the dominant owner with the interests of the minority investors. However, high percentage 297 ownership may also make it easier to misappropriate assets from the firm (Leng, 2009). To explore the effect 298 of the percentage of ownership, we rerun the equation (1) regression using the following model: OpPerformit = 299 ?0 + ?1LOWNit + ?1BLOCKit + ?2PFORit + ?3PBDSHit + ?4LNDTPit + ?5PEXESHit + ?6LNMGPit + 300 ?7SIZEit + ?8LEVit + ?9IORAit + ?10DEVELOPIit + ?it(2) 301

Where OpPerformit is a set of performance measures described in section 4.2. LOWNit is the proportion 302 of shares held by the largest shareholder, that is, SOECG, SOELG, or PRIVATE. SOECG is the proportion 303 of shares held in SOEs by the central government. SOELG is the proportion of shares held in SOEs by the 304 local government. PRIVATE is the proportion of shares in firms held by private investors. We have undertaken 305 regression analysis after controlling for industry and year-fixed effects. The results of equation (2) are reported 306 in Table VI.

However, Demsetz and Villalonga (2001) argued that ownership and firm value could be endogenously 308 309 determined. Since shareholders have an incentive to vary their stock holdings in accordance with their 310 expectations of future performance, the regression results relating to firm performance-dominant shareholders 311 could be spurious.

Fourth, to test the potential endogeneity of the performance-ownership relationship, we have undertaken a Two-312 Stage Least Squares (2SLS) regression. Our model consists of two equations that determine firm performance 313 (Tobin's Q) and the percentage of shares owned by the largest shareholder (SOECG) in listed central SOEs, 314

simultaneously. 315 The Relationship between Ownership Identity, Ownership Concentration, and Firm Performance: Evidence 316 317 318 319 320 + ?321

322 Where OWN is the ownership percentage of the largest shareholder (SOECG or SOELG). The log of remuneration of top-tier executives (LMGP), strategic industry dummy (SID), and total residual state shares, 323 excluding the dominant shareholder's proportion (RESUDS), are treated as exogenous variables (instruments). 324 The remaining control variables are the same as those used earlier. 325

The 2SLS regression allows us to control for the effect of endogeneity between Q and the largest ownership. 326 Given the dataset, we have identified the remuneration of toptier executives (LMGP), strategic industry dummy 327 (SID), and total residual state shares (RESUDS) as the exogenous variables. According to and Mattlin (2009), 328 when deciding the level of shares owned by the dominant shareholder in SOEs, the government takes into account 329 whether the firm is in a strategic or pillar industry. Consequently, SID has an effect on Tobin's Q but not on 330 SOECG. 12 Moreover, through the corporate restructuring process during the early 2000s, the Chinese authorities 331 adopted a debt for equity swap program to reduce the level of SOEs' bad loans, allowing a certain number of 332 state shares to be held by different state agencies or enterprises rather than by the direct controlling shareholders 333 (Kang & Kim, 2012). Since this type of equity is treated politically as a pledge of future debt repayment, the 334 actual holders of these shares (various state agencies) rarely get involved in the management of these SOEs and 335 seldom attend shareholders' meetings (Wang, 2003;Leng, 2009). For the reason stated above, we assume that 336 RESUDS will have a positive effect on SOECG as proof of strong political links but these RESUDS will not have 337 any effect on Tobin's Q. 13 12 We have also undertaken correlation in pairs between SID, Tobin's Q, SOECG 338 and SOELG. Our results show that the correlation between SID and Tobin's Q is -0.214, 0.015 between SID 339 and SOECG, and 0.065 between SID and SOELG. These results suggest that SID is correlated with Tobin's Q 340 but not with SOECG and SOELG. 13 We have also undertaken paired correlation between RESUDS, Tobin's 341 Q, SOECG and SOELG. Our results show the following correlations: between RESUDS and Tobin's Q, -0.098; 342 between RESUDS and SOECG, 0.304; between RESUDS and SOELG, 0.446. This result suggests that RESUDS 343 is correlated with SOECG and SOELG but not with Tobin's Q In addition, the remuneration package of SOE 344 senior management is designed by the state which takes into consideration size and meeting the objectives of the 345 state (Leung & Cheng, 2013) rather than performance. Therefore, we do not expect LMGP to have an effect on 346 firm value. 14 However, the difficulty of disentangling the endogeneity of private ownership structure and firm 347 performance has been widely documented in many studies, using samples from Western countries (Lemmon & 348 Lins, 2003; Beiner, Drobetz, Schmid & Zimmermann, 2006; Bhagat & Bolton, 2008). Since private firms were 349 only officially approved in 2001 to go public, it is unclear whether the same phenomenon also exists in China as 350 well. To test for potential endogeneity in private ownership, we have modified equations (??) and (5) as follows: 351 14 Our paired correlation results indicate that LMGP is negatively correlated with SOECG and SOELG, that 352 is, for LMGP and SOECG, -0.162, and for LMGP and SOELG, -0.242. The paired correlation between LMGP 353 and Tobin's Q is 0.058. These results suggest that LMGP is correlated with SOECG and SOELG but not with 354 355

where OWN is the percentage of ownership of the largest private shareholder in equations (??) and (7). The natural log of remuneration for senior executives (LNDTP), the market status dummy (STATUS), the proportion of shares owned by individual investors (RESUDA), and the regional openness dummy (OPENNESS) are treated as exogenous variables (instruments).

We have identified STATUS as the first instrument. Tian and Zhou (2003) and Luo, Wan & Cai (2012) argued 365 that the largest private investors tend to acquire the licenses of businesses that are performing well or sectors 366 they regard as valuable. They also undertake merger and acquisition activities to obtain permits indirectly 367 (Luo et al., 2012). Local protectionism is strong in China and without a local partner or making a direct 368 investment in a region, enterprises cannot readily sell products in regional markets, especially those operating in 369 highly competitive industries (Tian & Zhou, 2003). Consequently, private firms in these sectors will have high 370 performance but the concentration of ownership will be low due to the expansion of their partnership networks 371 372 (Tian & Zhou, 2003).

