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## Research Article

# Solving agency problems in Chinese family firms – A law and finance perspective

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**Abstract** To overcome the potential for omitted-variable and aggregation biases in country-based comparisons commonly adopted in the law and finance literature, this study designs a within-country analysis of legal measures toward resolving agency problems in Chinese family firms. Our findings show that agency costs in family firms can be significantly minimized by the evolution of formal legal rules, even with weak enforcement of investor protection. These results have important implications for economic reform and corporate development in emerging economies, because they show that the development of rules and regulations does matter in countries with weak enforcement. *Asian Business & Management* (2016) **15**, 57–82. doi:10.1057/abm.2016.3

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## Introduction

Family firms, because of their usually concentrated form of ownership, are often confronted with significant twin-agency problems: conflict between managers and shareholders, and conflict between controlling and minority shareholders (Burkart *et al.*, 2003; Villalonga and Amit, 2006). While the latter conflict is often assumed to overshadow the former (Shleifer and Vishny, 1997; La Porta *et al.*, 1999; Faccio *et al.*, 2001; Villalonga and Amit, 2006), the owner–manager conflict is not a resolved issue



in the context of family-controlled governance (Castillo and Skaperdas, 2005; Zhou *et al*, 2013). As suggested by Burkart *et al* (2003), the controlling shareholder, even with significant ownership, is still exposed to the risk of expropriation by the manager who runs the company in practice. Thus, the nature of corporate governance in family firms should be about mitigating the expropriation of minority shareholders by insiders, as well as the expropriation of all shareholders by a manager.

The law and finance literature first developed by La Porta *et al* (1998) gives new insights to exploring agency issues by highlighting the role of legal protection of minority shareholders in financial markets. As suggested by La Porta *et al* (2000b), with respect to the conventional theoretical framework based on bank-centred and market-centred financial systems, the legal analytical approach is a more meaningful way to understand the nature of corporate governance. This strand of literature empirically shows that expropriation by the controlling shareholder is legally constrained by law and its enforcement, and the extent and strength of legal protection of minority shareholders leads to a prediction of differences in financial outcomes both at the firm and at aggregate levels in individual countries (La Porta *et al*, 1997, 1998, 1999, 2000a, b, 2002, 2006; Gompers *et al*, 2003; Allen *et al*, 2005; Djankov *et al*, 2008; Spamann, 2010). However, because of the emphasis on legal protection of minority shareholders, this strand of literature tends to overlook the legal implications on owner–manager conflict in family firms. The country-based comparisons often adopted in conventional studies are also likely to create omitted-variable and aggregation biases in the empirical testing of hypotheses (Wu *et al*, 2009). Therefore, investigating within-country legal effects on twin-agency conflicts in family firms will better inform our understanding of the intriguing issue of corporate governance in the literature.

Further, the role of investor protection in raising corporate governance issues prevalent in emerging economies, often characterized by weak legal systems, differs significantly from those found in developed countries in the West (Dharwadkar *et al*, 2000; Mitton, 2002; Allen *et al*, 2005; Prabowo and Simpson, 2011; Tam and Yu, 2011). As China is one of the largest emerging economies in the world, the central objective of this article is to investigate whether twin-agency issues in family firms are associated with a potential mismatch between their concentrated ownership structure and the extent of investor protection provided by China's legal and regulatory systems.

We assembled a unique and detailed family-firm data set from China's stock markets for the period 2000–2009 to address this question. We developed two indices to measure the extent of China's investor protection: one is a time series index evaluating changes in legal rules as an indicator of investor protection at the formal level, and the other is a cross-provincial index of the quality of the governance environment, measuring investor protection at the practical level.

China provides a good case for this purpose for three reasons. First, the increasingly important role played by Chinese family firms in the economy provides



an environment to examine family-firm issues in China's fledging capital-market development. This important role of Chinese family firms calls for better understanding of how it works and is governed (Zhou *et al.*, 2013).

Second, recent significant legal reforms and the discrepancies in provincial enforcement in China present a unique opportunity and data set for investigating the legal effects over time and across provinces within one country. On the one hand, formal legal rules pertaining to the rights of investors have made much improvement over the last two decades. China has transplanted a series of legal and regulatory rules pertaining to investor protection from developed countries. On the other hand, its enforcement of investor protection is to a large extent captured by the interactions between local governments and national legal institutions. Hence, despite the unified formal regulation of written legal rules at the national level, Chinese family firms in individual provinces and regions are exposed to different degrees of efficacy in legal enforcement (Wong, 1985; Allen *et al.*, 2005; Chen *et al.*, 2005; Fan *et al.*, 2007; Wu *et al.*, 2009).

Third, since the 1990s, China and other emerging countries have gone through a fundamental transition toward market-based economies from central planning systems. China's evolution of legal rules for investor protection thus follows a broadly similar pattern to many emerging economies (Peng and Heath, 1996). As the choice of governance mechanisms to some extent subject to institutional and governance regimes (Dharwadkar *et al.*, 2000; Wright *et al.*, 2005; Peng and Jiang, 2010; Prabowo and Simpson, 2011), China's experience may therefore provide valuable insights into the way family businesses develop in other emerging economies.

This article makes two methodological innovations to this growing literature. First, we extend the conventional notion of 'investor protection' to include not only legal mechanisms protecting minority shareholders against large shareholders, but also protection of all shareholders against managers. This integrated conceptual perspective allows a refocus on twin-agency problems in family firms. Using this redeveloped concept of investor protection, we build two indices to more comprehensively and accurately measure the extent of China's investor protection at both the formal and the practical level.

Second, unlike conventional studies addressing issues at the aggregate national level and disregarding the owner–manager conflict in family firms, we explore changes and relationships within a country over time and across different provinces as regards twin-agency problems in family firms. This new approach is expected to mitigate estimate biases that plague the literature, and to enrich understanding of the nature of corporate governance in family firms.

Utilizing these methodological innovations, this article contributes to the literature by showing that in emerging countries with legal-enforcement deficiencies, the evolution of written legal rules has a significant effect on relieving twin-agency conflicts in family firms, thereby supporting their growth in the economy.



Specifically, we find that legal protection for investors at the national level did improve substantially for the period 1991–2009 in China. This dynamic legal evolution is potentially favorable to Chinese family firms, as it enhances their firm performance.

We also find that the overall quality of the governance environment in China is relatively inferior compared with the world average, especially in government efficiency and the reliability of the legal system and business infrastructure. Such an inefficient institutional environment, despite provincial discrepancies, is found to have negligible impact on family firms. Instead, other informal mechanisms, for instance family governance or network-based strategy, may help family firms to survive in the discriminatory political and economic environment.

