

Geography and Firm Performance: Evidence from Chinese Listed Private Enterprises

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A Thesis

In

The John Molson School of Business

Presented in Partial Fulfillment of the Requirements  
for the Degree of Master of Science in Administration (Finance) at  
Concordia University  
Montreal, Quebec, Canada

April, 2015

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**CONCORDIA UNIVERSITY**  
**School of Graduate Studies**

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**MASTER OF SCIENCE IN ADMINISTRATION (FINANCE)**

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## ABSTRACT

Geography and Firm Performance: Evidence from Chinese Listed Private Enterprises

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We investigate the effects of geography on firm performance and agency costs. We argue that non-urban firms, which located in sparsely populated areas, have location disadvantages. Shareholders can't efficiently oversee the management of non-urban firms because of the long distance. Using a sample of 1036 Chinese private firm observations for the year 2013, we do univariate tests and multivariate regressions to study the relationships between location dummy (equals to 1 if firms are urban-located and 0 otherwise) and firm performance. We find that urban firms have better corporate governance structure, lower agency costs and better firm performance measured by Tobin's Q. We then substitute location dummy with population size of the city to do robustness tests. The results show that firms located in populated areas perform better and have lower agency costs. According to agency literature, firms pay higher dividends to mitigate the increased agency costs. So we study the dividend policy of urban firms and non-urban firms to study whether non-urban firms have adjusted their corporate policies to solve their severe agency conflicts. Consistent to agency literature, we find that non-urban firms, which have more information problems and agency costs, pay higher dividends.

## ACKNOWLEDGEMENT

Foremost, I would like to thank my supervisor, Dr. Harjeet S. Bhabra, for his patience, encouragement and advice throughout my thesis. I am so lucky to have a supervisor who is so knowledgeable and responded to my questions so promptly. Without his guidance, I can't finish my thesis.

Also, I want to thank my committee members, Dr. Nilanjan Basu and Dr. Rahul Ravi. They provide me valuable recommendations and suggestions to improve my thesis.

Last, but not the least, I want to thank all my classmates and roommates. They gave me great encouragement when I felt frustrated during my thesis writing.

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## 1. Introduction

People hold different opinions when they talk about geography's effects on firms. Some people believe that urban location is crucial to firms' performance. As we all know, firms located in urban cities can enjoy many benefits. Urban centers have a wealth of diverse resources and are the preferred locales for many talented persons. Thus, urban firms can attract talents more easily. In addition, urban firms enjoy a higher quality of infrastructure, more availability of capital, more convenient transportation, and in general better information. Urban firms are generally more close to and easily overseen by shareholders. An urban location, therefore, offers many advantages for firms. However, technology is developing fast. With modern modes of communication, information is spreading faster and more widely. To a large extent, for many people distance is no longer an impediment. Besides, non-urban firms can enjoy some favorable policies from government, which largely offset their location disadvantages. So, many people believe that the effects of geography are weakened.

Many economic researches consider the effects of geographic factors. Location affects firm behavior to a large degree. Porter (1998) argues that competitive advantages are closely related to local things—"knowledge, relationships, and motivation that distant rivals can't match". These local things can't spread freely, resulting in performance differences among different geographic areas. Loughran and Schultz (2005) examine how location affects liquidity. They point out that investors trading more on local stocks and analysts cover more local stocks. Ivković and Weisbenner(2005) and Coval and Moskowitz (1999) also find that investors prefer local investments and they can earn more when they invest in local stocks. Acquirers show similar fascination. They prefer geographically proximate targets. (Kang and Kim, 2008) John et al. (2011) examine the effects of firm location on agency costs and dividend policy. They find that remotely located firms have higher agency costs and pay higher dividends.

Geographic factors are significantly important in China because of its large country size and many barriers to factor flow. Although there is some research on geography and firm performance in China, most these studies focus on provincial discrepancy (Wei and Fan, 2000; Xu & Han, 2005) or compare the performances of firms located in eastern and western China (Sun and Liu, 2004; Tao et al., 2005, Démurger et al. 2002). No study compares urban-located

and non-urban located firms directly. This paper attempts to fill this gap and compare non-urban firms with their urban counterparts to study how geographic factors influence corporate governance structures, firm performance and agency costs.

Like John et al. (2011), we believe urban firms can be easily overseen by shareholders because they are close to the shareholder base. We argue that urban firms have lower agency costs and less information asymmetry. Non-urban firms, because of their distance, make it costly for shareholders to monitor the management of firms. Agency conflicts are likely to be more severe in non-urban located firms as a result, which in turn can adversely affect the overall firm performance.

Our sample consists of 1036 private firm observations for the year 2013. We use both univariate tests and multivariate regression analyses to examine the governance structure of urban and non-urban firms, and the relation between firm performance and geographic location, controlling for other factors that impact performance. To classify urban firms and non-urban firms, we use two approaches. Classification A follows the *Notice of Adjusting Standards of Classifying City Size*. Firms headquartered in cities with more than 10 million people are called urban firms; otherwise, they are non-urban firms. The second approach classifies firms headquartered in one of the 30 largest statistical areas based on population size as urban firms. Both approaches have similar results. From univariate comparisons, we can see that urban firms have higher Tobin's Q and ROA. Urban boards have more directors holding firms' shares. The urban board chairman and General Manager have more ownership in the firm, which better align their interests with shareholders. This is evidence of good governance structure, less information asymmetry and fewer agency conflicts. In multivariate regressions, location dummy (equals to one if firms are located in urban area; zero otherwise) is significantly positively related to Tobin's Q, which further suggests that urban firms have better firm performance and lower agency costs. We then do robustness tests by measuring the location effects with the population of the city. Tobin's Q increases with population size of the city. This is consistent with our preceding results that urban firms have better performance and lower agency costs because we define populated areas as urban areas. According to agency theory, firms with higher agency costs pay higher dividends. Dividends have signaling function and can help resolve agency problems. So, we then study the

relation between dividends and firm location to see how firms deal with agency costs. Our results are consistent with John et al. (2011). Non-urban firms that have higher agency costs have higher level of dividends payout. In short, we find that urban firms have better governance structure, better firm performance and lower agency costs. Non-urban firms pay higher dividends compared to their urban peers to reduce agency conflicts.

