

# **SUBSTITUTIONAL ENVIRONMENT AND EXPROPRIATION OF MINORITY SHAREHOLDERS IN CHINA**

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## **ABSTRACT**

This study examines how the substitutional environment impacts the incentive of controlling shareholders to expropriate minority shareholders and how the coercive pressure from increased government regulation interacts with the substitutional environment to alter the practices of financial tunneling by controlling shareholders. With a sample of Chinese public firms, we find that substitutional environments with more developed legal and market institutions alleviate minority shareholder expropriation. When a regulatory agency illegalizes the use of intercorporate loans, controlling shareholders turn to transfer pricing for expropriation and transfer pricing is more severe in substitutional environments with highly developed legal and market institutions. Our findings highlight both the strong incentive of controlling shareholders to expropriate at differing levels of substitutional environment, and the challenges confronting regulatory agency in emerging economies where external mechanisms for firm control is far from being developed.

## **INTRODUCTION**

Agency theory, focusing on conflicting interests of principals and agents, is derived from and more applied to developed economies (Jensen & Meckling, 1976; Young et al, 2008). Agency problem in transition economies has manifested itself more in principal-principal conflict, which refers to minority shareholders expropriating or tunneling (Dharwadkar, George & Brandes, 2000; Johnson, La Porta, Lopez-de-Silanes, & Shleifer, 2000). Controlling shareholders realize the control right using pyramidal ownership structure or cross-holdings (Claessens, Djankov & Lang, 2000; Lins, 2003). Faced with low cash flow rights, controlling shareholders have the incentive and ability to divert resources from controlled companies at the expense of other large shareholders (Lemmon & Lins, 2003). As shown by Shleifer and Vishny (1997), controlling shareholders can employ different means to expropriate such as “outright theft, dilution of outside investors through share

issue to insiders, excessive salaries, asset sales to themselves or other corporations they control at favorable prices, or transfer pricing with entities they control” (c.f. Lemmon & Lins, 2003).

The expropriation problem is attributed to the lack of legal institutions and inadequate enforcement of laws, and the underdevelopment of financial markets, such as lack of takeovers (La Porta, Lopez-de-Silanes, Shleifer & Vishny, 1998, 2000). Existing research focuses on the effect of institutional environments in developing economies on the behavior of controlling shareholders (La Porta et al, 1998), and the effect of expropriation on firm valuation (Lemmon & Lins, 2003; Claessens et al., 2002). Overall, the institutional environment is an antecedent (Young et al, 2008). Prior literature on corporate governance treats institutional environment as a given and static, emphasizing the deterministic nature of institutional environment on corporate governance in emerging economies, and measuring it at the national level. Dichotomizing the institutional environment along the spectrum from weak to strong at the national level could lead to ignoring the differing effects on expropriation behavior of controlling shareholders of subinstitutional environments within the territory of one country.

Further, considering that institutional environments are changing due to the introduction of new regulations on corporate governance in transition economies, the corresponding changes of expropriation behavior from controlling shareholders could not be captured when a homogeneous institutional environment is assumed at a national aggregate level. In sum, such treatment of the institutional environment is inadequate to capture the dynamics of corporate governance evolution within one country. Homogeneous institutional environment is far from being a realistic picture of corporate governance in emerging economies.

Many important research questions remain unanswered. Drawing on agency theory and institutional theory, our research attempts to resolve three research questions. (1) Does institutional heterogeneity within one country moderate the relationship between controlling shareholding and expropriation of minority shareholders? (2) Does the increased regulatory pressure mitigate the expropriation problem in a transition economy? (3) How does expropriation of minority shareholders evolve over time within one transition economy?

We choose to test our theory using publicly traded firms in China for three reasons. First, as an emerging economy, China is characterized by unbalanced development of legal and market institutions across its territory. Its coastal areas have the most dynamic economy, and the protection of property rights and investors is highest according to the composite marketization index compiled by Fan, Wang and Zhang (2010), followed by middle and western areas with lower marketization indices, respectively. This feature of heterogeneous institutional environments enables us to find the effect of institutional heterogeneity on expropriation. Previous research has afforded us the preliminary evidence to examine differential effect of subinstitutional environments on firm behavior in China. Wang, Wong, & Xia (2008) find that in areas with less developed legal and market institutions, publicly listed state owned enterprises (SOEs) are more likely to hire small local auditors, which suggests there are incentives for local SOEs to collude. Luo and Tang (2007) find that market environment, characterized by less government intervention and more developed financial markets, mitigates the tunneling behavior of controlling shareholders.

Second, by the end of 2005, China Securities Regulatory Commission, with the coordinated efforts of State Council of China, explicitly declared the use of intercorporate loans by controlling shareholder as illegal. Before 2005, it was prevalent for controlling shareholders to borrow large sum of funds from listed companies they controlled and never pay back. An intercorporate loan was a dominant tunneling strategy before 2005. This exogenous change from regulatory agency in 2005 largely resolves the endogeneity issue arising from each set of specific industry characteristics. The quasi-experimental context allows us to better delineate the effect of regulatory pressure on change of expropriation behavior after the regulation. Extant research on expropriation has limited their timeframe of samples in China to 2005 due to the change in regulatory policy. It is imperative to find whether increased regulatory pressure mitigates the principal-principal conflict or forces controlling shareholders to adopt an alternative expropriation strategy after 2004. This finding will have important policy implications.