For the reasons stated above, we argue that STATUS affects PRIVATE but not Tobin's Q. 15 The second 373 374 exogenous variable used is RESUDA, which represents the proportion of shares owned by individual investors. A higher proportion of shares owned by small investors indicates that a relatively lower proportion of stocks is 375 available for the largest shareholder. Therefore, we argue that RESUDA in equation (??) affects PRIVATE, 376 but not Tobin's Q. 16 15 Our paired correlation results for PRIVATE, TOBIN'S Q, and STATUS show that 377 STATUS is correlated with Tobin's Q (0.151) but not with PRIVATE (0.067). 16 Our paired correlation results 378 for PRIVATE, TOBIN'S Q, and RESUDA show that RESUDA is not correlated with Tobin's Q (-0.056) but 379 highly correlated with PRIVATE (-0.157). 380

The third exogenous variable used in this study is OPENNESS. Wang et al. (2010) argued that the majority 381 of Chinese private listed firms are owned by families who operate typical product manufacturing and export 382 processing businesses. These firms tend to have relatively high levels of ownership concentration and are often 383 gathered in certain regions to form industrial clusters (Shen, 2008;Leng, 2009). Therefore, we have used the 384 385 proportion of the total value of exports and imports to provincial GDP and ranked them to capture the most 386 export-oriented regions in China. We presume that OPENNESS positively affects PRIVATE but not Tobin's Q. 17 Finally, we argue that the compensation plans for hired executives have the potential to be based on size and 387 meeting the largest shareholders' objectives. Based on the above, we argue that LMGP affects PRIVATE but 388 not Tobin's Q. 18 V. 389

## 390 6 Empirical Results

## <sup>391</sup> 7 a) Effect of Ownership Identity on Firm Performance

The results reported in Table IV Panel A show that firms' financial performance does differ for different types of largest shareholders. For example, the mean (median) ROA for SOECGs as the largest shareholder is 5.60% (5.29%), 5.78% (5.39%) for SOELGs, and 6.79% (6.60%) for PRIVATEs. These results suggest that PRIVATE controlled firms perform better than both SOECGs and SOELGs. These results are statistically significant at a 1% level. The statistical significance of the differences in means (medians) of ROA for different types of the largest shareholder is reported in Table IV, Panel B. The results for ROA reported in Panel A do not support hypothesis H2. That is, SOEs (SOECGs and SOELGs) perform better than the PRIVATE controlled firms.

The results for SPROD show that SOELGs perform better than PRIVATEs and SOECGs and also that 399 SOECGs perform better than PRIVATEs. The results of SPROD suggest that listed SOEs have a relatively 400 stronger revenue-generating capacity compared to the PRIVATE controlled firms, thus supporting our hypothesis 401 402 H1. The results of CFOA suggest that SOELGs and SOECGs have higher cash flow returns compared to PRIVATE and PCHINEXT. The results of CFOA provide support for hypothesis H1. The results of OCS show 403 that the operating costs of PRIVATE controlled firms and PCHINEXT are slightly lower than the SOECGs and 404 SOELGs. The results of OCS provide support for hypothesis H3. Results for Tobin's Q suggest that PRIVATE 405 controlled firms have higher market value compared to SOECGs and SOELGs. Thus this finding does not provide 406 support for hypotheses H4 and H5. 407

408 The cross-sectional results reported in Table IV Panel C show that PRIVATE controlled firms perform better 409 than SOECGs and SOELGs. In the period 2005 -2008, however, according to all performance measures SOECGs 410 performed better than SOELGs but from 2009 to 2012, SOELGs achieved better performance than SOECGs. 411 Our results suggest that SASAC 2003 has had a positive effect on SOELG performance. Table IV Panel A reports a series of financial measures of operating performance for companies clustered according to different 412 identities. ROA/CFOA is operating earnings/cash flows deflated by the average book value of total assets. 413 SPROD is the ratio of net sales to the number of employees in millions of RMB. OCS is the ratio of operating 414 cost to net sales. Tobin's Q is the market value of total assets deflated by the average book value of total assets, 415 where the market value of total assets is the sum of monthly average market capitalization and average total 416

debts. Table III ?? show that the coefficients of the owner type/identity variables are statistically significant for 417 the performance measures ROA, CFOA, SPROD, and Tobin's Q, thus suggesting that ownership identity does 418 matter. Our results suggest that as the largest owner of SOECGs, the central government has a positive effect 419 on firm performance, measured by CFOA and Tobin's Q. For CFOA and SPROD, our results indicate that local 420 governments have played an active role in the management of SOELGs after gaining ownership rights as a result 421 of the recent SASAC reform. The coefficient of DSOELG is negative and statistically significant at a 1% level 422 for the performance measure Tobin's Q. This finding is consistent with that reported by Zou et al. (2008) and 423 Chen et al. (2009) that SOELGs experience negative market reactions compared to SOECGs and PRIVATEs. 424 In regard to PRIVATEs, our results are positive for the performance measures ROA, CFOA, and Tobin's Q. 425

## <sup>426</sup> 8 Table V reports the regression results for Equation (1). The <sup>427</sup> results reported in Table

428 The coefficient of SIZE is positive and statistically significant for all the accounting based performance measures, 429 thus suggesting that larger firms are better at exploiting economies of scale and have access to capital on more 430 favorable terms.