Our paper is meaningful in four aspects. Firstly, it gives some information to Chinese policy makers. Aiding non-urban private firms is part of Chinese urbanization policy. Chinese government encourages the development of non-urban private firms and gives them many preferential policies. However, these policies can't cover the shortage of location disadvantages. Urban firms perform better than non-urban firms. The differences between urban and non-urban areas are still obvious. Secondly, investors and shareholders can be inspired by this paper. Non-urban firms have more agency costs and worse firm performance. Shareholders of non-urban firms should stay alert and pay more attention to the firm management. Thirdly, this paper supplements the existing literature of geographic economics by adding information about emerging markets. Literature about geography and agency costs is rare, let alone studies using data of emerging markets. Our research and results give researchers more information on agency costs in China.

Last but not the least, our findings challenge the argument that geography is playing a weaker and weaker role. Large cities are more open and owners in large cities have more opportunities to learn advanced management skills. So firms in large cities tend to be better organized and positioned to attract high quality manpower. Also, firms in large cities are close to shareholder base, which make them easily overseen by shareholders. Technology has enhanced the circulation of information. We can learn about firms through press releases, corporate announcements on the companies' webs and through a variety of online resources. Notwithstanding the advantages of technology, the disadvantages for non-urban located firms in attracting a higher quality of management talent and the close oversight of shareholders remain issues.



The rest of the paper is organized as follows. The next section reviews the literature on relationships among geography, agency costs, corporate governance structure and firm performance. The third section presents the data and variables and discusses the methodology. The fourth section shows the results of geography's effects on firm performance. Next section tests the robustness. The sixth section discusses how firms deal with agency costs. The last section concludes with a summary.

## 2. Literature review

In this section, we review some literature that is related to this paper. The first part is about the effects of geography on firm performance. The next parts discuss the function of corporate governance mechanisms, debt policies and dividend policies from the view of agency theory.

### 2.1 Geography and firm performance

From the World Development Report on Economic Geography and the rise of the New Economic Geography, we can see that geography has been regarded as an important factor affecting economic performance. This interest in the effects of geography is also shown in the growing literature discussed as follows.

Dollar et al. (2005) demonstrate that productivity and growth of firms are linked to the reliability of infrastructure and financial services available. As a result, urban firms seem to have an advantage because they are close to higher-quality infrastructure and financial services.

Audretsch and Dohse (2007) study firm performance of new technology firms and geographic location. They find that location affects firm performance as measured by employment growth. They attribute the effects to the difference in knowledge resources. Rijkers et al. (2010) examine how location affects performance of manufacturing enterprises in rural and urban Ethiopia. They find that urban firms grow more quickly than rural firms. Although their results show that there is no obvious difference on factor productivity between urban firms and rural firms, they document that remotely located firms are less productive.

Recent researches also examine the relationship between geography and various characteristics of the firms. John et al. (2011) document that distance is positively related to agency costs. They

argue that shareholders have more difficulties to monitor and oversee the remotely located firms. So remotely located firms have more agency costs and, as a result, pay more dividends to mitigate the agency conflicts. They argue that information on firms' management is largely soft information that is hard to monitor with long distance. Technological advances can reduce geographic barriers but is not effective when it come to soft information. Knyazeva, Knyazeva and Masulis (2010) report the relationship between geography and board composition. If firms are close to a large pool of talented directors, they are more likely to have independent boards and attracted the talented directors to the board. Loughran and Schultz (2006) find that "rural firms wait longer to go public, are less likely to conduct seasoned equity offerings, and have more debt in their capital structure than otherwise similar urban firms". John and Kadyrzhanova (2008) study peer effects in corporate governance. According to their findings, good governed neighbors have positive influence on a firm's governance. Bouwman (2012) documents that executives' compensation is influenced by neighbor firms.

## 2.2 Agency costs and corporate governance structure

Agency costs arise when the principal appoints an agent to act on behalf of him/her. (Jensen and Meckling, 1976) For firms, the principal is the owner and the agent is the manager. Agency theory focuses on the conflicts between the principals and the agent. There is an extensive body of research that examines how an effective corporate governance structure can be implemented to reduce agency costs and improve firm performance. Most of these papers focus on how to design corporate governance mechanisms that will motivate managers to make choices in the shareholders' interests.

Gompers, Ishii, and Metrick (GIM, 2003) explore the influence of corporate governance on firm performance. They find that firms with strong shareholder rights have better returns than those with weak shareholder rights. Many corporate governance advocates cite this paper as good evidence that better governance results in better performance. Bhagat and Bolton (2008) confirm GIM's results by considering the endogeneity of relationships among governance structure, firm performance, and capital structure. Thus, shareholders can play an important role in reducing agency conflicts and improving firm performance by adopting an effective governance structure.

Usually, shareholders exercise their rights through shareholder meetings. If shareholders participate actively and shareholder voting fulfills its objectives, shareholder meeting is an optimal instrument to monitor and oversee managers and mitigate agency conflicts. However, some researchers question the function of shareholder meetings. After studying the voting results for over 6,000 proposals at shareholder meetings of large US firms during 1994 to 1997, Maug and Rydqvist (2001) find that management proposals always passed and shareholders' proposals usually failed. The "shareholder democracy" model, therefore, does not appear to be as effective and good as it seems. Berle and Means (1932) point out in their book that while the proxy or agents in shareholder meetings are legally representatives of shareholders, they are "dummy for the management".

In addition to shareholder rights, a good board structure also helps to reduce agency costs and improve firm performance. Corporate boards can be seen as good measures of governance because boards are empowered by shareholders to directly control management. They can affect important firm decisions, including investing policy, management compensation policy and the board governance itself. (Bhagat and Bolton, 2008) The board effectiveness in its monitoring function is determined by the corporate board's characteristics, including board size, board independence, board activity, stock ownership and compensation of board members and chairman/CEO duality.