Third, investigating expropriation of minority shareholders *over time* can provide us a more realistic and dynamic picture of the problem. Given the large population of developing economies such as China, addressing the expropriation issue can enhance the quality of economic development, benefiting the largest share of the underprivileged population. The significance of studying expropriation problem cannot be overestimated.

Our research contributes to the literature in two respects. First, our research extends institutional theory by showing that the effect of coercive pressure by controlling shareholders on expropriation behavior is dependent on the subinstitutional environment where the focal public firm is headquartered. The extent to which legal and market environment develops impacts the incentive and subsequent expropriation strategy of controlling shareholders. Our results suggest that before year 2005, when intercorporate loans are legal, the more developed the legal and market institutions are in a certain province of China, the less the expropriation of minority shareholders are measured by intercorporate loans. When expropriation by financial tunneling is declared illegal and the law is enforced strictly, the use of intercorporate loans is almost extinct after 2005. However, in provinces where legal and market institutions are more developed, controlling shareholders are more likely to employ transfer pricing to expropriate minority shareholders compared to provinces where legal and market institutions are less developed. We define the differences in development of legal and market institutions across the regional areas as institutional heterogeneity.

Contending that the effect of coercive isomorphic influence derived from regulatory agencies differs across subinstitutional environments, we enrich the neoinstitutional theory. Prior research using institutional theory emphasizes the effect of institutional change on organizational behavior (e.g., Marquis & Huang, 2009). Scholars either assume that the institutional environment is stable and undifferentiated across geographical regions or they ignore the regional differences in institutional environments. With a few exceptions (Tolbert & Zucker, 1983; Jiang et al, 2010), the effect of non-synchronous change of institutions goes unnoticed. We contend that examining the differing impacts of non-synchronous institutional changes within one country would give us a more realistic picture of the dynamics of corporate governance change, such as principal-principal (P-P) conflicts.

Second, our research contributes to agency theory by highlighting that expropriation strategy by controlling shareholders changes over time. Expropriation of minority shareholders is a dominant manifestation of principal-principal conflict in emerging economies. Originating from Anglo-Saxon cultures and applied to developed economies mainly characterized by principal-agent conflict, agency theory can be enriched by examining the principal-principal relations in an institutional environment characterized by weak rule of law and prevalence of expropriation of minority shareholders (c.f. Young et al, 2008). The P-P conflict is well examined in the U.S. context. Hoskisson, Hitt, Johnson, and Grossman (2009) found the differing impacts of heterogeneous institutional investors on firm innovation strategies. Our research also answers the call by Young et al (2008) to examine the P-P conflicts in emerging economies. As pointed out by Fiss (2008), transition economies offer promising areas to study how corporate governance systems and practices change and become persistent. In our study, we find that expropriation of minority shareholders are not only prevalent in China, but also increased regulatory efforts forcing controlling shareholders to adopt expropriation strategies, which are less able to be detected, thereby not eliminating the problem. So our research demonstrates the dilemma that confronts a regulatory agency: by eliminating one form of expropriation of minority shareholders, new forms of expropriation are devised to evade regulatory pressure. In the discussion section, we will propose the remedies to the expropriation problem.

## **THEORY AND HYPOTHESES**

Institutional theory highlights the institutional pressure on organizations. Organizations obtain legitimacy and resources by conforming to three types of isomorphism namely coercive, normative and mimetic (Meyer and Rowan, 1977; DiMaggio and Powell, 1984). Institutions consisting of regulative, normative and cultural-cognitive pillars exert effects on organizations and individuals through three corresponding mechanisms: coercive, normative and mimetic (North, 1990; Scott, 2001). We contend that the regulatory process, through laws and regulations with sanctioning activities, impact the incentives of organizations and individuals and their subsequent behavior. The incentive to conform is contingent on the extent of the law or regulation enforcement. We also argue that institutional environment within one country is not only an antecedent of organizational behavior, but also moderates the relationship of incentive and behavior.

Extant literature investigates the deterministic effects of institutional environment on organizational behavior or the adaptive behavior of organizations under coercive, normative or mimetic pressures (Tober & Zucker, 1983; Haveman, 1993; Kostova & Roth, 2002). The main thread is that institutional environment is an antecedent (Young et al, 2008). Comparative institutional research across countries usually aggregates institutional characteristics at the national level. While characterization of institutional environment at the national level shed much light on the institutional differences across countries, its assumption that institutions within one national territory are changing at the same pace and in the same direction is inadequate in deepening our understanding of the interaction between institutional change and corporate governance within a particular country. First, many developing countries have such a large geographical area that institutional development in the process of globalization is not synchronous. The legal and market institutions are developing in an unbalanced manner. Metropolitan cities in developing countries

are more subject to the influence of multinational corporations based in these cities. Legal and market institutions are more developed in the metropolitan areas. The rule of law may play a more significant role in these areas than in other less-developed regions of the same country.