However, the negative coefficient of SIZE for Tobin's Q suggests that investors are concerned about the agency 431 problems existing in larger firms and therefore favor smaller firms instead (Jiang et al., 2008). The coefficient 432 of LEV is negative for the accounting-based measures but positive for the operating efficiency, productivity, 433 and market measures, which suggest that firms that take on leverage are better governed and have better 434 growth prospects. The coefficient of IORA is positive for both ROA and Tobin's Q, thus suggesting that firms 435 that experience growth generate better returns for the shareholders. The positive coefficient of DEVELOP1 436 437 suggests that firms that operate in developed regions benefit from better developed regional business institutions and infrastructure (Fan et al., 2001; ??ian & Stiglitz, 1996). Notes: The Model: OpPerform???? = ??0 + 438 439 ??3????????? + ??4??????????????? + ?????? where OpPerform is the performance measure, including 440 ROA, CFOA, OCS, SPROD and Tobin's Q. DSOECG is a dummy variable coded 1 for firms whose biggest 441 shareholder is a SOE affiliated to the central government. DSOELG is a dummy variable coded 1 for firms whose 442 biggest shareholder is a SOE affiliated to a local government. DPRIVATE is a dummy variable coded 1 for firms 443 whose biggest shareholder is a private investor. SIZE is the natural logarithm of total assets in billions. LEV is 444 the ratio of total debt to total assets at the end of the year. IORA is the total asset growth rate. DEVELOPI is 445 a geo-economic dummy variable for China's economically developed regions, including Beijing, Tianjin, Shanghai 446 and the coastal regions (ranked by each region's GDP per capita over the 8 sampling years). The table reports 447 pooled-OLS regression and fixed effects OLS regression. Standard errors are reported in brackets, where \*\*\*, \*\* 448 and ? represent statistical significance at the 1%, 5%, and 10% levels, respectively. 449

## <sup>450</sup> 9 b) Effect of Ownership Concentration on Firm Value

We are interested in finding out whether the proportion of shares held by the largest shareholder has a positive effect on the various financial performance measures. According to Shleifer and Vishny (1986), larger ownership may better align the incentives of the dominant owner with the preference of the minority investors but it also increases the possibility that the controlling party may undertake tunneling activities.

Table VI reports the results of the linear relationship between the five performance measures and the proportion 455 of the largest shareholder ownership. According to columns 11 and 14 of Table VI, the percentage of shares held 456 by the central government in SOEs is statistically significantly related to SPROD and Tobin's Q. However, the 457 458 coefficient of SOECG in column 11 is negative, thus suggesting that the largest shareholder contributes negatively to firm performance measured by SPROD. This result indicates that the central government is interested in 459 achieving social objectives. Consequently, it hires more people to boost employment, and this in turn leads to a 460 decline in sales per employee (as measured by SPROD). On the other hand, the coefficient of SOECG in column 461 14 is positive and statistically significant at a 1% level. Results reported for the non-linear model in Figure 1, 462 Graph A in the Appendix also show that central government ownership above 40% leads to higher Tobin's Q. 463 Our results reported in Table II confirm that central government ownership in strategic industries is between 464 45% and 60%. Our results are similar to that reported by ?? and and Xiao (2009), which suggest that the central 465 government has kept a substantial amount of state shares in the partially privatized enterprises to retain control 466 even after the Split Share Reform. This result supports our hypothesis H5. 467

468 According to columns 3, 6, 12, and 15 of Table VI, the percentage of shares held by the local government in 469 SOEs is statistically significantly related to the firm performance measures ROA, CFOA, SPROD, and Tobin's 470 Q. The coefficient of SOELG in columns 3, 6, and 12 is positive, thus suggesting that the largest shareholder 471 contributes to firm performance measured by ROA, CFOA, and SPROD. Our findings support the view posited by Li, You, Wang, and Yuan (2013), that managers are interested in accounting based performance measures because 472 their personal performance appraisals are determined by them. On the other hand, the coefficient of SOELG in 473 column 15 is negative and statistically significant at a 5% level. This result supports the view posited by Zou et 474 al. (2008), that local government-owned SOEs receive a negative market reaction from investors and consequently 475 experience lower market valuation (similar to the results reported in Table ??). Results reported for the non-linear 476

model in Figure 1, Graph B in the Appendix show that local government ownership between 25% and 72% leads
to higher Tobin's Q. Our results reported in Table II show that local government ownership in strategic industries
is between 28% and 49%. However, and Leng (2009), argue that the proper legal infrastructures and weak law
enforcement may have led to the expropriation of the minority shareholder rights by the local government.

According to columns 4, 10, 13 and 16 of Table VI, the percentage of shares held by private investors is 481 statistically significantly related to firm performance measures ROA, OCS, SPROD, and Tobin's Q. The coefficient 482 of PRIVATE in columns 4, 10, and 16 is positive, thus suggesting that the largest private shareholder contributes 483 to a firm's performance, as measured by ROA, OCS, and Tobin's Q. This result indicates that the largest 484 shareholder (PRIVATE) is interested in creating value for the firm. Results reported for the non-linear model in 485 Figure 1, Graph C in the Appendix also show that the local government ownership above 30% leads to higher 486 Tobin's Q. According to Wang et al. (2010), family businesses account for a large proportion of private firms 487 where concentrated ownership of up to 45% is common. Since private firms are not close to government ties, 488 expropriation seems to be lower. On the other hand, the coefficient of PRIVATE in column 13 is negative and 489 statistically significant at a 5% level. This result suggests that firms with predominantly private investors tend 490 to contribute negatively to sales per employee, which could be the result of misappropriation. 491

The results in Table VI show that the percentage of ownership by non-controlling blockholders (BLOCK) 492 493 is positively related to the firm value measured by Tobin's Q, a result that is statistically significant at a 1% 494 level. This result provides support for hypothesis H6 and is consistent with the results reported by Song et al. (2004), Kang and Kim (2012), and Leung and Cheng (2013). The evidence suggests that non-controlling, large 495 shareholders play an active role in corporate governance in China irrespective of who the controlling investor is. 496 The coefficient of foreign ownership (PFOR) for Tobin's Q reported in Table VI is positive and is statistically 497 significant at a 1% level for all three types of controlling investor groups. This result supports our hypothesis 498 H7 and is consistent with the results reported by Bai et al. (2004), , and Jiang et al. (2008), who in different 499 contexts conclude that the presence of foreign shareholders in China's public firms leads to higher market value. 500 A plausible reason for this may be greater transparency in these companies' financial performance, enhanced 501 monitoring effects, and the technical support brought by foreign investors. Since foreign investors seek better 502 economic returns, they force management to act more consistently in regard to the goal of profit maximization. 503 Consequently, an increase in foreign investors in China's listed companies Finally, Table VI reports the results 504 of the effect of board members' remuneration in Chinese public companies. Results show that board members' 505 remuneration (LNDTP) contributes to firm value and the result is statistically significant at a 1% level. This 506 result indicates that remuneration packages are an important mechanism for motivating top decision-makers in 507 privately controlled firms (Li et al., 2013). 508