Scholars haven't reached a consensus on the relationships between board size and firm performance. Although the capability for monitoring increases with the number of directors, the benefits may be offset by the incremental cost of less communication and complicated decision-making process because of larger groups (John and Senbet 1998). Singh and Davidson (2003) find that smaller boards function the same as large boards in reducing agency costs. Yermack (1996), Eisenberg et al. (1998), Mak & Kusnadi (2005) and Andres et al. (2005) document that board size is inversely related to firm value.

Agency literature suggests that independent directors can better monitor the management team and resolve, or at least alleviate agency conflicts. Brickley et al. (1994) use a sample of firms adopting poison pills and use the event-study methodology to show that outside directors can

protect shareholder interests. Independent directors are admired because they are usually knowledgeable and experienced. The independent directors are often called “professional referees” at stake (Fama, 1980). Fama and Jensen (1983) argue that outside directors incline to monitor management because they need to protect their reputations. Schellenger et al. (1989) find a direct relationship between board independence and firm performance. Baysinger and Butler (1985) find a weak positive but lagged relation between firm performance and independent directors. However, there are many researchers who do not find any significant relation between board independence and corporate performance. Hermalin and Weisbach (1991) find there is no relation between board composition and firm performance. Bhagat and Black (2002) also find no relation between independent directors and long-term firm performance. Bathala and Rao (1995) explain this insignificant relationship by studying the association between board independence and other “agency conflict-controlling mechanisms”. They document an inverse relationship and suggest that board composition and firm performance may not have any direct relationship because of the utilization of alternative agency conflict-controlling mechanisms.

Board activity is also shown to be related to firm performance. Frequency of board meetings is a good measure of the intensity of board activity and the quality of its monitoring. Conger, Finegold and Lawler (1998) suggest that board meeting is an effective instrument to improve board effectiveness. The study suggests that directors can better advise, monitor and discipline management and protect shareholders’ interests if they frequently meet. Ntim (2009) also find this positive relationship. Ntim and Osei (2011) investigate the impact of corporate board meetings on corporate performance with a sample of South African firms and find that frequently met corporate boards tend to generate higher financial performance. Vafeas (1999) argues that regular board meetings allow directors to have more time to set strategy of the firm and evaluate managerial performance. So directors are informed and knowledgeable of the development of the firm and can address emerging problems more efficiently (Mangena et al., 2012).

Stock ownership of board members is another effective mechanism to control agency costs. Board directors are appointed by shareholders and monitor managers on behalf of shareholders. If directors hold shares in the firm, they themselves become shareholders and are willing to

spend more energy to perform their responsibilities because this relates to their own interests. Brook et al. (2000) report that, in the banking industry, outside directives' ownership can enhance managers to act in the shareholders' interests. Bhagat and Bolton (2008) document that stock ownership of board members has a significant positive relation with current and subsequent operating performance. Compensation is another mechanism to encourage directors to assume responsibilities. If the compensation of directors is made sensitive to firm performance, directors have increased motivation to improve firm performance to realize a higher salary.

Another heated debate about the governance structure in the agency literature is Chairman/CEO duality. According to agency theory, dual CEO leadership structure reduces board effectiveness and intensifies CEO entrenchment. Separating ownership and control is seen as a way to mitigate agency conflicts. Many government regulators, like SEC, encourage firms to split the titles (Yang and Zhao, 2012). Bhagat and Bolton (2008) find that firms behave better when CEO and board chairman positions are separate. However, there are some empirical results suggesting firms with duality titles perform better. According to Yang and Zhao (2012), "duality firms outperform non-duality firms by 3% when competition intensifies". The advantage of duality firms over non-duality firms is more obvious when information costs are higher for the firm. So the effects of CEO duality on firm performance are still ambiguous.

In addition to an efficient board, management ownership and management compensation are also considered as effective mechanisms to reduce agency costs and improve firm performance. According to the agency model, managers and shareholders may have a divergence of interest, causing managers pursuing their own interests at the cost of shareholders' benefits. Contracts cannot solve this problem, but the ownership by manager can be a good instrument to realign shareholders' and managers' interests. Jensen (1993) put forward the 'convergence of interest' hypothesis. He argues that managerial ownership can help alleviate principal-agent conflict. Ang et al. (2000) use Jensen and Meckling's (1976) zero agency-cost firms as the base case and analyze the Federal Reserve Board's National Survey of Small Business Finances (NSSBF) data. The database includes owner-manager firms and firms managed by outsiders who don't have equity stake in the firm. They find that firms with outside managers have higher agency costs than those with inside managers. They also find that agency costs decrease when managers'

stock ownership increases. Singh et al. (2003) extend the work of Ang et al. (2000) by using large firms. They report that, in large publicly traded firms, agency costs are also inversely related to managerial ownership. Hermalin and Weisbach (1991) use Tobin's Q as the measure of performance and find a positive relation between Q and stock ownership by top management when ownership levels are less than 1%. The relation becomes negative when ownership exceeds 20%. Between 1% and 20% levels, Q first decreases and then increases with ownership. John et al. (1998) suggest that at lower levels of ownership, management's interests are better aligned with those of shareholders as the ownership increases, and "management is not insulated from other disciplinary devices". The negative relationship at higher level of ownership is because the increasing insulation from disciplinary devices more than offsets the benefits of increased alignment of interests.

Compensation structure of management is also the subject of debate. Incentive-based compensation contracts that reward managers for good performance and behaviour can encourage managers to act in the best interests of shareholders. Executives' equity incentive is an important part of compensation structure. As we have discussed, giving managers equity is positively related to firm value. Other than stock-based compensation, other kinds of compensation is also considered effective. Currently, Chinese firms rarely grant executive options, as they were not allowed until recently (Kato and Long, 2006). Existing studies have shown a positive relation between executives' pay and firm performance (Canyon and He, 2011; Kato and Long, 2006; Firth et al, 2006). However, Jensen and Murphy (1990) also point out that the link between pay and performance is too weak to provide incentives for CEO because of the political restrictions of management compensation.