Second, the notion of a homogeneous institutional environment fails to capture the differences of organizational behavior and individual incentives within the territory of one country. While the expropriation of minority shareholders by controlling shareholders in emerging and transition economies is well documented in finance, management and economics literature (e.g. La Porta, Lopez-de-Silanes & Shleifer, 1997; La Porta, Lopez-de-Silanes, Shleifer & Vishny, 2000; Jiang, Lee, & Yue, 2010), how the subinstitutional environment impacts the incentive-behavior relationship *over time* remains unexplored. Overall, the treatment of institutional environment as a homogeneous system hinders the understanding of evolution of corporate governance in developing countries.

Luo and Tang (2007) and Wang et al (2007) have examined the moderating effect of subinstitutional environments using a sample of firms between 2001 and 2003. Our research differs from theirs in two ways. First, we integrate agency theory and institutional theory to explicate the mechanism of how subinstitutional environment changes the incentives of controlling shareholders to expropriate. Second, with new data from 2003 to 2007, we further investigate how the expropriation behavior under coercive pressure changes in differing subinstitutional environments *over time*.

## **Subinstitutional Environment**

To capture the regional differences across 30 provinces in China, the construct of subinstitutional environment has four theoretical dimensions: the government-market relations, the factor market development, the product market development, and the legal environment (Luo & Tang, 2007; Wang et al, 2007; Fan et al, 2010).

One feature of the China economy is that the intervening hand of government is visible in the economy. Quite a number of firms listed on the stock exchanges are state owned enterprises (SOEs). State ownership results in inefficiency and minority shareholder expropriation (Shleifer & Vishny, 1997; Luo & Tang, 2007). Moreover, when central or local government has vested interests in firms they control, issues concerning minority shareholder expropriation would be hard to resolve. The jurisdictional convention in China decides that local courts where the focal firms are registered and headquartered have the jurisdiction authority to resolve the suits filed by minority shareholders against controlling shareholders (refer to the case in the Appendix). Therefore, government-market relations not only affect minority shareholder expropriation, but also the enforcement of contracts. When a decentralized government refrains from getting much involved in the economy, its courts are more likely to be impartial in judging economic cases. A decentralized government is conducive to minority shareholders forming a coalition to protect their legal rights.

Since the factor market overall is not competitive in China, the related party transactions have potential benefits of lowering production costs if controlling shareholders intend to do so. When the factor market is not competitive, buying instead of making reduces the transaction costs (Williamson, 1979). Additionally, empirical evidence shows that when public firms have ST status, controlling shareholders in a pyramidal ownership structure prop up resources into the controlled firms (Riyanto & Toolsema, 2004). Thus, the extent to which the factor market develops has an effect on expropriation behavior.

The related party transaction also includes related party sales. The law and contract enforcement is the fourth essential component of the subinstitutional environment. The effect of laws and the legal environment on financial tunneling is well documented by La Porta et al. (2003) and Djankov et al. (2008). The prominent role of the legal environment makes it a primary component of the subinstitutional environment.

Agency problems arise when goals of agents (managers) are incongruent with those of principals (investors). Without effective monitoring, managers would behave in an opportunistic way to maximize their own benefits (Jensen and Meckling, 1976). The principal-agent conflict is more applied to the developed economies with a good rule of law than to developing economies with inadequate law enforcement or institutional void (Peng, 2002). As suggested by Eisenhardt (1989), agency theory can be enriched when complemented by other theories and examined in appropriate contexts. The characteristics of the institutional environment of emerging economies can make such a contribution.

The agency problem is more manifested in principal-principal conflict in emerging economies. One of the major conflicts is the minority shareholder expropriation or financial tunneling (Dharwadkar et al., 2000; Johnson, et al., 2000). There are a variety of expropriation strategies that controlling shareholders can use such as direct theft, transfer pricing of resources to related parties, intercorporate loans borrowed by controlling shareholders.

The ownership structure in Asian economies provides controlling shareholders the incentive and ability to expropriate minority shareholders (Lemmon & Lins, 2010). One distinct feature of the publicly listed firms is concentrated ownership (Ye, Lu & Zhang, 2007). The benefits of controlling a public firm coupled with concentrated ownership outweigh the costs associated with share price discounts, monitoring, bonding and reputation building (Claessens & Fan, 2002). In addition, the control based model of corporate governance makes expropriation a ubiquitous problem in China (Liu, 2006). Hence two baseline hypotheses are developed.

**H1:** Controlling shareholding is positively associated with expropriation of minority shareholders.

**H1A:** Controlling shareholding is positively associated with intercorporate loans.

**H1B:** Controlling shareholding is positively associated with transfer pricing.

The economic development in China is unbalanced, with coastal areas including Shanghai, Shenzhen, and Beijing being the most developed with middle and western areas of China lagging

behind (Fan et al, 2010). The flow of capital investment and diffusion of technology are directed from the east to the west. Therefore the subinstitutional environment of each province may differ, with the east having more developed legal and market institutions, and the west lagging behind and catching up incrementally. Three factors in the coastal areas contribute to the protection of minority shareholders. The widespread use of Internet, the increasingly higher percentage of college graduates and the relatively developed legal and market institutions all increase the incentives of minority shareholders to protect their interest. The potential lawsuits engendered by minority shareholders in the coastal areas decrease the incentives of controlling shareholders to expropriate minority shareholders. The law enforcement institutions are better developed in these areas, making appropriating minority shareholders less attractive. The high technology development, particularly the widespread use of the Internet, mitigates the information asymmetry between majority shareholders and minority shareholder. The monitoring cost of minority shareholders in the coastal areas is substantially decreased due to co-evolution of technology and institutions, easier access information system and increased regulatory efforts of governing body (Eisenhardt, 1989, Nelson, 2008).