The remainder of the article is organized as follows. The next section lays out the research design, including sample selection and data sources, as well as the construction of indices of investor protection. We then report the main results, and present the robustness check in the following section. The final section concludes.

## Method and Data

### Sample

Our analysis consists of a panel of 13 365 firm-year observations from 1624 non-financial companies listed on the Shanghai and Shenzhen Stock Exchange in China for the period 2000–2009. We excluded banks and insurance companies due to the well-known problem of computing comparable key variables for financial institutions. On detailed analysis of the ownership and management composition of each company, the full sample was broken down into two sub-sample sets, yielding 2920 family-firm observations and 10 441 non-family-firm observations. The year 2000 was chosen as the start point as the number of publicly traded family companies has soared since 2000 in China's stock markets. In effect, we find very few observations before 2000.

Data on family ownership and financial variables are mainly sourced from the CSMAR Database,<sup>1</sup> and double-checked against annual reports, prospectus and interim announcements of listed companies. The publicly accessible reports or announcements were obtained from official Websites in China – the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE).

Family management data were manually obtained through two approaches: (i) relatives in the top-ten shareholders of a listed company are disclosed in 'Statements of Associated or Concerted Shareholders Action' in annual reports, while information on the ultimate controller is detailed in the 'Diagram of Property and Control Relation between the Ultimate Controller and the Listed Company'. For each firm-year observation, we scrutinized these two parts to identify the founder



and his/her relatives, as these family members may serve as directors or managers in firm management. (ii) We matched the founder with each person disclosed in the 'Information on Directors, Supervisors and Senior Management' section in annual reports, and retrieved remaining family members by looking up public sources such as prospectus, annual reports and interim announcements.

## Family firms

In this article, a family firm is defined as one whose ultimate owner is a family or an individual founder. On 30 January 2007, the China Securities Regulatory Commission (CSRC) introduced the 'Listed Companies Information Disclosure Regulations' to China's stock markets. The regulations require mandatory disclosure of any shareholder retaining more than 5 per cent of a listed company's shares and any changes to these shareholdings, as the CSRC considers a 5 per cent stake as having material interest and influence in a company. Accordingly, in the context of family firms with multiple major shareholders in China, the criterion to identify the ultimate owner in this study is based on the notion of a shareholder having control rights 5 per cent greater than the next largest shareholder (who typically holds more than 10 per cent of shares).<sup>2</sup> Following Faccio and Lang (2002), control rights are measured by the weakest shareholdings in the shareholder's control chain, while ownership rights are measured by the product of shareholdings along the shareholder's control chain of a listed company. We provide representative examples supported by a graphical presentation of the ownership structure of two companies in Appendix A.

## Legal investor protection index

The legal investor protection index aims to measure the extent of evolution of written legal rules on shareholder protection for the period 1991–2009 in China. Following the literature (La Porta *et al.*, 2002; La Porta *et al.*, 2006; Djankov *et al.*, 2008; Wu *et al.*, 2009), we focus on legal rules only pertaining to the rights of shareholders and use the term 'shareholder protection' and 'investor protection' interchangeably, unless stated otherwise.

### *Constituents of the investor protection index*

The measures of shareholder protection in this article build on and extend those of La Porta *et al.* (1998) and Pistor *et al.* (2000). We start by identifying 29 clauses in legal provisions related to investor protection, and group them into seven dimensions, namely: VOICE, EXIT, SMINTEGR, ANTIBLOCK, ANTIDIRECT, ANTIMANAGE and ANTINONTRADABLE. Definitions of indicators are detailed in Appendix B.



Shareholders can exercise their rights over firm management by either voting on a particular decision (that we refer to as *vote-by-hand*, ‘VOICE’) or selling out their stakes (*vote-by-foot*, ‘EXIT’) (Coffee, 1991; Pistor *et al*, 2000). The two rights are considered essential for shareholder protection (Pistor *et al*, 2000). As many indicators for investor protection, such as those in La Porta *et al* (1998), are targeted at ‘voice’ rights, Pistor *et al* (2000) added five more indicators to denote VOICE. In our assessment, VOICE refers to legal mechanisms entitling shareholder rights of delegation to management, decision making and judicial access, including 17 specific clauses protective of shareholder rights.

EXIT highlights shareholders’ rights on liquidating their stakes when they do not agree with the way the firm is managed. We define four clauses as indicators of ‘exit’ rights: no restrictions on share transfer by laws or corporate statutes, limited formal requirements on share transfer, minority shareholders’ put options, and mandatory take-over rules.

SMINTEGR is designed to indicate the integrity and effectiveness of capital markets, rather than any particular protection regarding shareholder rights (Pistor *et al*, 2000). This index covers regulations on information disclosure, self-dealing and insider trading, policies on accounting and audit, dividend and placement issues of shares, and provisions on the independence of shareholdings registration and capital-market supervision. Notably, most Chinese listed companies have suffered from the problem of having two-thirds of their issued shares as non-tradable shares, resulting in low liquidity and efficiency in stock markets. Reform of the split-share structure in 2005 aimed to improve this situation. We thus capture such potential variation in SMINTEGR by defining an additional clause pertaining to the progress in the reform of the split-share structure in China.

Further, to directly evaluate the legal effects on agency problems in family firms, we reorganize the above 29 clauses into four dimensions – ANTIBLOCK, ANTIDIRECT, ANTIMANAGE and ANTINONTRADABLE. ANTIBLOCK refers to legal mechanisms against large shareholders, and ANTIDIRECT and ANTIMANAGE refer to mechanisms against directors and managers, respectively. In particular, ANTINONTRADABLE is to feature legal protection for tradable shareholders, referring to the mechanisms against non-tradable shareholders.

#### *Criteria for adding or subtracting scores*

Most studies use dummy variables to calculate the value of indicators for the investor protection index, in which the dummy equals 1 when a particular clause concerning investor protection is specified in a law or regulation, and 0 otherwise (La Porta *et al*, 1998; Pistor *et al*, 2000; Glaeser *et al*, 2001; Allen *et al*, 2005). This approach distinguishes between the presence and absence of shareholder protection in legal evolution, but says little about the improvement and intensity of such legal protection over time.



In effect, China's legal provisions protecting shareholder rights mainly consist of three categories of regulations – laws (stipulated by the National People's Congress, NPC), national administrative regulations (stipulated by the State Council) and departmental regulations (stipulated by the CSRC). The degree of influence on investor protection stipulated by laws is generally considered to be higher than administrative or departmental regulations (Wu *et al.*, 2009). Therefore, based on the principle of adding or subtracting scores adopted by Wu *et al.*, we developed a progressive approach that chronologically scores each indicator of investor protection according to the criteria given in Appendix C.