# <sup>509</sup> 10 Table 6: OLS Regression with Fixed Effects for Different <sup>510</sup> Performance Measures and Ownership Proportion

OpPerform is the performance measure, including ROA, CFOA, OCS, SPROD and Tobin's Q. SOECG is the 511 proportion of shares held by the central government. SOELG is the proportion of shares held by the local 512 government. PRIVATE is the proportion of held by private investors. BLOCK is the non-controlling blockholders' 513 shareholding. PFOR is the proportion of shares held by residents outside mainland China, include: foreign 514 nationals, residents of Hong Kong, Macau, and Taiwan. PBDSH is the proportion of shares held by the board 515 members. LNDTP is the natural logarithm of the total emolument of the top three directors on the board. 516 PEXESH is the percentage shareholding of the top three ranked executives. LNMGP is the total emolument 517 of the top three executives. SIZE is the natural logarithm of total asset. LEV is the ratio of total debt to 518 total assets. IORA is the total asset growth rate. DEVELOPI is geo-economic dummy variable for China's 519 economically developed regions, including Beijing, Tianjin, Shanghai and the coastal regions. Standard errors re 520 reported in brackets and \*\*\*, \*\*and ? represent significance at 1%, 5% and 10% levels, respectively. 521

## 522 11 Tests of Reverse Causality

To check for the robustness of our results reported in Table VI, we have undertaken further investigation using Two-Stage Least Squares (2SLS) which allows us to control for the effect of endogeneity.

Table VII Panel A reports the 2SLS regression results for equation (4) when the largest shareholder is a SOECG. The coefficient for SOECG is positive and is statistically significant at a 1% level, as with the results reported for OLS regression in Table VI. The coefficient of SID is positive and is statistically significantly related to Tobin's Q, thus providing support for the view that the government cherry-picks firms in industries that tend to perform well.

Table VII To check the robustness of the 2SLS regression, we have undertaken further analysis as follows. First, we checked whether the instruments are not correlated with both ownership and Tobin's Q. Second, we tested the instruments' validity by checking whether they are orthogonal to the error term of the respective equation. The test for over-identifying restrictions is implemented where the equation has two or more instruments (Sargan, 1964). According to Panels A and B of Table VII, Hansen's J statistics for equation (5) is 0.095 and is statistically insignificant, thus indicating that the instruments of the system are orthogonal to the error term and are all valid. Third, we checked whether the instruments used are "weak," as this problem has the potential to cause severely biased results (Stock & Yogo, 2004). According to the results reported in Table VII, the F-statistic exceeds the general criterion of 10 (Stock & Watson, 2007), and we, therefore, conclude that the instruments used in equations (??) and (5) are not weak.

Table VII Panel C reports the 2SLS regression results for equation (6) when the largest shareholder is 540 PRIVATE. The coefficient of PRIVATE is positive and is statistically significant at a 1% level. The coefficient 541 of STATUS is statistically insignificant, thus indicating that the participation of private investors investing in 542 highperforming firms in local areas is not an important determinant of firm performance. The evidence regarding 543 the concentration of ownership in private firms when market barriers exist is not convincing. The results of 544 instrument validity tests reported in Panel C of Table VII suggest that the instruments used in equations (??) 545 and (??) are not weak. Tobin's Q is the performance measure market value divided by total assets. SOECG 546 is the proportion of shares held by the central government, SOELG is the proportion of shares held by the 547 local government, and PRIVATE is the proportion of shares held by private investors. In estimating the 2SLS 548 system, Tobin's Q and SOECG, Tobin's Q and SOELG, and Tobin's Q and PRIVATE are treated as endogenous 549 variables for simultaneous equations. LMGP refers to the log of remuneration of top-tier executives. SID is 550 the strategic industry dummy. RESUDS is a fraction of total residual state shares, excluding the dominant 551 shareholder's proportion in listed SOEs. STATUS refers to the market status dummy that captures whether 552 553 there is a strong trade barrier for private firms in China's various regions. RESUDA is the proportion of shares 554 owned by individual small investors. OPENNESS is the regional macro-economic indicator that labels the most 555 export-oriented regions in China (ranked by each region's proportion of the total value of exports and imports to provincial GDP over the 8 sampling years). SIZE is the natural logarithm of the book value of total assets. 556 LEV is the ratio of total debt to total assets. IORA is the total growth rate and is used to control for investment 557 opportunities. DEVELOPI is a geo-economic dummy variable for China's more economically developed regions. 558 ??tandard 559

#### <sup>560</sup> 12 a) Robustness Check

To further check the robustness of the results reported in Tables VI and VII, we have undertaken a difference 561 and difference-in-difference regression. 19 The results of BLOCK, PFOR, and LEV are positive and statistically 562 significant at a 1% level, thus suggesting that BLOCK, PFOR, and LEV are important mechanisms for monitoring 563 managerial decisions. Furthermore, the results of IORA suggest that an increase in total assets is seen as a positive 564 signal for growth and encourages a positive outlook among investors. Thus the firm is positively evaluated as 565 566 measured by Tobin's Q. However, the coefficient of SIZE is negative and is statistically significant at a 1% level, The results are reported in Table VIII. The difference measures the change in the independent variable that 567 contributes to the change in the dependent variable, that is, ?Yit = ?Xit + ?it, where ?Yit = Yit - Yit-1 and 568 ?Xit = Xit - Xit - 1. On the other hand, difference-in-difference measures 2?Yit = 2?Xit + ?it, where 2?Yit = (Yit)569 -Yit-1) -(Yit-1 -Yit-2) = Yit -2Yit-1 +Yit-2 and 2?Xit = (Xit -Xit-1) -(Xit-1 -Xit-2) = Xit -2Xit-1 +Xit-2. 570

The results reported in columns 2 and 3 in Table VIII show that the presence of the central government as the largest shareholder contributes positively to Tobin's Q. The difference and difference-indifference regression results also show that the coefficient of SOECG is positive and is statistically significant at a 1% level, thus suggesting that the central government as the largest shareholder provides a measure of vigilance over managerial decisions. The results reported in Table IV show that the performance of SOECGs is positive but not better than that of SOELGs and PRIVATEs. This suggests that the positive performance of SOECGs is the result of the central government's cherry-picking of industries for investment rather than close monitoring.