### 2.3 Agency costs and debt policy

The previous agency literature suggests that debt may be useful in controlling agency costs. Jensen (1986) argues that debt can reduce managers' control on free cash flow because firms have to pay debt holders periodically. This can restrict managers' ability to abuse firms' free cash flow and engage in the non-optimal projects. Grossman and Hart (1982) suggest that debt can force managers to consume fewer perquisites and act to maximize shareholders' profits. McKnight and Weir (2009) also find that debt can help mitigate agency conflicts. Besides, high

leverage firms raise money in the market frequently. They attract the attention of various financial market participants. Management have fewer opportunities to obtain private profits.

#### 2.4 Agency costs and dividend policy

Asquith and Mullins (1983) document a direct relationship between dividend level and market return. With the existence of information asymmetry, dividend payment is a signal of good profitability sent by management. (Miller and Rock, 1985) According to Myers (2000), dividends are signs of good performance and help attract funding from investors for the following projects. Lower level of previous dividend payment directly affects the management's future financing ability. In addition to the signaling theory, dividend payment is seen as a type of corporate payout that can help resolve agency problems. According to Knyazeva (2007), management pays dividends as a commitment that they won't "steal" the profits of shareholders. Shareholders demand dividends to make up the value loss caused by agency conflicts. Rozeff (1982) documents that higher dividend payouts are related to firms with higher agency conflicts. These firms pay high dividends to ease agency conflicts, especially when they have high free cash flow. Dividends perform such a function because the payment of dividends reduces the amount of discretionary money available for management (Jensen, 1986). Also, if funds are used up through dividends payment, firms have to go to the capital markets to raise money. The money raising process usually makes firms focus of the public and deter management's bad behavior (Easterbrook, 1984).

Reasonable level of dividends should be assured to reduce agency costs on one hand and give management enough money to invest in good projects on the other hand. For firms with fewer investment opportunities and more free cash flow, agency problems are more severe and firms are more likely to pay high level of dividends. (Jensen, 1986) So, John et al. (2011) argues that remotely located firms with lots of free cash flow and fewer growth opportunities pay higher dividends. Centrally located firms are geographically approximate to shareholder base. They have lower dividend payout because their management decisions can be better monitored by shareholders. They also find that remotely located firms are less likely to substitute regular cash dividends with special dividends or repurchases. These remotely located firms would like to

increase dividends and reluctant to cut or suspend dividends. All these results suggest that remotely located firms “face a greater need for a dividend precommitment”.

### 3. Data and Methodology

The location and performance of state owned enterprises (SOEs) are largely affected by government policy. SOEs do not have much freedom in organizing and locating their operations. To examine the effects of geography on corporate governance structure and firm performance, we choose non-SOEs as our study sample. Our data come from the China Stock Market & Accounting Research (CSMAR) Database. It is a comprehensive database designed and developed by GTA Information Technology and covers data on the Chinese stock market and information on Chinese Listed Firms.

In China, regular domestic stocks are issued as A-shares. B-shares are denominated in foreign currency. In this study, we report the characteristics of private listed firms offering A-shares. Our initial sample consists of 1434 private firms recorded by China Listed Non-state-owned Enterprise Database at the end of the year 2013. We exclude 265 firms that are indirect listing. These firms’ shares are controlled by the state at the time of listing but then transferred to natural persons or non-state-owned enterprise. An additional 119 firms with missing information on privatization are also removed. We then exclude 13 special treated firms and one financial firm. Special treatment stocks carry “ST” tags and have abnormal financial situation. Most of their financial data in our sample are outliers. These restrictions result in a final sample of 1036 non-SOE firms that trade on the two major stock exchanges in China, Shanghai and Shenzhen.

Table 1 shows the industry distribution of the sample firms. The majority of the firms in the sample are from the manufacturing and information technology (IT) industry. China has a comparative advantage in the manufacturing industry because of the availability of cheap labor. Manufacturing is the largest and a pillar industry of China and is of great importance for economic growth. From the table we can see that 76% of listed private enterprises are manufacturing firms. Besides manufacturing, 89 listed private firms are from information technology industry. Although they only account for 8.6% of our sample, this segment of the market is growing at a rapid rate. With the general saying, “Science and technology constitute



the primary productive force”, the Chinese government attaches great importance to the information technology industry. Research and advisory firm Gartner, Inc. points out that China is a huge IT market full of potential and competitiveness.

To compare urban firms and non-urban firms, we use two approaches to classify geographic location. We use CSMAR data on locations of firms’ headquarters. In Classification A, we follow the *Notice of Adjusting Standards of Classifying City Size* issued by Chinese government. Cities with more than 10 million populations are called megacities. There are 13 megacities in China based on population size reported in the sixth national population census in 2000: Chongqing, Shanghai, Beijing, Chengdu, Tianjin, Guangzhou, Baoding, Haerbin, Suzhou, Shenzhen, Nanyang, Shijiazhuang and Linyi. Firms that set headquarters in these cities are classified as urban-firms. The rest of the sample is classified as non-urban firms. *Location* dummy equals to 1 if firms are classified to be urban and 0 otherwise. Under this classification, 34% firms are located in urban areas. Manufacturing is still the largest industry in urban areas, which accounts for 66.3% of the sample. Information and Technology comes next as the second largest industry, accounting for 16.7% for the sample. For non-urban firms, manufacturing is also the dominant industry and while other industries constitute only a small part of the sample. In the second approach to classification (Classification B), we define firms located in one of the 30 largest statistical areas as urban firms. According to this approach, half of our sample firms are classified as urban firms. Similar to Classification A, manufacturing is the most dominating industry in both urban area and non-urban areas. For the non-urban area, its proportion is even larger. For the IT industry, 84% of information and technology firms are located in urban areas, which makes IT industry the second important industry in urban area. But for non-urban areas, no other industry accounts for more than 10%.