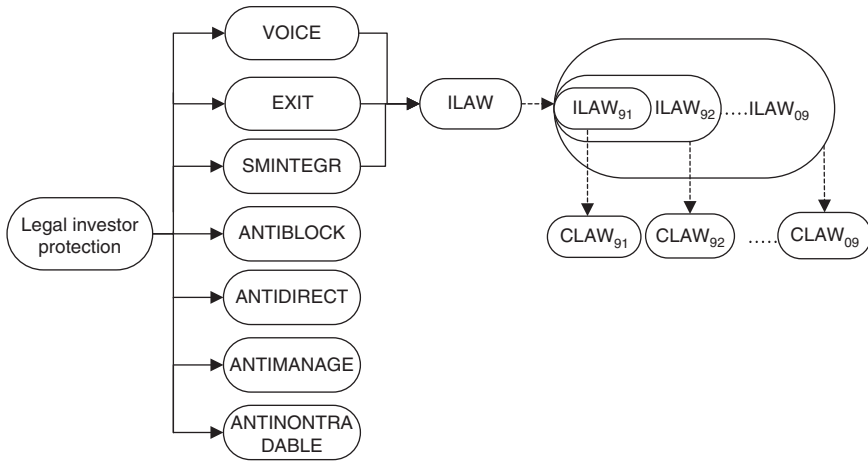
Under this scoring principle, if the new provision has the same content as the old one, but is enshrined in formal law and regulations instead of just administrative rules or pronouncements, we still assign a value of 1 to the indicator, even though this formalization may be considered a slight improvement of legal investor protection. For example, the representation of independent directors on the board was first introduced by an administrative pronouncement in 2001, which was formalized into amendments to the Company Law in 2006. This provision is positive for investor protection and is represented by Clause 6 of the legal investor protection index (*Other rules to ensure proportional board representation (i.e. rules on independent directors)*). The corresponding indicator is thus assigned with 1 in 2001 and with an additional 1 in 2006. In particular, as per Wu *et al.* (2009), we assign an indicator of 1.5 rather than 1 if the new provision, stricter and more detailed than the previous one, is specified in a particular regulation.

#### *Sources of laws and regulations*

On the basis of the 'Index of main laws, rules, regulations and other regulatory documents on investor protection' of the *Investor Rights Education Handbook*, we discovered 101 legal provisions protective of investor rights introduced during the period 1991–2009 in China. These provisions contain laws, national administrative regulations and departmental regulations. The reason for choosing 1991 as the start point is that the establishment of the Chinese Securities Registration and Clearing Corporation in 1991 signaled the start of the process of developing greater integrity in the capital market and the enhancement of investor protection in China.

To recap, we define seven dimensions of investor protection and chronologically match them with the content of each legal provision regarding investor protection enacted from 1991–2009 in China. The value of each dimension makes up an individual index of investor protection. As there is no overlap of clauses specified in VOICE, EXIT and SMINTEGR, the sum of the three indices constitutes an incremental legal index of investor protection (ILAW). The cumulative legal index (CLAW) is constructed by the total cumulative sum of ILAW. Figure 1 shows the way that ILAW and CLAW are developed. The results are reported in Appendix D.

As shown in Appendix D, the cumulative legal index of investor protection has been gradually enhanced for the period 1991–2009 in China. The value of CLAW for



**Figure 1:** Constructing process of legal investor protection index.

each year is 2.0, 8.0, 13.5, 31.5, 32.0, 35.5, 44.5, 45.5, 52.0, 55.5, 59.0, 67.0, 71.0, 74.0, 79.0, 110.0, 113.5, 116.0, 118.5. The big jump from 2005 to 2006 (from 79.0 to 110.0) is mainly because of significant amendments to both the Company Law and the Securities Law. As most of the amendments are beneficial to investor protection, a number of indicators in the legal investor protection index are assigned with corresponding positive scores according to the above criteria for adding or subtracting scores. To be specific, the legal investor protection index increases by 13.5 points due to the amendments of the Company Law (version 2006), and 5 points due to the amendments of the Securities Law (version 2006).<sup>3</sup>

### Governance environment index

Strong legal enforcement is considered a substitute for weak rules (La Porta *et al*, 1998). In our analysis, we build an index of governance environment (GENVIRON) as an indicator of the effectiveness of legal enforcement in China’s provincial jurisdictions. The level of legal enforcement has often been measured by the effectiveness of the national government, credit markets and judicial system (La Porta *et al*, 1998; Pistor *et al*, 2000; Wang *et al*, 2008; Wu *et al*, 2009). In this article, we define the quality of legal enforcement by a broader concept – the quality of the governance environment in which a listed company has chosen to operate as its base – and evaluate it by four specific measures: (i) *Government corruption* (GOVERN); (ii) *Development of financial market* (FINANCE); (iii) *Development of market intermediaries* (INTERMEDIARY); and (iv) *Efficiency of the judiciary* (JUDICIARY). The definition of indicators of GENVIRON is presented in Table E1.





Data on the four measures are sourced from the *NERI INDEX of Marketization of China's Provinces 2009 Report* compiled by Fan *et al* (2010). The NERI index aims to assess the marketisation process of individual provinces in Mainland China from 1999 to 2007, and has been extensively adopted in recent literature, such as Chen *et al* (2005), Li *et al* (2006), Wang *et al* (2008) and Wu *et al* (2009). The value of each measure in our analysis is computed by the three-year average from 2005 to 2007.<sup>4</sup> Table E2 presents the results.

## Variables

### *Dependent variables*

We adopt two variables to directly measure costs resulting from twin-agency problems. Management expropriation is proxied by SG&A, the ratio of selling, general and administrative (SG&A) to sales (Ang *et al*, 2000; Singh and Davidson, 2003). The most critical problem plaguing Chinese listed companies is argued to be capital abuse by the controlling shareholder, mainly extracted from prepayment and other receivable subjects. Agency costs between controlling and minority shareholders are indicated by TUNNEL, the ratio of prepayment and net other receivables to total assets. Further, we use Tobin's Q and ROA as the firm performance measure to identify the economic consequences of legal effects on family firms. Tobin's Q is measured as the ratio of the market value of a firm's assets to the replacement cost of the firm's assets, while ROA is the ratio of a firm's earnings before interest and tax (EBIT) to the average total assets for the period.