Since expropriation strategies differ in their own characteristics, the use of one particular form of expropriation may also vary with the characteristics of subinstitutional environment. Intercorporate loans are almost equivalent to direct theft. Controlling shareholders borrow huge amount of funds from the controlled public firm. They either use it with low or no interest or never intend to pay off. Transfer pricing, in contrast to conspicuous intercorporate loans, is a very covert approach to diverting resources from controlled public firms. It is technically difficult to tell transactions that are normal business conduct from expropriation transactions. In the absence of strict enforcement of law, the incentive to expropriate, however, still remain strong. Given the increased monitoring of minority shareholders and high legal costs involved with borrowing directly from public firms, controlling shareholders tend to use less conspicuous transfer pricing to expropriate. Therefore, we hypothesize that:

**H2:** The strength of the positive association between controlling shareholding and expropriation of minority shareholders is contingent on the subinstitutional environments where the focal firm is headquartered.

**H2A:** The association of controlling shareholding and intercorporate loans is weaker for firms headquartered in subinstitutional environments characterized by strong legal institutions and market institutions than those firms headquartered in subinstitutional environments characterized by weak legal institutions and market institutions.

**H2B:** The association of controlling shareholding and transfer pricing is stronger for firms headquartered in subinstitutional environments characterized by strong legal institutions and market institutions than those firms headquartered in subinstitutional environments characterized by weak legal institutions and market institutions.

When newly issued regulations are devised to reduce transaction cost and are strictly enforced, the overall incentive to expropriate will decrease, and social welfare benefits. If an illegitimate expropriation practice is legally prohibited, continuing such expropriation practice can substantially increase punitive costs incurred to controlling shareholders. Controlling shareholders

themselves are less likely to risk themselves. Managers representing controlling shareholders would be held responsible for such expropriation actions.

However, without the overhaul of the whole institutional environment, controlling shareholders may turn to other strategies of expropriation which are still illegitimate but legal. To evade increased regulation, newly invented expropriation practice will be less overt and difficult to be defined as illegal, technically speaking.

On November 1, 2005, the State Council of China on behalf of CSRC issued a directive titled On Improving the Quality of Listed Companies. The directive explicitly mandates that top management of controlling shareholders be punished if controlling shareholder fails to pay back the loans borrowed from the controlled public firm by the end of 2006 (Jiang et al, 2010). This mandate illegalizes the illegitimate practice of intercorporate loans. The directive does not specify that transfer pricing is illegal. As a result, it is hypothesized that

**H3:** After the explicit prohibition of intercorporate loans by China Securities Regulatory in 2005, the propensity to expropriate minority shareholders shifts to more covert expropriation strategy.

**H3A:** The use of intercorporate loans to expropriate minority shareholders tends to decrease after 2005.

**H3B:** The use of transfer pricing to expropriate minority shareholders tends to increase after 2005.

## METHODOLOGY

The research population comprises all the public firms listed on Shanghai Stock Exchange and Shenzhen Stock Exchanges in China from 2003 and 2007. We choose the time frame from 2003 to 2007, as 2005 is a cutoff year marking the dramatic change in regulation from CSRC. The quasi-experiment design to a large extent eliminates the endogeneity issue associated with firm and industry characteristics. It allows us to find the effect of increased regulative pressure on change of expropriation strategy.

Three major data sources are Chinese Stock Market and Accounting Research database (CSMAR) and CCER China Stock Database provided by SinoFin Information Services. CSMAR provides comprehensive corporate governance data including related party transactions and intercorporate loans and financial variables such as costs of goods sold and total assets. We retrieved the following information from CCER China Stock Database: CEO duality, independent directors, state ownership, firms' headquarter city, regulated industry and the proportion of shareholding by the largest to the fifth largest shareholder. Previous studies in corporate governance (e.g. Sun & Tong, 2003; Shen & Lin, 2009; Jiang et al, 2010) used these data sources. Data on subinstitutional environment are obtained from Fan et al, (2010). Their report of the marketization process at the provincial level in China is by now the most comprehensive measure of subinstitutional environment.

Our sample consists of 6359 firms in 13 industries ranging from manufacturing, agriculture, mining, information technology, transportation, media and entertainment, utilities, construction, trade, finance, real estate, and travel. These industries are classified according to the 1-digit CSRC industry code.

### **Dependent Variables**

Intercorporate loan (O) represents one of the expropriation strategies employed by controlling shareholders (Shleifer & Vishny, 1997). It is a prevalent illegitimate practice by the controlling shareholders in Chinese public firms (Jiang et al, 2010). We measure intercorporate loans by other receivables owed by controlling shareholder divided by total assets. Cost of goods sold (COGS) is the second dependent variable. We use COGS to measure the impact of transfer pricing. COGS is measured by sales costs divided by sales.