The results reported in columns 4 and 5 in Table VIII show that the participation of local government as the largest shareholder (SOELG) does not contribute to firm performance, nor does the private investor (PRIVATE) as the largest shareholder (refer to columns 6 and 7 in Table VIII). These results possibly reflect misappropriation by local government and private investors and suggest that tunneling activities may be involved. thus suggesting that firm size is not at an optimal level. This result is not surprising, since industries in China are new and still in the development stage. Consequently, firm size may have been developed only to suboptimal levels as a temporary response to market demand. VII.

#### <sup>505</sup> 13 Conclusions and Policy Implications

The results reported in this study show that different types of owners behave differently to promote their 586 firms' operating efficiency. The "helping hand" from the government tends to benefit both the central SOEs 587 through preferential incentives, such as loans and subsidies, large government orders, and the protection of local 588 589 industry. These resources tend to be an important factor contributing to SOECGs' performance. In contrast, 590 the performance of PRIVATEs may be affected as they do not receive similar treatment from the government. Our findings are consistent with those of prior researchers who have reported that policy discrimination may 591 have resulted in serious capital starvation in private firms (Leng, 2009). Our results also show that SOECGs 592 have slightly higher operating costs compared to the SOELGs and PRIVATEs, thus suggesting that SOECGs are 593 still required to meet the government's social/political objectives even after the SASAC reforms. However, our 594 findings contrast with those of prior studies that reported that state-owned companies are superior to private 595

ones because of their political connections and better corporate governance (Xu and Wang, 1999;Chen et al., 2009).

Our findings support the argument made by Stiglitz (1999) that without the helping hand and protection of 598 government, it will be difficult for SOECGs to maintain sustainable performance in the long run. Finally, our 599 results show that the three ownership types (central government, local government, and private investors) tend to 600 determine their incentives by modifying their practice in accordance with a profitmaximizing strategy. Under the 601 strict supervision of the central government, SOECGs show strong, positive alignment with minority shareholders 602 when the largest investors increase their holdings. In contrast, without proper monitoring and with weak legal 603 enforcement at local levels, both SOELGs and PRIVATEs tend to abuse minority shareholders' interests when 604 the dominant shareholders' holdings are below a certain level. 605

Our results are timely for policymakers and can assist in better aligning the effects of ownership on firms' performance and can also provide guidelines for China's future enterprise reforms. In 2013, China's new government released its social and economic reform agenda for the next 10 years, highlighting major steps to further reform SOEs and plans to adopt such measures as "pushing further ownership diversification" as a "high priority." 20 The benefit of privatization can be realized by clearly defining property rights (Martin & Parker, 1997).

612 In this regard, our results suggest that partial privatization has not led to higher performance and efficiency 613 gains, especially when SOEs still have monopolistic powers. Shleifer and Vishny (1994) argued that efficiency 614 gains from privatization can only be expected if control rights are passed to private investors. 21 Prior researchers who have studied the postprivatization performance of former SOEs have reported positive results for the OECD 615 countries (Bortolotti & Faccio, 2006). However, the empirical evidence from the developing world is more 616 equivocal and in some cases negative, thus indicating that privatization may not always work when addressing the 617 operational inefficiencies of former SOEs (Leng, 2009). In this regard, Merritt and Michael (2000) reported that 618 privatized firms in Russia have suffered from the pervasive interference of politicians, and enterprises are unable 619 to freely implement their profit-maximizing strategies. Similarly, the oligarchs, who acquired the former large 620 SOEs after privatization in Russia, colluded with politicians to obtain financing or set up excessive administrative 621 barriers against potential competitors to ensure their monopoly status (Galina & Robert, 2003). Consequently, 622 market failures tend to distort incentives Leng (2009) argued that the rapid expansion of SOEs is likely to cause 623 a "spill-over" problem in other parts of the economy since they consume large quantities of social and financial 624 resources and use them inefficiently. Chen et al. (??008) also reported that the efficiency gains of China's 625 former SOEs after privatization only appear when control rights are passed to a private entity. Consequently, 626 our results provide support for the view that further ownership reform of large SOEs in China should be followed 627 by increasing market competition, which could be beneficial for improving SOE performance. In this regard, 628 Stiglitz (1999) argued that the effects of privatization in transition economies largely depend on the existence of 629 a free competitive market. 20 "SOE reforms to be launched after Plenum." China Daily, November 11, 2013. 21 630 Control privatization refers to the situation where government relinquishes its control rights over state enterprises 631 or reduces its holdings as a non-controlling shareholder after privatization. Revenue privatization refers to the 632 situation where the government retains a controlling stake after privatization. 633

for non-politically linked businesses and reduce the benefits provided by private ownership even after complete privatization (Leng, 2009).

The findings of studies undertaken in China and Russia suggest that in the absence of a free competitive market, "spill-over" problems may remain regardless of whether privatization is partial or complete. Finally, because of the lack of good corporate governance and legal protection for minority shareholders, the largest shareholders in both local SOEs and private firms have the opportunity to expropriate these shareholders when