### *Explanatory variables*

The cumulative legal index (CLAW) and governance environment index (GENVIRON) are adopted as two main explanatory variables to proxy for investor protection at the formal and practical level, respectively.

### *Control variables*

Control variables are specified, such as GROWTH, the rate of shareholders' value maintaining and increasing; BETA, the systematic risk of the firm relative to the market; TURNOVER, the ratio of trading volume to shares outstanding; MARKET-SHARE, the ratio of market capitalization to the gross domestic product; SYSTEM, equaling 1 when the firm is under the same family's control as at least one other listed firm in the same year, and 0 otherwise; SALE, the ratio of annual operating revenue to total assets; SIZE, the natural log of annual total assets; LEVERAGE, the ratio of liabilities to total assets; AGE, the number of years since the initial public offering (IPO) of the firm. Time and industry dummies are also adopted to control for potential time and industry effects in the estimation.

## Controlling for endogeneity problems

The diagnostic test shows that the panel data set has significant presence of heteroskedasticity and endogeneity disturbances (see Appendix F).<sup>5</sup> We therefore implement the estimation of Generalized Method of Moments (GMM) with robust standard errors in the multivariate regression analysis. GMM estimator appears to be more reliable than the estimator of Two Stage Least Square (2SLS) when the data set is in the presence of heteroskedasticity. GDP per capita and unemployment rate are set as instruments for the endogenous variable CLAW. All regressions do not suffer from a weak instruments problem (that is, the value of *F-statistics* is greater than 10 in the first-stage regression in Table 3 or the *P-value* of the sargen test is greater than 0.1 in Table 4). Heteroskedasticity is controlled by robust standard errors in regressions.

## Empirical Results

### Distribution of firms

Table 1 reports the number and percentage of family firms in China's stock markets for the period 2000–2009. In 2000, there were only 68 listed companies identified as family firms under our definition, representing less than 7 per cent of all listed companies. By the end of 2009, the number of family firms had soared to 551, accounting for 34 per cent

**Table 1:** Numbers and percentages of family firms in 2000–2009<sup>a</sup>

Year	All listed firms	Family firms	Non-family firms	Family firms (% of total) <sup>b</sup>
2000	1044	68	976	6.51
2001	1124	94	1030	8.36
2002	1186	135	1051	11.38
2003	1246	183	1063	14.69
2004	1337	275	1062	20.57
2005	1336	305	1031	22.83
2006	1397	365	1032	26.13
2007	1498	446	1052	29.77
2008	1573	502	1071	31.91
2009	1624	551	1073	33.93
Total	13 365	2924	10 441	21.88 (average)

<sup>a</sup>The full sample comprises 13 365 firm-year observations from 1624 companies listed on China's stock markets during 2000–2009. After filtering five outliers, the sample of all firms and family firms comprises 13 360 and 2920 observations, respectively. As the number of outliers is too small to affect the descriptive statistics much, the unfiltered results are presented here.

<sup>b</sup>Family firms (% of total) are computed as the number of family firms divided by the total number of firms in each year.



of the full sample. Although the percentage of family firms is slightly lower than in the United States or German stock markets, it represents an eightfold increase since 2000, indicating significant development of family businesses in China.

## Descriptive statistics of variables

Table 2 presents the means, standard deviations, and minimum and maximum values for the main variables of the family-firm sample. As shown in Table 2, the ratio of SG&A fee to sales for family firms has a mean value of 0.64 with a maximum value of 721.00, indicating a notable managerial expropriation. Family firms on average

**Table 2:** Descriptive statistics of main variables<sup>a,b</sup>

<i>Panel 2 A: Summary statistics of variables</i>				
<i>Variable</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum</i>	<i>Maximum</i>
SA&G	0.640	14.871	-151.200	721.000
TUNNEL	0.019	0.520	-18.820	0.610
Tobin's Q	3.125	4.209	0.622	128.300
ROA	0.047	0.141	-2.986	2.471
CLAW	86.400	25.200	55.500	118.500
VOICE	23.600	7.800	14.000	32.500
EXIT	8.800	3.600	5.5000	14.000
SMINTEGR	54.000	14.000	36.000	72.000
ANTIBLOCK	27.800	9.000	17.500	39.500
ANTIDIRECTOR	28.800	10.500	16.500	41.000
ANTIMANAGER	17.100	5.600	11.000	23.500
ANTINONTRADABLE	1.700	1.800	0.000	3.500
GENVIORN	6.080	1.540	2.320	9.620
GOVERN	8.100	1.980	0.000	10.640
FINANCE	7.480	1.860	3.560	11.490
INTERMEDIARY	5.330	1.630	2.280	10.000
JUDICIARY	3.410	1.830	0.210	8.250
GROWTH	1.472	5.792	-17.570	277.600
BETA	1.028	0.488	-2.370	20.760
TURNOVER	321.300	273.322	1.761	1791.000
MARKETSHARE	0.639	0.907	0.050	9.920
SALE	0.617	0.502	0.000	5.710
SIZE	20.878	0.964	16.700	24.460
LEVERAGE	0.642	2.460	0.010	96.960
AGE	7.354	4.467	1.000	20.000

<sup>a</sup>Descriptive statistics of CLAW are computed on a time-series index for the period 2000–2009, and GENVIORN are computed on a cross-provincial sample of 31 provinces in China.

<sup>b</sup>Descriptive statistics of other variables are computed on the family-firm sample comprising 2786 observations after deleting observations with missing values.

have a return-on-assets, based on EBIT, of 4.69 per cent and an average Tobin's Q value of 3.13. The ratio of annual sales to total assets is used to indicate firm growth opportunities. On average, annual sales are found to represent 62.7 per cent of total assets in listed family companies. Average family firm age is nearly 8 years since IPO, suggesting that China's listed family firms are relatively young.