### **Independent Variables**

Controlling shareholding (CS) captures the extent to which the largest shareholder controls the focal public firm. It is measured by the proportion of shares held by the largest shareholder divided by the total shares issued. Related purchase (PUR) is measured by the total amount that public firms spends buying goods from the largest shareholder in a fiscal year. The substitutional environment (MKT) is measured using the marketization index compiled by Fan et al (2010). The composite index comprises four components of government-market relations, factor market development, product market development and the legal environment. Substitutional environment of a focal firm is defined as the province where the focal firm is headquartered. The regulatory policy mandated by State Council on behalf of CSRC is a dummy variable with 1 indicating the company year after 2005 and 0 before 2005.

### **Control Variables**

CEO duality (DUAL) refers to the situation that CEOs also hold the position of chairman of board of directors. CEO duality affords the CEO more positional power (Finkelstein, 1994). Previous research shows that CEO duality has impacts on the relationship between organizational slack and firm performance, suggesting high CEO discretion (Peng et al., 2010). Further, in public state-owned enterprises (SOEs), board chairman is the highest executive position. Therefore, CEO duality can have either deter or facilitate financial tunneling. Given the impact of concentrated power of CEO duality on financial tunneling, we include it in the control variable. CEO duality is a dummy variable coded 1 when the same person holds two positions of CEO and chairperson, otherwise 0.

The effect of independent directors (ID) on deterring tunneling among public firms in China is found to be significant. Controlling for the endogeneity problem, independent directors can curb financial tunneling (e.g. Ye et al., 2007). This variable is continuous, measured by the number of independent directors divided by the total number of directors sitting on one board of a public firm.

Minority shareholders (MS) have mitigating effects on curbing expropriation by controlling shareholders. Among the minority shareholders, institutional investors serve as an effective monitor of the behavior of controlling shareholders (Jiang et al, 2010). Recent years have also witnessed the active actions taken by the minority shareholders as a coalition to protect their own rights when confronting expropriation by controlling shareholders. Therefore to control for the effect, we include the proportion of minority shareholding measured by the total proportion of shares held by the second largest to the fifth largest shareholders. It is a continuous variable.

State owned enterprises behave differently from other types of ownership enterprises (Shleifer & Vishny, 1997; Peng et al, 2010). SOEs have conflicting incentives such as providing employment opportunities and profit maximization. The differing incentives affect the corresponding appropriation behavior. This variable (STATE) is a dummy with 1 indicating the controlling shareholder being SOEs, and 0 other types of enterprises.

We include in the control variables company size (SIZE) measured by the natural log of total assets and a dummy variable of REG with 1 indicating a regulated industry and 0 otherwise. Regulated industries include mining, utilities, finance and real estate (Fan et al, 2007). Also controlled for are industry and year.

We use the Tobit model to test H1A and H2A, as 67% of the dependent variable intercorporate loans is 0.

$$FT = \alpha_0 + \alpha_1 CS + \alpha_2 MKT + \alpha_3 CS * MKT + \alpha_4 DUAL + \alpha_5 ID + \alpha_6 MS + \alpha_7 STATE + \alpha_8 REG + \alpha_9 SIZE + industry + year + \varepsilon$$

The following model is used to test H1B and H2B:

$$COGS = \alpha_0 + \alpha_1 PUR + \alpha_2 CS + \alpha_3 CS * PUR + \alpha_4 MKT + \alpha_5 CS * MKT + \alpha_6 PUR * MKT + \alpha_7 MKT * CS * PUR + \alpha_8 DUAL + \alpha_9 ID + \alpha_{10} MS + \alpha_{11} STATE + \alpha_{12} REG + \alpha_{13} SIZE + industry + year + \varepsilon$$

The following model is used to test H3A and H3B, respectively:

$$FT = \alpha_0 + \alpha_1 CS + \alpha_2 MKT + \alpha_3 POLICY + \alpha_4 CS * MKT + \alpha_5 DUAL + \alpha_6 ID + \alpha_7 MS + \alpha_8 STATE + \alpha_9 REG + \alpha_{10} SIZE + industry + \varepsilon$$

$$COGS = \alpha_0 + \alpha_1 PUR + \alpha_2 CS + \alpha_3 CS * PUR + \alpha_4 POLICY + \alpha_5 CS * POLICY + \alpha_6 PUR * POLICY + \alpha_7 POLICY * CS * PUR + \alpha_8 MKT + \alpha_9 DUAL + \alpha_{10} ID + \alpha_{11} MS + \alpha_{12} STATE + \alpha_{13} REG + \alpha_{14} SIZE + industry + \varepsilon$$

## RESULTS

The descriptive statistics are presented in Table 1 and Table 2. Table 1 includes the results of means and standard deviations of variables. Table 2 presents variable correlations.