Dependent		ROA			CPOA			OCS			578.00			Tabia's Q	
_	4.264***	4.263***	-8.67**	4.101***	-0.099****	-0.023	4.754**	4.712**	1.982	-18.22***	-0.667***	-18.972***	14.854***	14.522***	10 101000
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		9.0227			8.822***		1.1.1	-0.536			1.725***			-8.143**	
50EL0		[0.006]			(0.004)			(0.10.5)			(0.283)			(8.865)	
-			0.025****			0.004			1.042**			-8.528**			0.543***
PRIVACE			(8,007)			[0.004]			(9.354)			(9.216)			(8.947)
-	6.0287	8.833**	4.852***	8.024**	6,632***	0.032****	-0.678	-0.656	-1.653	-1.334****	-1.325**	-2.257+++	1.710****	1.508***	1.685***
BUCCA	(0.015)	[0.016]	(8.915)	lorueal.	laroexi	laroesd	[0.823]	10.40-4	(0.7mm)	[8.500]	[0.545]	(0.479)	[0,120]	(8.162)	(8.152)
Parties.		0.008	0.023		-0.0567	-0.007		-0.339	-0.408		-0.348	-0.386		0.885***	1.855****
PPUM		[0.015]	60.0133		ferenal	lorone0		to and	to word		(0.493)	10.4971		(R.157)	(8.153)
HENCH	-6.007	-0.006		4,827***	-0.025***		-0.211	-0.345		0.372	6.659		-0.025	-4.300	
r muser	lo cost	(0.004)		foreed.	feroezi.		(0.445)	10.467]		[0.294]	(0.284)		lo coul	la until	
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	(0.442)	(6.002)		lorent.	la'onoli		[0.084]	lo or d		(#.852)	(6.451)		[0.046]	[R.816]	
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F State	86.67***		76.82***	38.75***	40.80****	33.99***	3.55***	ASTON	Allinas	40.45****	49.11***	45,99***	236.05***	228.91***	228.49***
(P Value)	(0.666)	(8.000)	(5,000)	(0.000)	(9.000)	(0.000)	(96,0490)	(5.000)	(0.0005	(0.000)	(8,896)	(0.000)	(9.000)	(8.898)	(8,000)
Overall R <sup>1</sup>	0.151	0.158	0.544	0.068	8.071	0.064	0.089	0.0%6	0.070	0.090	0.094	0.089	0.262	8.259	0.258
(Within R <sup>1</sup> )	(0.147)	(8.141)	(8.137)	(0.075)	(0.078)	(0.065)	(0.072)	(0.071)	(5.067)	(0.083)	(00.054)	(0.080)	(0.136)	(0.311)	(8.310)
Ob															

Figure 1:



Figure 2:



Figure 3: Figure 1 :



Figure 4:

#### I

ownership declined significantly in 2012 compared to 2006, it remained high in strategically important sectors. Table II reports state ownership in SOEs belonging strategic sectors, such as  $\mathrm{to}$ communications, construction, energy, heavy machinery, publications, public utilitiend transportation. The results in Table

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#### Figure 5: Table I

their holdings reach a certain level. Accordingly, it is recommended that Chinese policymakers enact regulations to improve the matrix is a fiber of the level of the level  $12^{3} + 5^{6} = 7^{8}$ 

to improve the monitoring of the largest shareholders, especially at the local level.  $1 \ 2 \ 3 \ 4$ 

<sup>&</sup>lt;sup>1</sup>Naughty, Naughty: China's Corruption Crackdown Skims the Richest. (2013, 15 October). Forbes. Retrieved from http://www.forbes.com/ sites/hengshao/2013/10/15/naughty-naughty-chinas-corruptioncrackdown-skims-the-richest/2 Based on the data adopted in this study, 325 private listed firms had conducted their IPOs in China's growth enterprise market (ChiNext) by the end of 2012.

<sup>&</sup>lt;sup>2</sup>Strategic industries include energy, heavy machinery, metal, telecommunications, and transportation.4 Large sums of money (4 trillion yuan) were pumped into large SOEs in the form of financial subsi-dies or direct loans from state banks during the period 2009 -2011(Liu et al., 2012).

<sup>&</sup>lt;sup>3</sup>Due to the presence of outliers, we have winsorized ROA and ROS at the 2.5% level in both tails of the distribution and Tobin's Q at the 2.5% level only at the right tail of the distribution. After receiving anonymous reviewer feedback, we also tried to winsorize at 1%. However, winsorizing at 1% increased the number of outliers so we reverted to winsorizing at 2.5%.6 According to the studies byTian (2003),Song et al. (2004) andChen et al. (2009), the pyramid ownership structure of Chinese listed firms is not significant. The Relationship between Ownership Identity, Ownership Concentration, and Firm Performance: Evidence from China

<sup>&</sup>lt;sup>4</sup>© 2022 Global Journals

<sup>&</sup>lt;sup>5</sup>Using the Chinese Securities Regulatory Commission (CSRC) industry classification, this study reclassifies all listed firms into 19 industries (Web site: http://www.csrc.gov.cn).8 48.29% is the overall (pooled) mean value of the largest shareholders' holdings in the listed SOEs distributed among the important, strategic industries in the sample.

<sup>&</sup>lt;sup>6</sup>Paired correlation (not reported) between different financial performance measures (ROA, CFOA, SPROD, OCS and Tobin's Q) is very low, ranging from 0.002 to 0.135. This result indicates that performance measures used in this study are not correlated and each performance indicator considers a different characteristic of the firm's activities.

<sup>&</sup>lt;sup>7</sup>The Relationship between Ownership Identity, Ownership Concentration, and Firm Performance: Evidence from China

<sup>&</sup>lt;sup>8</sup>We thank the anonymous reviewer for suggesting that we use the difference and difference-in-difference method to check for robustness in our OLS and 2SLS regression.

	SOECG (Obs. $2135$ )			SOELG	(Obs. 4911)	PRIVA	TE (Obs
		Mean Media	an Mean		Median Me	ean Media	an Mean
Panel A: Ow	vnership Concentration by Top						
Shareholder							
Percent by l	argest shareholder	$41.77 \ 42.40$		38.71	37.28	33.38	30.16
Percent by s	second largest shareholder	9.02	5.28	7.48	4.33	10.21	8.84
Percent by t	hird largest shareholder	3.10	1.87	2.96	1.85	4.47	3.50
Combined or	wnership by top 3 shareholders	$53.89 \ 53.79$		49.14	49.24	48.06	48.14
Percent by r	non-controlling blockholders	9.19	7.00	9.06	6.78	13.54	12.13
U	0	SOECG (O	bs. 2135)	SOELG	(Obs. 4911)	PRIVA	TE (Obs
		Mean Media	an Mean		Median Me	ean	Mean 1
			Panel B	: Percent	by Largest Sh	nareholde	r for
				Cross-se	ectional Years		
Year	No.						
	of						
	Com-						
	pa-						
	nies						
2005	1246	$46.82 \ 50.07$		43.60	42.50	33.46	29.56
2006	1402	$40.63 \ 41.03$		38.18	36.77	30.94	28.93
2007	1489	$40.36 \ 41.19$		37.58	36.30	32.13	29.69
2008	1502	41.26 $42.23$		37.86	37.25	33.09	30.58
2009	1503	$41.46 \ 42.43$		38.00	36.64	32.98	30.00
2010	1708	41.38 42.22		38.27	37.42	33.75	31.16
2011	2045	41.43 42.14		37.99	36.20	34.17	31.61
2012	2534	$41.36 \ 42.14$		38.50	36.27	34.42	32.07