### Multivariate analysis

To gain insights into the relation between investor protection and agency costs in family firms, we employ the GMM estimation of the legal effects on family firms. In Column 1 of Table 3, the agency cost, measured by SA&G, is the dependent

**Table 3:** GMM estimation of effects of investor protection on family firms

	SA&G	TUNNEL	Tobin's Q	ROA
CLAW	-0.233* (-1.61)	-0.010* (-1.91)	1.016** (2.01)	-0.001 (-0.73)
GENVIRON	0.305* (1.71)	-0.023*** (-3.15)	0.020 (0.85)	0.002 (0.83)
GROWTH	-0.199 (-0.88)	0.001 (0.91)	0.068 (1.00)	-0.003** (-2.53)
BETA	-4.270 (-1.22)	0.363* (1.73)	-0.735 (-1.19)	-0.002 (-0.03)
TURNOVER	0.002 (1.34)	-0.000 (-1.56)	-0.001* (-1.78)	-0.000* (-1.65)
MARKETSHARE	-1.247 (-1.63)	-0.080** (-2.20)	1.029*** (10.58)	-0.002 (-0.19)
SYSTEM	0.847 (0.93)	-0.012 (-0.69)	0.346** (2.34)	-0.010 (-0.98)
SALE	-0.940* (-1.70)	0.031 (1.62)	0.013 (0.87)	0.024*** (3.70)
SIZE	—	0.044*** (2.88)	-1.583*** (-15.51)	0.025*** (2.98)
LEVERAGE	0.92* (1.19)	-0.182*** (-3.21)	0.324* (1.78)	-0.017 (-1.02)
AGE	0.09 (1.26)	0.006* (1.86)	0.031** (2.22)	-0.005*** (-6.13)
Time dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
F-statistics	107.23***	107.94***	25.931***	104.327***
R-squared	0.02	0.47	0.55	0.17
Observations	2786	2786	2786	2786

*Note:* Variables of CLAW and GENVIRON are divided by 100 to mitigate the relatively tiny standard errors because of the large scale of predictors. *t*-statistics from the clustered standard errors are in parentheses. Asterisks denote statistical significance at 10 per cent (\*), 5 per cent (\*\*), or 1 per cent (\*\*\*) level, respectively.



variable, while TUNNEL is the dependent variable in Column 2. Columns 1 and 2 show that the coefficient of CLAW is  $-0.233$  in the SA&G regression and  $-0.010$  in the TUNNEL regression; statistically significant at 10 per cent, respectively. These findings indicate that the distinct evolution of legal rules protective of shareholder rights has been able to minimize managerial expropriation and the abuse of capital by controlling shareholders in family firms

Columns 3 and 4 are regressed by firm performance measure proxied by Tobin's Q and ROA, respectively. The coefficient of CLAW is still positive in the Tobin's Q regression and it is significant at the 5 per cent level. To further test the robustness of GMM estimation, we apply 2-step GMM estimation to these two regressions. The results are reported in Table 4, showing that the coefficient of CLAW is

**Table 4:** 2-step GMM estimation of effects of investor protection on family firms

	<i>Tobin's Q</i>	<i>ROA</i>
CLAW	0.054*** (10.45)	0.001** (2.53)
GENVIRON	0.020 (0.86)	0.001 (0.77)
GROWTH	0.068** (2.07)	-0.003*** (-5.41)
BETA	-0.736*** (-7.08)	0.005 (0.55)
TURNOVER	-0.001*** (-7.64)	-0.000*** (-3.95)
MARKETSHARE	1.030*** (15.77)	0.014*** (2.66)
SYSTEM	0.346*** (3.29)	-0.012 (-1.47)
SALE	0.013 (0.18)	0.022*** (3.70)
SIZE	-1.583*** (-33.93)	0.017*** (4.56)
LEVERAGE	0.323*** (14.82)	-0.018*** (-10.32)
AGE	0.031*** (3.27)	-0.005*** (-6.96)
Time dummies	Yes	Yes
Industry dummies	Yes	Yes
Sargen test	0.99	0.12
$R^2$	0.55	0.18
Observations	2786	2786

*Note:* Variables of CLAW and GENVIRON are divided by 100 to mitigate relatively tiny standard errors because of the large scale of predictors. *t*-statistics from the clustered standard errors are in parentheses. Asterisks denote statistical significance at 10 per cent (\*), 5 per cent (\*\*), or 1 per cent (\*\*\*) level, respectively.



0.054 (0.001) in the Tobin's Q (ROA) regression; it is significant at the 1 per cent (5 per cent) level. This finding further confirms that the improvement of legal investor protection is indeed beneficial for family firms in generating better firm performance. Also, it is consistent with mainstream notions in the law and finance literature, suggesting that firms under stronger investor protection will have higher corporate valuation (La Porta *et al*, 2002; Gompers *et al*, 2003; Giannetti and Koskinen, 2010), lower control premiums (Nenova, 2003; Dyck and Zingales, 2004; La Porta *et al*, 2006; Djankov *et al*, 2008) and less earnings manipulation (Leuz *et al*, 2003).

Another notable finding from Tables 3 and 4 is that the coefficient of GENVIRON is not consistently significant in the four regressions. Therefore, we cannot draw a confident conclusion that the governance environment for investors has a significant effect on family firms, especially in terms of enhancing their economic performance.

The inconsistencies in the effects of CLAW and GENVIRON on family firms can in part be explained as follows. As suggested in our analysis, on-paper investor protection has experienced a progressive improvement for the period 1991–2009 in China. By the end of 2009, China had transplanted a series of legal regulations pertaining to investor protection from developed countries, especially in terms of the considerable amendments made to the Company Law and the Securities Law in 2006, and the introduction of the reform of split-share structures launched in 2005. With the dynamic legal evolution, the extent of investor protection significantly rose from 55.5 in 2000 to 118.5 in 2009 (see Appendix D), implying substantial effects of investor protection on China's stock markets.

Unlike the significant evolution of written legal rules, the overall effectiveness of China's governance environment is relatively inferior. According to the AMB Country Risk Report released on 31 August 2009, China was rated as a CRT-3 country with slow development of the legal environment, legal system, business environment and capital market. Also, political risk regarding the efficiency of the government bureaucracy and reliability of the legal system was significantly higher than the world average. This suggests that China is still highly likely to suffer from government or bureaucratic inefficiencies and an inadequate legal system (AMB, 2009). It is also noted that on the decentralization path toward a market-based economy, local governments in China have built up their *de facto* control over local enterprises by either granting them preferential treatments or imposing additional fees and penalties (Chen *et al*, 2005). Compared with state-owned enterprises (SOEs), local family firms are under considerable discrimination in resource allocation and are thus more inclined to be arbitrarily harassed by local governments (Li *et al*, 2006). For instance, the Chinese stock exchanges were initially developed to serve SOEs, resulting in a sizable bias in equity issuance against private enterprises.

Hence, to survive in an adverse political and institutional environment, family firms located in different provinces tend to seek new ways to safeguard their interests instead of relying on formal institutional protection. Likewise, La Porta *et al* (2002) and Lins (2003) show that concentrated ownership may be especially conducive to



filling the institutional-governance void. Allen *et al* (2012) propose that alternative finance generally supported by non-legal mechanisms contributes most in fast-growing economies such as India. Peng and Heath (1996) suggest that firms in transitional economies follow a network-based strategy of growth. Such network-based strategy is characterized by reputation and relationships in private-sector development in China (Allen *et al*, 2005). Chen *et al* (2005) and Li *et al* (2006) further demonstrate that most private entrepreneurs have actively sought involvement in politics in China, with such political connections or participation serving as a response to formal institutional failure, especially in provinces with lower investor protection. Pistor and Xu (2005) also state that an administrative governance structure featured by a quota system substituted for formal legal enforcement in the early stages of China's stock markets development.