**TABLE 1. MEANS AND STANDARD DEVIATIONS**

Variables	Variables	Mean	Std. Dev.
1	Intercorporate Loans	0.01	0.05
2	Costs of goods sold	1.04	0.62
3	Related party purchase	0.04	0.10
4	Controlling shareholding	0.39	0.17
5	Subinstitutional environment	5.85	3.02
6	CEO duality	0.13	0.33
7	Independent directors	0.34	0.07
8	Minority shareholding	0.17	0.13
9	State ownership	0.72	0.45
10	Regulated industry	0.07	0.25
11	Total Assets (in billion Yuan)	12.50	201.00

**TABLE 2 CORRELATIONS**

Variables	1	2	3	4	5	6	7	8	9	10	11
1	1										
2	0.193	1									
3	0.032	-0.032	1								
4	0.027	-0.13	0.204	1							
5	-0.054	-0.026	-0.131	-0.036	1						
6	-0.003	0.024	-0.032	-0.063	0.015	1					
7	-0.027	0.04	-0.028	-0.057	0.015	0.035	1				
8	-0.028	0.026	-0.132	-0.497	0.04	0.054	-0.061	1			
9	-0.002	-0.084	0.125	0.277	-0.029	-0.101	-0.122	-0.237	1		
10	-0.024	-0.02	-0.034	0.002	0.08	-0.011	-0.032	-0.042	-0.002	1	
11	-0.103	-0.256	0.12	0.192	0.084	-0.091	-0.14	-0.135	0.232	0.205	1

The test results of hypotheses 1a and 2a are presented in Table 3. H1A predicts that the higher proportion of outstanding shares held by controlling shareholders, the more likely controlling shareholders expropriate minority shareholders by means of intercorporate loans. Based on the results of Model 1 in Table 3, controlling shareholding is positively related to other receivables from controlling shareholders and the relationship is significant ( $b=0.039$ ,  $p<0.001$ ). Therefore, H1A is supported.

H2A proposes that the propensity of controlling shareholders to expropriate through intercorporate loans is lessened by subinstitutional environments characterized by strong legal institutions and market institutions where the controlled public firm is headquartered. In Model 2 of Table 3, the coefficient for the interaction term of controlling shareholding by subinstitutional environment (CS&MKT) is negative and significant ( $b= -0.020$ ,  $p < 0.01$ ), providing support to H2A.

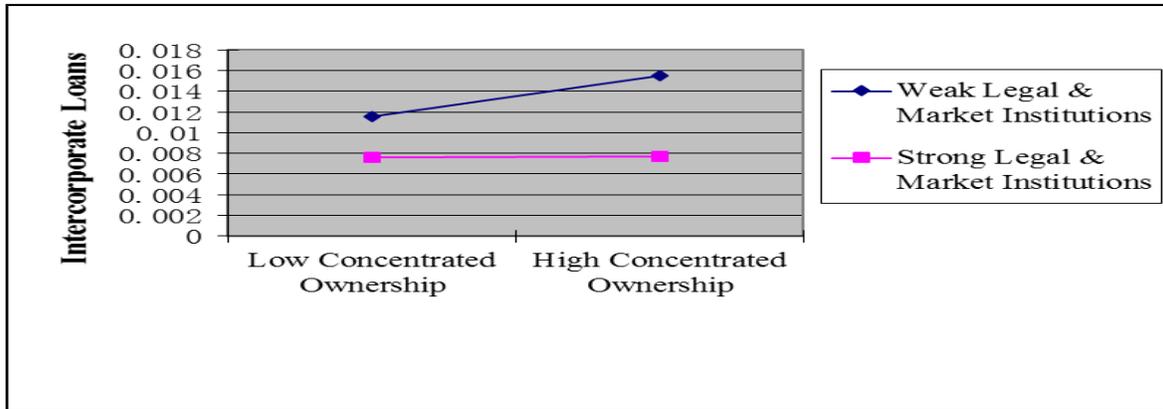
**TABLE 3. EFFECTS OF CONTROLLING SHAREHOLDING AND SUBINSTITUTIONAL ENVIRONMENT (H1A AND H2A)**

	Dependent variable : Intercorporate Loans	
	Model 1	Model 2
Independent variables:		
CS	0.039***(3.406)	0.051***(3.910)
MKT	-0.003***(-4.688)	-0.001*(-1.862)
CS*MKT		-0.020**(-2.056)
Control variables:		
Dual	-0.004(-0.752)	-0.003(-0.711)
ID	-0.076***(-3.560)	-0.076***(-3.539)
MS	-0.072***(-4.737)	-0.070***(-4.655)
State	0.008**(1.965)	0.007*(1.871)
REG	-0.014(-0.947)	-0.014(-0.965)
SIZE	-0.003*(-1.765)	-0.003*(-1.741)
Constant	0.059(1.634)	0.050(1.396)
Industry and year dummies	Yes	Yes
Observations	6359	6359
Log Pseudo Likelihood	210.321	212.116

t-values are reported in the parentheses. \*, \*\*, and \*\*\* indicate significance at 10%, 5%, and 1% levels, respectively.

To further explore the relationship between controlling shareholding and intercorporate loans in differing subinstitutional environments, we plot the results in Figure 1. As suggested in Figure 1, the minority shareholders expropriation through intercorporate loans rises; as the proportion of shares held by the largest shareholders increases in subinstitutional environment characterized by weak legal and market institutions. This propensity of expropriation is not salient in a

subinstitutional environment featuring strong legal and market institutions. We will discuss the reasons for this in the discussion section.