In our paper, we study corporate governance and various measures of firm performance to compare the agency costs of urban firms and non-urban firms. If firms are effective in controlling agency conflicts and ensuring management act in the shareholders’ interests, firms will have better corporate performances. To study the performance differences between urban firms and non-urban firms, we do a univariate comparison first. We compare firm performance, firm characteristics and governance characteristics of urban firms and non-urban firms. We use

Tobin's Q as our main proxy for firm performance. Tobin's Q is the ratio of firm market value (book value of total assets plus market value of common equity minus book value of common equity) to book value of total assets. Return on assets, ROA, is our alternative measure for firm performance. ROA is calculated using two methods: ROA1 is the ratio of net profit after deducting non-recurring profit and loss to total assets while ROA2 is the ratio of operating profit to total assets. Firm characteristics include firm size (measured by total assets), firm age and firm leverage (measured by long-term liability). Governance characteristics variables include number of shareholders, frequency of meeting of shareholders, frequency of meeting of board of directors, annual general meeting (AGM) attendance rate, board size, proportion of independent directors, chairman and GM duality, number of directors holding the firm's share, number of non-paid directors, proportion of shares held by board chairman, proportion of shares held by GM, compensation for top3 directors, and compensation for top3 executives. Compensation for directors and executives are the ratios of compensation (adjusted by cities' costs of living) to operating revenue. We use the ratio of compensation to sales because Kedia (1997) finds that top management's compensation has higher sensitivity to sales than to firm value. The data of cities' living costs come from *Report on the Quality of Life in Chinese Cities (2013)*.

Beside univariate tests, we also conduct cross-sectional analysis to study the performance and agency differences between urban and non-urban firms. We regress firm performance variables on location dummy (under Classification A and Classification B separately), firm characteristics variables and corporate governance variables. We also include industry dummy variables in our regressions.

To further examine the relation between firm performance and geographic location, we conduct additional robustness tests. We substitute the location dummy with the population density of cities where firms locate their headquarters. If the sign of population variable is positive, firms located in larger urban cities perform better than those located in smaller cities. If the sign is negative, firms located in smaller non-urban cities perform better.

After investigating the differences of corporate governance structure, firm performance and agency costs between urban-located firms and non-urban located firms, we study the dividend

policy of urban firms and non-urban firms to examine how firms deal with agency costs. According to agency theory, firms with increased agency costs usually pay higher dividends to alleviate the agency conflicts. To test whether this is the case in our sample, we run regressions of dividend yield (the ratio of cash dividends to the market value of the firm) on the location dummy.

## 4. Empirical Results

### 4.1 Univariate comparison: Classification A

Our analysis begins with the univariate comparisons of firm performance and corporate governance structure of urban firms and non-urban firms, presented in Table 2. The significance of the differences is tested by t-tests. We can infer from the table that urban firms have better firm performance, better corporate governance structure and fewer agency costs.

Panel A compares the firm characteristics. We find significantly better firm performance among firms located in urban areas. Compared to urban firms, non-urban firms have a lower Tobin's Q and 0.6% lower ROA as measured by the ratio of net profit after deducting non-recurring profit and loss to total assets. There is no statistically significant difference in the firm age for the two groups. Non-urban located firms, on average, have higher long-term debt. The difference is statistically significant and is close to 1%. According to our literature review, debt may be useful in controlling agency costs. However, the average long-term leverage for Chinese private firms is only 4%, which is much lower than the average long-term of US firms (around 20%) reported by John et al. (2011). The lower leverage ratios documented for Chinese privately listed firms in this paper are consistent with the evidence presented in Bhabra, Liu and Tirtiroglu (2008). Compared to US firms, the low leverage suggests that the monitoring function of long-term debt holders may be very weak in China. In addition, bankruptcy implementation is weak in China. (Allen et al., 2005) Lacking strong and efficient penalty for bad firm performance, rights of creditors are quite limited and creditors can't monitor and discipline management in debt and optimal capital structure.

Non-urban firms have larger firm size measured by total assets. The t-test for the difference in firm size is not significant when we compare firms' total assets directly because total assets are

not normally distributed. When we use the log transformation of total assets, non-urban firms are significantly larger than urban firms. Manufacturing is the main industry for private firms and labor is the key factor for manufacturing. According to Sridhar and Wan (2010), labor intensity is significantly negatively related to the firms' likelihood to locate in medium or large cities. This is because large cities have "higher training costs and attrition rates"; employees in large cities are better aware of labor regulations and labor rights than employees in small cities and they ask for higher salaries. Sridhar and Wan (2010) also report that large cities in China have more restrictive labor regulation and enforcement. Firms planning to hire more employees and grow larger, thus, have the incentive to locate away from large cities. In addition, the Chinese government attaches great importance to the development of non-urban private firms because it is a strong power to promote the urbanization in China. Chinese government gives preferential policies to encourage the development of non-urban firms, like tax preference, loan subsidies, and encourage talents to work in non-urban areas. Private firms in small cities also have close relationships with local governments. Some firm leaders are elected as the local leaders to combine the development of enterprise with the development of the local area. So local governments would like to give many special treatments to non-urban private firms so as to boost the local economy.

Panel B presents the univariate comparisons for corporate governance characteristics. Non-urban firms have more shareholders than urban firms. This is reasonable because non-urban firms are larger. The difference of number of shareholders is not significant because of the non-normal distribution. When we use the log transformation of the number of shareholders, the difference is statistically significant. Although we find that shareholders for urban firms meet slightly more frequently and the attendance rate for shareholders' meetings is a little higher than those for non-urban firms, the differences are small and insignificant.

We find significantly smaller boards and a higher proportion of independent directors on the boards among urban firms. Urban firms hold more meetings of the board of directors than non-urban firms. Based on extant research on corporate governance, these are signs of good board structure which can help reduce agency costs (Yermack , 1996, Eisenberg et al. , 1998, Mak, and Kusnadi, 2005, Andres et al., 2005, Fama and Jensen , 1983, Wang et al, 2006, and Conger,

Finegold, and Lawler, 1998). Board chairman of urban firms hold more shares than that of non-urban firms. The difference is significant and close to 3.7%. Board chairman who has more ownership of the firm has more incentive to monitor management because his/her own interests are closely tied to firm value. We can deduce that board chairman of urban firms may better assume the monitoring responsibility. Besides chairman ownership, the chairman compensation is also more sensitive to sales among centrally located firms. But the difference is not significant. Of CEO duality, around 47% of the urban firms have dual titles, but the percentage for the non-urban firms is only 36%. This suggests that urban firms may have more entrenchment. However, according to Liang and Li (1999), duality does not affect firm performance in Chinese private listed firms. Besides, the problem of CEO/duality is less severe in China than in the United States and other developed country (Jiang and Kim, 2014). The evidence suggests that urban firms have a better board structure overall compared to non-urban firms. In addition to the better board structure, urban firms also have significantly larger GM ownership and more sensitivity of executives' compensation. These results also confirm the better corporate governance structure of urban-located enterprises. The high ownership of managers is not surprising because most non-SOEs in China are family firms or firms whose large shareholder-founder is the manager. (Jiang and Kim, 2014)