## Robustness Check

Table 5 applies four alternative econometric techniques to test whether the previous findings are robust. These techniques include the ordinary least squares (OLS) estimation, generalized least squares (GLS) method, the fixed effects (FE) and

**Table 5:** Robustness test of the effects of investor protection on family firms

		<i>SA&amp;G</i>	<i>TUNNEL</i>	<i>Tobin's Q</i>	<i>ROA</i>
OLS	CLAW	-0.06* (-1.69)	-0.005*** (-3.42)	0.04*** (17.08)	0.001*** (7.52)
	GENVIRON	0.29 (1.60)	-0.03*** (-4.66)	0.03 (1.30)	0.001 (0.67)
GLS	CLAW	-0.02* (-1.64)	-0.003*** (-5.24)	0.04*** (17.11)	0.001*** (7.53)
	GENVIRON	0.28 (1.56)	-0.03*** (-4.76)	0.03 (1.30)	0.001 (0.67)
FE	CLAW	-0.05* (-1.63)	-0.002*** (-4.72)	0.02*** (4.15)	0.001** (2.47)
	GENVIRON	-0.39 (-0.08)	-0.004 (-0.31)	-0.29 (-0.99)	0.01 (0.58)
RE	CLAW	-0.08** (-1.64)	-0.00*** (-6.58)	0.03*** (6.71)	0.001*** (3.91)
	GENVIRON	0.22 (-0.08)	-0.02 (-0.06)	0.01 (0.48)	0.001 (0.33)
2SLS	CLAW	-0.18* (-1.76)	-0.005*** (-4.20)	0.06*** (9.60)	0.001** (2.11)
	GENVIRON	0.32* (1.74)	-0.02*** (-4.59)	0.03 (1.27)	0.002 (0.86)

*Note:* *t*-statistics from the clustered standard errors in parentheses. Asterisks denote statistical significance at 10 per cent (\*), 5 per cent (\*\*), or 1 per cent (\*\*\*) level, respectively.



random effects (RE) panel-data models, and the 2SLS estimation. For brevity, only the results of CLAW and GENVIRON are reported here. We obtain qualitatively unchanged results as above, that the coefficient of CLAW is significant in all regressions and its sign is also consistent with that in Table 3. We still cannot obtain a robust finding of GENVIRON on family firms, as the significance of its coefficient is inconsistent in regression analyses.

## Conclusion

With high ownership concentration in family firms, the coexistence of agency conflicts between owners and managers and between large and small shareholders presents significant governance issues in emerging economies, especially those with a weak governance environment. The law and finance literature highlights the role of legal protection for minority shareholders in addressing this problem. However, studies in this strand often overlook the owner–manager conflict in family firms by considering controlling shareholders and managers as ‘insiders’ (La Porta *et al*, 1999). Also, the conventional methodology is to employ cross-country samples that tend to create estimate biases in the analysis of firm-level governance issues (Wu *et al*, 2009). This article is a first study with a new perspective and evidence to investigate within-country legal effects on twin-agency conflicts in family firms in order to better inform our understanding of the intertwining corporate governance issues in family firms.

Firm-level governance structure and its effectiveness in emerging economies are increasingly acknowledged to depart significantly from the standard corporate settings of the mature markets in the West, because of different external governance and complementary institutional conditions (Peng and Jiang, 2010; Huang *et al*, 2012; Lin and Lin, 2013). The central objective of this article is thus to address twin-agency issues in family firms associated with a potential mismatch between the concentrated ownership structure and extent of investor protection provided by China’s legal and regulatory systems. As one of the world’s largest emerging economies, China’s experience is expected to provide valuable insights on the way family businesses develop in other emerging countries.

In this article, based on previous work (La Porta *et al*, 1998; Pistor *et al*, 2000; Wu *et al*, 2009), we first refined two indices to measure the quality of China’s investor protection both at formal and at practical level. Investor protection at the formal level was measured by a time series index evaluating the evolution of legal rules pertaining to the rights of investors in China, while investor protection at the practical level was measured by a cross-provincial index indicating the effectiveness of the governance environment where firms actually operate. Using these two indices, we explored the effects of investor protection in the context of twin-agency conflicts based on a finer-grained family-firm data set from China for the period 2000–2009.





We find that since the 1990s the extent of investor protection at the formal level has markedly improved in China because of the promulgation of a series of legal rules pertaining to investor rights. Such legal development provides significant and positive effects on minimizing the agency costs of family firms, thereby supporting their growth in the economy. Further, shareholders' EXIT rights and ANTIMANAGE (protecting shareholders against managers) rights are the most prominent among the seven investor-protection indices we have developed, indicating that shareholders prefer to 'vote by foot' when facing unsatisfactory decisions made by a company, and that the owner–manager conflict deserves better attention in the analysis of agency issues in family firms.

On the other hand, our findings also show that China's governance environment is relatively inferior to the world average, especially in the efficiency of government bureaucracy and the reliability and integrity of the legal system. Despite provincial variations, such an inefficient governance environment is found to have negligible impact in family firms. The results imply that alternative mechanisms may serve as a response to deficiencies in the enforcement of investor protection in China. These results taken together provide important implications for economic reform and corporate development in emerging economies, because our findings show that the development of appropriate rules and regulations does matter, even in countries with weak enforcement of investor protection.

This article contributes to the literature in several ways. First, based on the new conceptualisation of investor protection covering twin-agency conflicts in family firms, we develop an innovative analytical approach with more comprehensive indices to better measure the extent of investor protection from both longitudinal and cross-provincial perspectives. Second, our adoption of within-country analysis mitigates estimate biases often pronounced in the country-based studies common in the existing literature.

Although much research has been conducted in the US setting, which is considered to have a strong legal protection for investors, little is known about the impact of a weak legal system on corporate governance mechanisms and firm performance (Prabowo and Simpson, 2011). This article sheds new light on the effects of investor protection on family firms in emerging economies, notably in countries sharing similar characteristics with China in terms of family-controlled governance and legal evolution. It suggests that the ineffectual investor protection prevalent in emerging markets can in part be explained by the relatively weak institutional environment, while formal legal rules do to some extent contribute to the growth of family firms in the economy. Policies to enhance legal enforcement are therefore needed in these countries. Yet, as suggested in our findings, some alternative mechanisms are found to exert impact on family firms in response to governance-environment failures.