**FIGURE 1. EFFECTS OF CONCENTRATED OWNERSHIP ON INTERCORPORATE LOANS**

Table 4 presents the models of related party purchase on COGS. Model 1 includes the controls and the main effects of controlling shareholding, related party purchase and subinstitutional environment. Model 2 adds the interaction term of controlling shareholding and related party purchase (CS\*PUR). Model 3 adds the three-way interaction term of controlling shareholding, related party purchase, and subinstitutional environment (MKT\*CS\*PUR).

H1B predicts that controlling shareholding is positively associated with transfer pricing measured by related party purchases. Results of model 1 show the coefficient related party purchase (PUR) is positive and significant ( $b=0.109$ ,  $p<0.001$ ), supporting H1B. In Model 2, when the interaction term controlling shareholding by related purchase (CS\*PUR) is added, the coefficient of related purchase (PUR) is negative and significant ( $-0.378$ ,  $p<0.001$ ), indicating that related party purchase itself in firms with controlling shareholders can reduce costs of goods sold. However, the sign of CS\*PUR turns to be positive ( $b=1.014$ ,  $p<0.001$ ), suggesting that firms using related party purchase have increased costs of goods sold rather than decreased costs of goods sold when controlling shareholders are present. This indicates that controlling shareholders have the incentive and are more likely to increase purchase prices to transfer assets from the public firms they control. Therefore, the results of Model 2 are consistent with our expectations of H1B.

H2B proposes that controlling shareholding is more strongly associated with transfer pricing for firms headquartered in areas characterized by strong legal institutions and market institutions than for firms headquartered in areas characterized by weak legal institutions and market institutions. In model 3, the interaction between controlling shareholding and subinstitutional environment (CS\*MKT) is significant and negative ( $b= -0.131$ ,  $p<0.01$ ), indicating that minority shareholder expropriation is alleviated in areas with more developed legal and market institutions. However, the coefficient for the interaction term of MKT\*CS\*PUR is positive and significant ( $b= 1.001$ ,

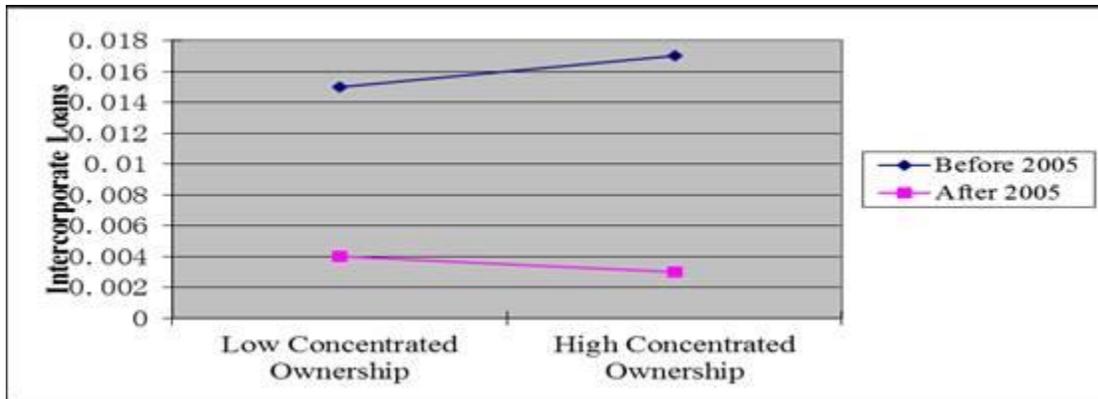
p<0.01), supporting H2B, suggesting that the more developed the legal and market institutions, the more likely controlling shareholders use related party purchase to expropriate.

**TABLE 4. EFFECTS OF RELATED PARTY PURCHASE, CONTROLLING SHAREHOLDING, AND SUBINSTITUTINAL ENVIRONMENT (H1B AND H2B)**

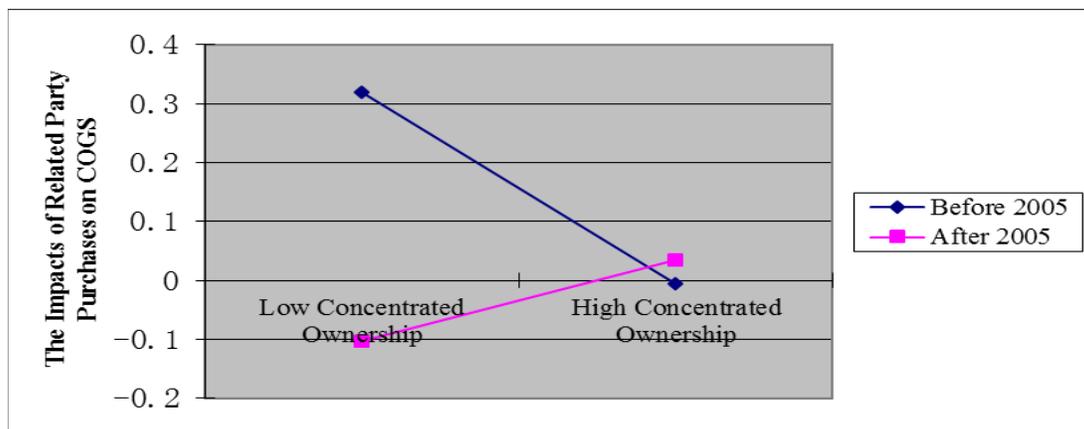
Dependent variable : COGS			
Independent variables:	Model 1	Model 2	Model 3
PUR	0.109***(2.734)	-0.378***(-3.088)	-0.280*(-1.927)
CS	-0.353***(-5.528)	-0.387***(-5.680)	-0.309***(-4.228)
MKT	-0.002(-0.553)	-0.002(-0.517)	0.004(0.963)
CS*PUR		1.014***(4.093)	0.684**(2.469)
CS*MKT			-0.131**(-2.566)
MKT*PUR			-0.294(-1.410)
MKT*CS*PUR			1.001**(2.488)
Control variables:			
Dual	-0.012(-0.480)	-0.011(-0.457)	-0.010(-0.408)
ID	-0.041(-0.308)	-0.046(-0.348)	-0.051(-0.379)
MS	-0.312***(-3.824)	-0.309***(-3.788)	-0.303***(-3.715)
State	-0.003(-0.159)	-0.002(-0.0745)	-0.004(-0.193)
REG	-0.266***(-2.949)	-0.272***(-3.015)	-0.270***(-2.991)
SIZE	-0.137***(-9.141)	-0.137***(-9.154)	-0.137***(-9.154)
Constant	4.431***(12.67)	4.456***(12.66)	4.407***(12.70)
Industry & year dummies	Yes	Yes	Yes
Observations	6359	6359	6359
R-squared	0.097	0.098	0.099