#### 4.2 Cross-sectional analysis: Classification A

Although univariate tests show that urban firms have better corporate governance, fewer agency conflicts and better firm performance, we cannot yet state the relationships among location, firm performance, and corporate governance without controlling for all factors. Cross-sectional regressions are used to formally test the effects of firm location on agency costs and firm performance. The main results are shown in Table 3. In Columns 1 and 2, the dependent variable is Tobin's Q, and in Columns 3 to 6, it is ROA. After accounting for firm characteristics and governance characteristics, we find that firm performance is positively associated with central location.

Panel A presents the regression results of firm performance measures on location dummy and firm characteristic variables. There is a significantly positive relationship between central location dummy and Tobin's Q when we control for firm characteristics variables. If firms set

headquarters in a big city, they are likely to have a 0.5 higher Tobin's Q than their counterparts located in smaller cities. The difference reduces to 0.3 after we control for industry effects. Firm size and firm leverage are also significantly associated with Tobin's Q. Consistent with Cabral (1995), smaller firms have better growth opportunities. In line with Graham et al. (1998), profitable firms have less leverage. However, this is not consistent with agency theory. We conjecture that this is likely because Chinese firms' level of leverage is much lower than that of US firms; so long-term debt holders in China cannot discipline managers as effectively as in the US. Another possible reason is the limited rights of Chinese creditors. The negative relationship can be explained by Myers (1977) analysis of agency costs of debt and optimal capital structure. Myers argues that firms that have more long-term debt are more likely to miss good investment opportunities. For firms with higher growth opportunities, this underinvestment problem is more severe. So leverage ratio is negatively related to Tobin's Q, the measure of investment opportunities and firm performance.

The location dummy is positive and significant in our regressions when we measure firm performance by return on assets. But after we control firm characteristics and industry effects, the relationship between firm performance and central location is not significant. Firm size is positively associated to ROA. Firm leverage is still negative, like the regressions of Tobin's Q. Firm age always enters into regressions insignificantly.

In Panel B, we run regressions of firm performance on location dummy and governance characteristics. Location coefficient is statistically significant and positive when dependent variable is Tobin's Q. Urban firms perform better when we control for corporate governance variables and industry effects. The difference is around 0.27. The number of shareholders is negatively and significantly related to Tobin's Q. This is in line with the result that smaller firms have larger Tobin's Q. The coefficient of frequency of shareholders meetings shows negative and significant signs. According to *Companies Act*, a shareholder meeting should be held once a year. Interim meetings can be called under some circumstances, such as insufficient directors, great losses and so on. So the negative association between the frequency of shareholders meetings and firm performance is explicable because the more bad conditions firms meet, the

more frequent they will call the interim meetings. The attendance rate of annual general meeting is found to be insignificantly related to Tobin's Q.

According to the agency literature, board of directors is often seen as the most effective internal governance mechanism to control agency conflicts. However, in China, board does not appear to be effective. Among our board characteristic variables, only frequency of board meetings and compensation for directors are significantly related to Tobin's Q. The coefficient of frequency of board meetings is positive. If board members meet more, they can better perform their duties to monitor management, reduce agency costs and hence improve firm performance. Sensitive compensation is also believed to be a good approach to encourage directors to actively monitor management on behalf of shareholders. We note that there is a positive association between Tobin's Q and compensation for top 3 directors.

Many coefficients of board variables are not statistically significant, including board size, proportion of independent directors and duality. The reason may be that board meetings and board compensation function are better proxies for governance. According to Fosberg (1989), in addition to the better function of other internal mechanisms, there is another reason explaining why outside directors cannot positively impact firm performance. Management can interrupt the election process of directors to appoint independent directors who are incapable or unwilling to restrain management. Under this scenario, outside directors who are influenced by management cannot effectively assume the monitoring responsibilities and protect shareholders' interests.

Chinese corporate governance also has its own special and unique characteristics that can explain the weak function of the board. Chinese board structure is "largely appears to be the outcome of regulations and not based on firm-specific characteristics" (Jiang and Kim, 2014). In China, listed firms are required to have a board and there are special rules for board size and board composition. The board should have at least 5 directors, but the number of directors cannot exceed 19. Since June 30, 2003, a listed firm is required to have at least 1/3 of its board composed of independent directors. The main function of independent directors is different from the United State. One of the main responsibilities of independent directors is to monitor large controlling shareholders on behalf of minority shareholders; knowing this situation, large

shareholders usually make their listed firms maintain the minimum number of independent directors. (Jiang and Kim, 2014) In our sample of 1036 private listed firms, there are 8 directors on the board on average, and the percentage of independent directors is 38%, just a little higher than the required 33%.

General Manager's ownership and compensation are not significantly associated with Tobin's Q. Similar to the reason for the insignificance of some board characteristics, it is possible that other mechanisms behave better and do not leave much room for GM ownership and GM compensation to function.

Location dummy is still not significant when we estimate the regression using ROA, even though we use two methods to calculate ROA. Some governance variables enter into the regression significantly. Frequency of shareholder meetings is negatively and significantly related to ROA, similar to the results as in regressions with Tobin's Q. AGM attendance rate have positive relationship with firm's profitability. If more shareholders participate in the AGM, shareholders meetings are less likely to be manipulated by management. Boards with more directors holding firms' shares and boards with directors holding fewer shares are more effective.