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## Notes

- 1 CSMAR Database developed by GTA IT Co., Ltd, is a professional database system specially designed to disclose Chinese financial market information. It contains six databases covering stock market, corporation, bonds, funds, industry and macro economy.
- 2 If a threshold of 10 per cent is used in this definition, taking the sample of 2005 as an example, the sample size is noticeably reduced by 34 per cent, which may lead to an underestimation of the incidence of family firms and a distortion in the analysis.
- 3 The detailed process of assigning scores to legal investor protection index is not included here, but is available upon request.
- 4 Fan *et al* (2010) state that the aggregate score of the NERI index appears little different from that computed by Principal Component Analysis and arithmetic average.
- 5 For short panel data ( $T=10$ ), the serial correlation can be ignored.



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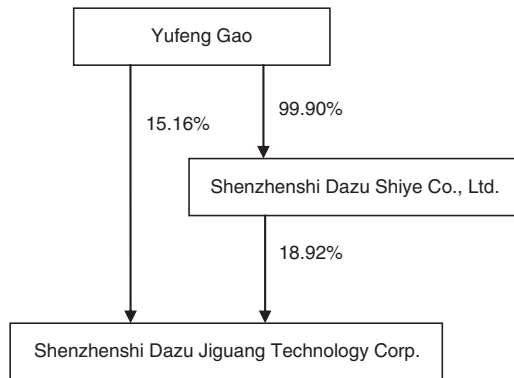


## Appendix A

### Examples of family firms

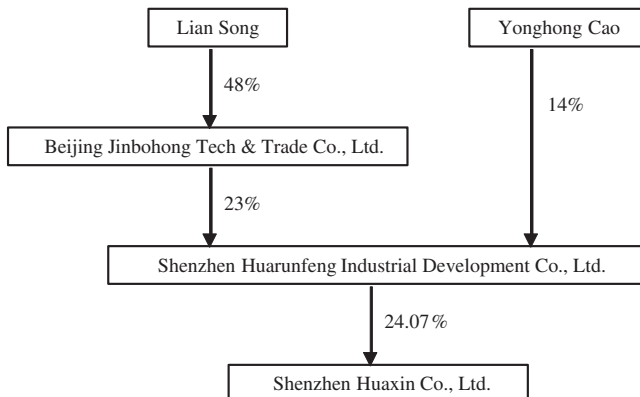
#### Case 1

Yufeng Gao is expected to have material influence over the bottom company. He holds 34.06 per cent ( $= 15.16\% + 99.90\% * 18.92\%$ ) ownership rights of the bottom company, and 15.16 per cent control rights.



#### Case 2

Lian Song holds smaller ownership rights ( $2.66\% = 48\% * 23\% * 24.07\%$ ) of the bottom company than Yonghong Cao ( $3.37\% = 14\% * 24.07\%$ ), but his control rights are 23 per cent, almost twice Cao's control rights (14 per cent). Lian Song is expected to have material influence over the bottom company.



## Appendix B

**Table B1:** Definition of legal protection index

No.	Indicator	VOICE	EXIT	SMIN	ANTIBLOCK	ANTIDIRECT	ANTIMANAGE	ANTINONTRADABLE	TEGR
1	Mandatory One Share-One Vote Rule (both multiple-voting and non-voting shares are prohibited by law, and a maximum number of votes per shareholder irrespective of the number of shares owned also prohibited)	X	—	—	—	X	—	—	
2	Vote by proxy (that is, proxy by mail allowed)	X	—	—	—	—	—	—	
3	Shares not blocked before meeting	X	—	—	—	X	—	—	
4	No registration cut-off date before meeting	X	—	—	—	—	—	—	
5	Cumulative voting for election of members of (supervisory) board	X	—	—	X	X	—	—	
6	Other rules to ensure proportional board representation (that is, rules on independent directors)	X	—	—	X	X	—	—	
7	Shareholders may take judicial avenue to challenge decisions of management or (supervisory) board	X	—	—	—	X	X	—	
8	Shareholders may take judicial avenue to challenge decisions taken by shareholders' meeting	X	—	—	X	—	—	—	
9	Current shareholders have pre-emptive rights when new shares issued by company	X	—	—	X	X	—	—	
10	Minimum percentage of shares entitling a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10%	X	—	—	—	X	X	—	
11	Minimum percentage of shares entitling a shareholder to call for an audit commission is less than or equal to 10%	X	—	—	—	—	X	—	
12	Corporate statutes required to distribute a certain percentage of net income as dividends among ordinary shareholders	X	—	—	X	X	—	—	
13	Executives (inc. general directors) appointed/dismissed by (supervisory) board rather than shareholders' meeting	X	—	—	X	—	X	—	
14	Members of management or (supervisory) board may be dismissed at any time without cause	X	—	—	—	X	X	—	
15	At least 50% of total voting shares must be represented at a shareholders' meeting for binding decisions	X	—	—	X	—	—	—	



16	Fundamental decisions, inc. charter changes, liquidation of companies, sale of major assets, issues of new shares, require at least ¾ of voting shares	X	—	—	X	—	—	—
17	All (supervisory) board members elected by shareholders (no mandatory representation of employees or public)	X	—	—	—	—	—	—
18	Right to transfer shares not restricted by law and corporate statutes	—	X	—	—	—	—	—
19	Formal requirements for transfer of shares limited to endorsement (bearer shares) and registration (registered shares)	—	X	—	—	—	—	—
20	Minority shareholders have a put option (may demand that their shares are bought by company at fair value) if they vote against fundamental decisions, inc. mergers, reorganization, sale of major assets, charter changes and so on.	—	X	—	X	—	—	—
21	Mandatory takeover bid (threshold)	—	X	—	X	—	—	—
22	Disclosure rules	—	—	X	—	—	—	—
23	Accounting and audit policies	—	—	X	—	—	—	—
24	Dividend and placement issues of shares policies	—	—	X	—	—	—	—
25	Restriction rules on self-dealing, incl. insiders' (that is, controllers, blockholders, directors and managers) compensation policy	—	—	X	X	X	X	—
26	Restriction rules on insider trading, inc. insiders' shareholding trading	—	—	X	X	X	X	—
27	Shareholder registration must be conducted by independent firm	—	—	X	—	—	—	—
28	A state agency conducts Capital Market Supervision	—	—	X	—	—	—	—
29	Rules on reform of split-share structure	—	—	X	—	—	—	X



## Appendix C

**Table C1:** Criteria for adding or subtracting scores

<i>Protective provisions</i>	<i>Laws or regulations</i>	<i>Corresponding score added or subtracted</i>
Provision first regulated by laws or regulations	Law	2
	Administrative Regulation	1
Provision previously set and regulated again by later laws or regulations	New provision is same as old one	1
	Administrative Regulation	0
	New provision stricter and more detailed than old one	1.5
	Administrative Regulation	0.5

*Note:* When the provision is positive for investor protection, we label it with an added score according to the above criteria. Otherwise, the provision will be subtracted by the corresponding score.