t-values are reported in the parentheses. \*, \*\*, and \*\*\* indicate significance at 10%, 5%, and 1% level, respectively.

We plot the use of intercorporate loans before and after 2005 in Figure 3 showing that after 2005 when CSRC declares illegal use of intercorporate loans borrowed by controlling shareholders, the illegitimate use of intercorporate loans to expropriate is substantially decreasing. However, related party purchase, an alternative strategy to expropriate minority shareholders, emerges as a salient illegitimate practice.



**FIGURE 3. USE OF INTERCORPORATE LOANS AS EXPROPRIATION BEFORE AND AFTER 2005**



**FIGURE 4. IMPACT OF RELATED PARTY TRANSACTION ON COGS**

## DISCUSSION AND LIMITATIONS

Our research contributes both to institutional theory and agency theory. First, our new construct of institutional heterogeneity explains how the institutional environment at the provincial level impacts the incentive of controlling shareholders to expropriate minority shareholders. The expropriation extent, by means of intercorporate loans and transfer pricing, is less severe in areas with more developed legal and market institutions than in less developed areas in China. Provinces with a high marketization score have less government intervention in the economy and markets play increasingly dominant role in resource allocation. Also, the contract enforcement is relatively strong in these areas. The improved institutions reduce the transaction costs of investor protection (North, 1990). Minority shareholders have increased incentive to protect their interests while the controlling shareholders have increased legal costs if they commit expropriation. Management representing controlling shareholders is more likely to be held responsible for lending out tremendous amount of funds to controlling shareholder.

Second, we find that the more developed the subinstitutional environment, the less likely controlling shareholders expropriate by means of intercorporate loans, and the more likely controlling shareholders employ transfer pricing to expropriate. Though the use of financial tunneling measured by intercorporate loans is illegitimate, controlling shareholders could still commit such practice, as long as they are not punished by law. However, when such illegitimate practice is prohibited by law and has punitive consequences, the illegal use of intercorporate loans becomes extinct and transfer pricing serves as the dominant expropriation strategy by controlling shareholders. Related party purchase—one form of transfer pricing and hard to define as illegal—is even more conspicuous in market-oriented geographical areas.

Our research also has practical implications for regulatory agency. Increased regulation of minority shareholder expropriation can decrease expropriation such as direct theft. On the other hand, due to a lack of external control mechanism to discipline the controlling shareholder's nonproductive behavior, the incentive to expropriate, rather than being lowered, remains still strong. The controlling shareholder could invent and manipulate new strategies to expropriate, which are technically more covert and hard to determine as illegal. This evolution of principal-principal conflict over time highlights the urgency of devising new regulation approach to tackling minority shareholder protection. Further, affording more legal rights to minority shareholders could substantially decrease expropriation incentive. Up to now, China has not allowed the class suit against controlling shareholders. External auditors, increasing the proportion of independent directors, and more shareholding by institutional investors could also contribute to curbing expropriation.

Our research has a few limitations. First, we focus on the shift of expropriation strategies by controlling shareholders without measuring the agency costs. Future research can collectively gauge the costs associated with transfer pricing and intercorporate loans. Second, our sample is drawn contextually from China, therefore, the generalizability of our findings is limited. Future research may extend our research to other countries. Third, we aggregate the minority shareholding as the second largest to the fifth largest shareholders. The mitigating role played by specific institutional investor has not been delineated, providing a potential research avenue. Institutional investors have been found to curb the expropriation behavior of controlling shareholders (Jiang et al, 2010). Future research may focus on the roles of foreign investors, pension funds, or insurance companies in the mitigation of minority shareholder expropriation.

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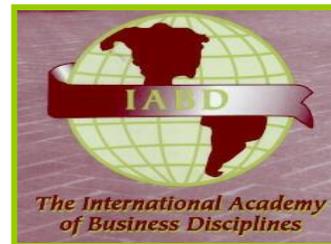
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