Panel C estimates the regression of firm performance on location dummy, firm characteristics variables and governance characteristics variables. Like the results in Panels A and B, the coefficient of location dummy is positive and statistically significant in Column 1 and 2. Frequency of board meetings and compensation for the directors are significantly and positively related to Tobin's Q. Firm size is negatively associated with Tobin's Q and the coefficient estimate is statistically significant. The significance of long-term leverage becomes weak when we regress on all variables and the significance disappears after we control for industry effects. This further confirms our explanation that debt holders likely have limited ability to monitor management activities. When we use ROA to measure firm performance, the effects of location are insignificant, similar to the results obtained in Panels A and B.

The results in Table 3 are in line with the view that firms located in non-urban area have more agency costs and relatively worse performance. The agency conflicts are likely caused by the



relatively bad governance structure and the greater distance from the shareholder base that limits the ability of investors to monitor management.

#### 4.3 Univariate comparison: Classification B

Under classification B, firms are classified as urban-located if their headquarters are located in the top 30 metropolitan statistical areas according to the population size reported in the 2000 Census. As under classification A, we do both univariate tests and cross-sectional regressions to study the relation between firm location, corporate governance structure and firm performance. Tables 4 and 5 present the results.

Table 4 presents the results of univariate comparisons. Similar to results in Table 2, firms located in the top 30 metropolitan areas have better performance. Their average Tobin's Q is significantly higher by 0.53 than those located in non-urban areas. Urban firms' ROA measured by the ratio of net profit after deducting non-recurring profit and loss to total assets is around 0.6% and is significantly higher than those of non-urban firms. The difference of firm age between urban-firms and non-urban firms is not significant. Additionally, firms located in non-urban areas have more long-term debt and urban firms are no larger than non-urban firms. Corporate governance characteristics are described in Panel B of Table 4. Non-urban firms have more shareholders and more frequent shareholders meetings. The ownership structure of non-urban firms is more dispersed and these firms have more abnormal conditions requiring the meeting of shareholders. Urban firms have more directors holding firms' shares and board chairmen of urban firms hold more shares. This suggests that interests of directors of urban firms are better aligned with shareholders. They monitor managers for the interests of shareholders, as well as to protect their own interests. The proportion of shares held by urban firm managers is 4% higher than that of non-urban firm managers. The difference is significant, which suggests a better alignment of interests between urban managers and shareholders. Urban areas have more firms that have CEO/chairman duality, a similar situation presented by Table 2.

#### 4.4 Cross-sectional analysis: Classification B

The results of cross-sectional regressions are shown in Table 5. Panel A presents the regressions of firm performance on location dummy and firm characteristics. Location dummy is positively

and significantly related to Tobin's Q while firm size and firm leverage are inversely related to Tobin's Q. Results of regressions on location dummy and variables of corporate governance characteristics are presented in Panel B. Coefficients of location dummy are also positive and statistically significant. Similar to the results in Table 3, board activity and directors' compensation are two effective mechanisms in resolving agency conflicts and improving firm performance. Panel C presents the results of regressions of firm performance on location dummy and all control variables. The positive sign and significance of location dummy still holds. The coefficients of frequency of board meetings and directors' compensation are still positive and significant, which further confirms the importance of the two mechanisms. Firm size is negatively related to Tobin's Q. The significance of leverage coefficients disappears and firm age is still insignificant.

The results of ROA under classification B are similar to those presented earlier. We use both the ratio of net profit after deducting non-recurring profit and loss to total assets and the ratio of operating profit to total assets to calculate ROA. The coefficients on the location dummy are not significant with specification of ROA measure.

## 5. Robustness tests

In addition to the location dummy studied thus far, we also use the population of the city as a measure of location effects. We regress firm performance on city population along with the same control variables. The results are shown in Table 6.

Panel A shows the regressions of firm performance on population and firm characteristics. Population of the city where firms are headquartered is positively correlated to Tobin's Q with the significance at 0.01 levels. Thus, firms located in populated areas have better performance than those located in sparsely populated areas. Although larger cities have their own problems, such as congestions and increased commute times, higher cost of living etc., they also present substantial opportunities as well as a higher quality of life, for example with arts and culture. These advantages possibly attract highly talented individuals to larger cities. Thus, firms in larger cities can attract better management talents and be organized in a more efficient way. In addition, firms in populated areas are geographically close to shareholder base. These firms may

have lower agency costs because of the close supervision of shareholders. Firm size and long-term leverage enter into the regression negatively and significantly. Population of the city is also positively related to ROA measured by ratio of net profit after deducting non-recurring profit and loss to total assets. The significance is at a 0.1 level.

Panel B presents the results of regressions on population and corporate governance characteristics. We find that, in Column 1 and 2, Tobin's Q is positively associated with population of the city it is headquartered in. The governance mechanisms, frequency of board meetings and compensation of directors, enter significantly in the regression, similar to the results obtained earlier. However, in Column 3 to 6, after we control for the governance characteristics and industry effects in the regression, population is no longer significantly related to ROA, but it is still significantly related to Tobin's Q.

In Panel C, we relate firm performance with population and all control variables. The population variable has a positive sign as before. The frequency of board meetings and compensation directors are still two effective mechanisms improving firm performance. Firm size is negatively related to Tobin's Q. ROA measured by ratio of net profit after deducting non-recurring profit and loss to total assets is positively associated with population of the city before we control industry effects. However, once again the significance disappears after we consider industry effects.

The results in Table 6 are consistent with those presented in Table 3 and Table 5. Firms located in cities with large population perform better than those located in cities with smaller populations. They also have a better governance structure. Being close to the shareholder base, shareholders are able to better monitor and oversee management activities. Overall, the evidence suggests that firms located in large population cities are inclined to have better governance structure, fewer agency costs and better firm performance.

## 6. Dividend policies of urban and non-urban firms

In the preceding discussions, we explained the effects of geography on firm performance as owing to agency costs. To further study the relation between location and agency costs, we

examine the effects of firm location on dividends to see how firms deal with their agency costs. According to the agency literature, payment of dividends can discipline managers as it entails a commitment to disburse cash flow to shareholders on a regular basis. Firms that maintain a high payout policy prevent the accumulation of resources that can be potentially overinvested by managers or misappropriated as excessive perks. So firms with potentially high agency costs benefit by maintaining a high dividend payout ratio. We study the relation of dividends and firm location by univariate tests and cross-sectional regressions.