[Note: TableIPanel A presents the summary statistics of ownership structure by largest shareholders' actual economic identity. SOECG refers to the mean/median percentage of equity ownership owned by the public companies where the largest shareholder is affiliated to the central government. SOELG refers to the mean/median percentage of equity ownership owned by the public companies where the largest shareholder is affiliated to a local government. PRIVATE refers to the mean/median percentage of equity ownership owned by the public firms that are controlled by the natural person (private investor). ALL the companies denoted as SOECG SOELG and PRIVATE are listed on China's main boards through the Shanghai and Shenzhen stock exchange markets. PCHINEXT represents the mean/median percentage of equity ownership owned by the public firms where the identity of the largest shareholder cannot be specified. The non-controlling blockholders are referred to as a combination of shares held by second largest shareholder to the tenth largest stockholder (within the top 10 shareholders' tier) in each firm. TableIPanel B reports the summary statistics for the largest shareholder at each ownership category for each year from 2005 to 2012.]

Figure 6: Table 1 :

1

#### $\mathbf{2}$

The Relationship between Ownership Identity, Ownership Concentration, and Firm Performance: Evidence from China

		from CI	iina				
Industry	No.	No.	SOECG	SOELG	PRIVATI	EPCHINE	XALL
	of Ob-	of					
	serva-	Com-					
	tions	pa-					
		nies					
Agribusiness	283	57	43.21	35.46	37.96	27.22	36.74
Food & Beverage	558	408	38.90	38.62	34.99	40.96	37.15
Textile & Clothing	522	99	31.34	34.96	35.09	00.00	34.79
Petrochemical & Chemical	1457	295	39.61	38.21	33.15	33.78	35.97
Metallurgy	1153	229	42.48	46.62	36.13	34.74	41.21
Light Industry	452	100	31.81	32.82	35.75	44.18	35.00
Pharmaceuticals	858	161	46.12	36.70	31.27	33.13	34.31
Real Estate	641	131	37.87	41.26	38.15	00.00	39.53
Transportation	509	89	46.32	43.36	30.93	28.30	42.67
Public Utility	582	99	34.03	44.45	33.96	58.51	40.03
Hospitality & Tourism	208	34	34.73	37.71	27.55	34.18	34.88
Energy	209	66	60.24	48.66	25.03	31.09	48.24
Construction	297	63	51.54	39.59	33.28	41.48	40.26
Light Industry Pharmaceuticals Real Estate Transportation Public Utility Hospitality & Tourism Energy Construction	<ul> <li>452</li> <li>858</li> <li>641</li> <li>509</li> <li>582</li> <li>208</li> <li>209</li> <li>297</li> </ul>	100 161 131 89 99 34 66 63	31.81 46.12 37.87 46.32 34.03 34.73 60.24 51.54	$\begin{array}{c} 32.82\\ 36.70\\ 41.26\\ 43.36\\ 44.45\\ 37.71\\ 48.66\\ 39.59 \end{array}$	35.75 31.27 38.15 30.93 33.96 27.55 25.03 33.28	44.18 33.13 00.00 28.30 58.51 34.18 31.09 41.48	$\begin{array}{c} 35.00\\ 34.31\\ 39.53\\ 42.67\\ 40.03\\ 34.88\\ 48.24\\ 40.26\end{array}$

Figure 7: Table 2 :

#### 3

The Relationship between Ownership Identity, Ownership Concentration, and Firm Performance: Evidence from China

Figure 8: Table 3 :

 $\mathbf{4}$ 

$\mathbf{S}$	SOECG		SOELG		PRIVATI	Ŧ	PCHINE	ХT	ALL	
Ν	Aean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
			Panel A: Overa	all Perfor	mance					
ROA 5	.60%	5.29%	5.78%	5.39%	6.79%	6.60%	8.61%	8.49%	6.33%	5.90%
CFOA 4	.88%	4.61%	5.43%	5.31%	3.88%	3.96%	1.94%	2.74%	4.50%	4.51%
SPROD2	2.905	1.242	4.386	1.214	2.357	1.085	1.931	1.472	3.171	1.176
OCS 0	0.795	0.825	0.758	0.798	0.735	0.770	0.592	0.627	0.745	0.781
Tobin's2	2.117	1.636	1.996	1.996	2.641	2.008	2.812	2.404	2.328	1.786
Q										
F	Panel B:									

Figure 9: Table 4 :

Figure 10: Test of Differences in Mean and Median of Different Performance Measures SOECG vs SOELG SOECG vs PRIVATE SOECG vs PCHINEXT SOELG vs PRIVATE SOELG vs PCHINEXT Mean a Median b Mean a Median b

2005	1246	4.94%	1.313	3.96%	1.272	-0.64%	1.456	2.51%	1.345
2006	1402	5.88%	1.784	5.29%	1.621	4.01%	1.925	4.94%	1.760
2007	1489	7.54%	3.455	7.50%	3.193	8.95%	3.988	8.06%	3.548
2008	1502	5.13%	1.495	4.98%	1.480	6.10%	1.913	5.46%	1.658
2009	1503	4.81%	2.551	5.10%	2.548	7.42%	3.620	$13.01\% 5.136\ 6.16\%$	3.039
2010	1708	6.42%	2.797	7.17%	2.487	8.82%	3.736	$10.01\% 4.235\ 7.98\%$	3.205
2011	2045	5.56%	1.803	6.28%	1.723	8.36%	2.224	$8.93\% \ 2.475 \ 7.42\%$	2.047
2012	2534	4.66%	1.675	5.80%	1.633	7.04%	2.113	$7.36\% \ 2.271 \ 6.43\%$	1.943