## Appendix D

**Table D1:** Results of legal protection index from 1991–2009

<i>Year</i>	<i>VOICE</i>	<i>EXIT</i>	<i>SMINTEGR</i>	<i>ANTIBLOCK</i>	<i>ANTIDIRECT</i>	<i>ANTIMANAGE</i>	<i>ANTINONTRADABLE</i>	<i>CLAW</i>
1991	0	0	2	0	0	0	0	2.0
1992	3	-1	6	2	2	1	0	8.0
1993	3	0	10.5	4.5	3.5	2.5	0	13.5
1994	11	4	16.5	8.5	9.5	4.5	0	31.5
1995	11	4	17	8.5	9.5	4.5	0	32.0
1996	11	4	20.5	9.5	10.5	5.5	0	35.5
1997	14	4	26.5	13.5	15	8.5	0	44.5
1998	14	4	27.5	13.5	15	8.5	0	45.5
1999	14	5.5	32.5	16.5	16.5	10	0	52.0
2000	14	5.5	36	17.5	16.5	11	0	55.5
2001	14.5	5.5	39	18	17	11	0	59.0
2002	18.5	6	42.5	21.5	21.5	13	0	67.0
2003	19	6	46	22	22.5	14	0	71.0
2004	20.5	6.5	47	23.5	24	14	0	74.0
2005	20.5	6.5	52	23.5	24	14	3	79.0
2006	32	12	66	36.5	40	23	3.5	110.0
2007	32	12	69.5	37	40.5	23.5	3.5	113.5
2008	32.5	13.5	70	39	41	23.5	3.5	116.0
2009	32.5	14	72	39.5	41	23.5	3.5	118.5





## Appendix E

**Table E1:** Definition of governance environment index

<i>Indicator</i>	<i>Definition</i>
GOVERN	Assessment of the relations between local government and market, including (i) the percentage of economic resources allocated by market; (ii) the reduction of farmers' tax; (iii) interference by the government; (iv) the enterprises' other burden except tax; and (v) the scale of local government. Sourced from NERI index between 2005 and 2007
FINANCE	Assessment of the maturity of the products market, including the competition of financial factors and marketisation of credit allocation. Sourced from NERI index between 2005 and 2007
INTERMEDIARY	Assessment of the service conditions of lawyers and certified public accountants, and the assistance level of industry associations given to enterprises. Sourced from NERI index between 2005 and 2007
JUDICIARY	Assessment of the efficiency of judicial system and administrative executing departments. Sourced from NERI index between 2005 and 2007
GENVIRON	Average of the four indicators above.

**Table E2:** Governance environment index of individual provinces in China

<i>Code</i>	<i>Province</i>	<i>Geviron</i>	<i>Govern</i>	<i>Finance</i>	<i>Intermediary</i>	<i>Judiciary</i>
AH	Anhui	6.93	9.83	7.46	6.26	4.15
BJ	Beijing	7.33	9.25	7.01	7.84	5.22
CQ	Chongqing	6.47	8.89	9.70	4.84	2.45
FJ	Fujian	7.37	10.09	8.54	5.79	5.05
GS	Gansu	4.43	6.91	5.33	4.21	1.28
GD	Guangdong	8.26	10.64	9.88	6.87	5.66
GX	Guangxi	5.33	8.94	6.76	3.62	2.01
GZ	Guizhou	4.09	6.68	6.01	3.46	0.21
HAN	Hainan	4.79	8.54	6.04	2.28	2.32
HEB	Hebei	6.63	8.69	7.93	5.97	3.91
HLJ	Heilongjiang	5.04	7.81	4.70	5.33	2.33
HEN	Henan	6.04	8.46	8.35	5.48	1.87
HUB	Hubei	6.24	9.06	7.18	5.57	3.15
HUN	Hunan	5.26	7.64	7.32	4.27	1.82
IM	Inner Mongolia	5.05	6.89	6.34	4.28	2.71
JS	Jiangsu	8.35	10.49	9.69	6.70	6.51
JX	Jiangxi	5.32	8.03	6.93	4.53	1.77
JL	Jilin	5.54	7.91	5.12	5.86	3.25
LN	Liaoning	6.81	8.53	9.25	5.64	3.80
NX	Ningxia	5.41	6.82	8.78	4.49	1.55
QH	Qinghai	4.07	5.49	4.96	2.81	3.01

**Table E2:** (Continued)

<i>Code</i>	<i>Province</i>	<i>Geviron</i>	<i>Govern</i>	<i>Finance</i>	<i>Intermediary</i>	<i>Judiciary</i>
SD	Shandong	6.94	8.76	9.74	4.66	4.61
SH	Shanghai	9.62	10.03	10.19	10.00	8.25
SX	Shanxi	5.46	6.94	7.74	5.95	1.20
SAX	Shanxi2	5.41	7.35	7.43	5.25	1.60
SC	Sichuan	6.73	9.47	7.69	5.12	4.65
TJ	Tianjin	7.07	8.83	7.45	7.32	4.70
TB	Tibet	2.32	0.00	3.56	2.59	3.15
XJ	Xinjiang	5.03	6.42	4.98	5.22	3.48
YN	Yunnan	6.10	7.72	8.19	5.25	3.25
ZJ	Zhejiang	8.96	10.00	11.49	7.66	6.70

## Appendix F

**Table F1:** Diagnostic test

	<i>SA and G</i>	<i>TUNNEL</i>	<i>Tobin's Q</i>	<i>ROA</i>
<i>Panel A: BP test for heteroskedasticity</i>				
$\chi^2$	45.52***	493.11***	393.61***	384.48***
<i>Panel B: DWH test for endogeneity</i>				
<i>P</i> -value for errors of the first stage regression	0.043	0.002	0.191	0.099

*Note:* Asterisks denote statistical significance at the 10 per cent (\*), 5 per cent (\*\*) and 1 per cent (\*\*\*) levels, respectively.

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