Figure 11: Accounting Indicator and Market Measure of Performance by Year Year Observations SOECG SOELG PRIVATE PCHINEXT ALL Mean a Tobin's Q Mean a Tobin's Q Mean a Tobin's Q Mean a Tobin's Q

 $\mathbf{5}$ 

	Profitability		Operating Efficiency	Productivity	Market Perfor-
Dependent	ROA	CFOA	OCS	SPROD	Tobin's Q
Constant	-0.186***	-0.019 [0.014]	1.34 [1.19]	-13.446***	14.428***
	[0.22]			[0.737]	[0.252]
DSOECG	-0.007 ?	$0.005^{**}$ [0.002]	-0.204	-0.167 [0.121]	0.117***
	[0.004]		[0.196]		[0.039]
DSOELG	-0.002 [0.003]	$0.011^{***} [0.002]$	-0.158 [0.152]	0.452*** [0.094] -(	).178*** [-0.030]
DPRIVATE	0.006 ?	$0.005^{**}$ [0.002]	0.204 [0.196]	0.167 [0.121]	0.190***
	[0.004]		. ,		[0.029]
SIZE	0.012***	$0.004^{***}$ [0.001]	-0.007	0.656*** [0.035] -(	0.614*** [0.011]
	[0.002]		[0.057]		
LEV	-0.103***	-0.007*** [0.002]	0.472***	0.427*** [0.085] 0	.946*** [0.027]
	[0.003]		[0.138]		
IORA	0.020***	$-0.005 \ [0.001]$	$0.014 \ [0.109]$	$-0.082 \ [0.067]$	$0.271^{***}$
	[0.002]				[0.021]
DEVELOPI	0.005** [0.002]	-0.003 ? [0.002] -0	.414*** [0.130]	0.966*** [0.080] 0.	$081^{***} [0.026]$
Industry	no	no	no	no	no
dummies					
Firm-fixed	yes	yes	yes	yes	yes
effects					
Year dum-	yes	yes	yes	yes	yes
mies					
F-statistics	171.41***	31.99***	3.12***	52.41***	609.66***
(P-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R2	0.144	0.031	0.030	0.059	0.374
(Adj. R 2 )	(0.143)	(0.023)	(0.021)	(0.048)	(0.374)
Durbin-	2.016	1.428	1.786	0.457	1.085
Watson					
			13273		

Figure 12: Table 5 :

Figure 13: Table 7 :

The Relationship	between Ownership Id	lentity, Owne	ership Conce from China	entration, and F	`irm Performance: E	vidence
Hansen's			Ullilla			
chi 2 (P-value)						
Stock & Yoko (20	04) Weak Instrument	13.16 (0.000)	423.58 (0.000)	36.27 (0.000	32.40 (0.000)	28.45 (0.000)
Test 310.75 (0.000 First-stage F-Stat	)) istics	· · · ·	<b>、</b> ,		<b>`</b> ,	
Hansen (1978) Sp	ecification Test	59.07	145.56	145.57	4.27	4.27
	58.07 (0.582)	(0.0022)	(0.000)	(0.000)	(1.000)	(1.000
	Panel A		Panel B		Panel C	
Variables	SOECG	Tobin's Q	SOELG	Tobin's Q	PRIVATE	Tobin' Q
Constant	- 0.682*** [0.017]	15.878***	$0.349 \\ [0.036]$	14.663***	-0.303**** [0.019]	12.136**
	[0.017]	[0 /89]		[0 422]		
Tobin's Q	0.005***	[0.105]	0.007 [0.001]	[0.122]	0.004 [0.011]	
SOECG	[0.001]	2.266***				
COELC		[0.335]		1 914 [0 174]		
PRIVATE				1.214 [0.174]		2 801*
						[0.348]
BLOCK		2.273***		2.348***		$1.695^{*}$
		[0.178]		[0.187]		[0.151]
PFOR				$0.872^{***}$		$1.310^{*}$
SID		$0.673^{**}$ [0.279]		[0.184] $0.064 \ [0.268]$		[0.192]
STATUS		L ]				-0.198
						[0.181]
LMGP	-		$0.032^{***}$		- 0 920***	
	[0.004]		[0.003]		[0.013]	
RESUDS	$0.195^{***}$ [0.010]		$0.401^{***}$ [0.010]		[]	
RESUDA					-	
					0.072***	
OPENNESS					[0.004] $0.006^{**}$	
					[0.002]	
SIZE	$0.031^{***}$ [0.001]	-0.681*** [0.022]	-0.004** [0.002]	-0.634*** [0.0	$19] \ 0.015^{**} \ [0.001]$	- 0.525* [0.020]
LEV	-	1.021***	0.006	1.025*** [0.09	02] -0.008*** [0.002]	[0.020] $1.042^{*}$
	[0.001]	[0.091]	[0.012]			[0.093]
IORA	-	0.2299***	0.002	0.221*** [0.02	28] -0.014*** [0.003]	0.186*
	$0.009^{***}$	[0.028]	[0.002]	L	_	[0.028]
DEVELODI	[0.001]	0 100***	0.010 2	0 010***		0.011
DEVELUEI	0.010	0.108	-0.019 (	0.010		-0.011

	Difference for SOECG	Difference-in- Difference for SOECG	Difference for SOELG	Difference-in- Difference for SOELG	Difference for PRIVATE	Difference- in- Difference for
Constant t	$\begin{bmatrix} 0.012 \\ [0.019] \end{bmatrix}$	$0.051 \ [0.035]$	0.012 [0.019]	-0.044 [0.036]	0.014 [0.019]	PRIVATE 0.046 [0.035]
SOECG	$[0.094^{***}]{0.091}$	$0.964^{***}$ [0.098]				
SOELG			0.107 [0.072]	0.075 [0.077]		
PRIVAT	ΓE		-		0.075 [0.082]	

Figure 15: Table 8 :

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