### 6.1 Univariate tests of dividends: Classification A

From Table 7 we can see that 84% of urban firms paid dividends in 2013. For non-urban firms, the proportion is 82%. Although a few more urban firms pay dividends, their average level of dividend payout is much lower. Non-urban located firms on average pay higher cash dividends as a percent of market value of shareholder equity. The difference is significant. A similar result is obtained with the dividend payout ratio, which is the ratio of cash dividends to net income (if net income is positive). Dividends account for 46% of total payout for non-urban located firms. The proportion is much lower for urban firms at 34%.

### 6.2 Cross-sectional analysis: Classification A

To further study the relation of dividends with location, we use multivariate regressions to also control for other determinants of dividend policy. The results are presented in Table 8. After accounting for firm characteristics and corporate governance characteristics, we find that dividend yield is negatively related to location dummy under Classification A. Several control variables are significant. In Column 1, we control firm characteristics. Dividend yield is increasing in firm size and firm profitability and decreasing in investment opportunities. In Column 2 we control for governance characteristics. We report that the greater the number of shareholders the more the dividends paid. Dispersed ownership increases both the information asymmetry problem as well as the agency problem. A larger dividend payout mitigates both problems as has been well established in the vast body of research on dividends. Characteristics of directors on the board also affect dividend policy. Dividend yield increases in the number of director-owners and non-paid directors. Frequency of board meetings and the directors' compensation are significantly negatively associated to dividend yield. In Tables 3 and 5, we

found that board activity and directors' compensation are two effective mechanisms in reducing agency costs and improving firm performance. Dividend policy is also effective in controlling agency costs. The negative sign suggests that the two board mechanisms are effective and possibly substitutes for dividends. Column 3 shows the regressions of dividend yield on location dummy and all control variables. Dividend yield is positively related to ROA and negatively related to investment opportunities measured by market to book ratio. More shareholders and more AGM attendance rate are associated with higher dividends. The number of non-paid directors is still positively associated to dividend yield. Executives' compensation is found to have a weak positive relationship to dividend yield here. The positive relation may be because shareholders use the compensation contract to induce managers to distribute more of the profits as dividends.

### 6.3 Univariate tests of dividends: Classification B

The results of univariate tests with Classification B are reported in Table 9. We observe that 4% more urban firms pay dividends to their common stock shareholders compared to non-urban firms. However, their level of dividend yield is significantly lower. Non-urban firms, on average, pay 0.22 significantly higher dividends (as a percent of market value of equity). They also have a larger dividend payout ratio, but the difference is not significant.

### 6.4 Cross-sectional analysis: Classification B

The main results of Table 10 are consistent with the results shown earlier. Location dummy under Classification B is negatively related to dividend yield. Urban firms pay fewer dividends as a percent of market value of equity.

In Column 1, firm size and ROA are positive and market-to-book ratio is negative. All are significant at the 1% level. In column 2, shareholders size, AGM attendance rate, number of directors holding shares and number of non-paid directors are positive while frequency of board meetings, percentage of shares held by chairman and compensation for directors are negative. In Column 3, ROA is positively related to dividend yield and market-to-book ratio is negatively related to dividend yield. Number of shareholders, AGM attendance rate, number of non-paid directors and compensation for executives are all positively related to dividend yield.

Overall, non-urban firms pay more dividends relative to urban firms. This is consistent with our previous results that show that non-urban firms have relatively poor corporate governance structure and more agency costs. Maintaining a high dividend yield potentially mitigates both the information asymmetry and agency problems for non-urban firms. Urban firms have a better governance structure and potentially fewer agency conflicts. Compared to non-urban firms, their need to pay out larger dividends to reduce agency costs is lower. Nevertheless, we observe that the vast majority of firms, both urban and non-urban, pay out dividends to their shareholders.

## 7. Conclusions

Although some researchers have studied the effects of geography location on firm performance in China, these studies have not compared urban-located firms and non-urban-located firms directly. In this paper, we investigate the impact of urban and non-urban location on firm performance as well as their governance structures. We find that urban firms (firms located in populated areas) have higher Tobin's Q and ROA. They have smaller boards, proportionally more independent directors on the board, and more frequent board meetings. Besides, the board chairman and general managers have larger ownership in urban firms. Our results suggest that urban firms have better firm performance, better governance structure and fewer agency costs compared to non-urban firms.

The relation between firm performance and location remains significant in cross-sectional analysis that account for other variables associated with performance such as firm characteristics, governance characteristics and industry distribution. It continues to hold after robustness checks where we substitute location dummy with population size.

Firms can adjust their corporate policies to deal with potential information asymmetry and agency problems that arise from being located in distant areas or away from the shareholder base. Extant research suggests that a suitable dividend policy can address these issues. We, therefore, also study the differences of dividend policy between urban-firms and non-urban firms. Consistent with existing literature, we find non-urban firms, which have more agency costs and information problems than urban firms, pay higher dividends. We argue that these non-urban

firms use regular dividend payout to mitigate these agency costs and information asymmetry issues.

The evidence presented in this paper suggests that firm location matters. Although modern technology can mitigate the problems associated with distance, our evidence shows that the advantages of locating in central locations, such as the ability to attract a more talented management team and being closer to shareholders and other market participants like financial analysts, can positively impact firm performance.

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## Appendix:

**Table 1**

### Industry distribution

We use data on locations of firm's headquarters and use two approaches to classify geographic location. Classification A follows the *Notice of Adjusting Standards of Classifying City Size*. Cities with more than 10 million people are classified as megacities. If firms are headquartered in such megacities, they are called urban-located. If not, they are non-urban firms. Classification B defines the top-30 cities as metropolitan areas. Firms located in these areas are urban firms. Others are non-urban firms.

Industry	Full Sample	Urban	Non-urban
<b>Classification A:</b>			
Agriculture, forestry, livestock farming, fishery	17	1	16
Mining	11	4	7
Manufacturing	788	234	554
Construction	26	12	14
Wholesale and retail	34	11	23
Information technology	89	59	30
Real estate	23	7	16
Others	48	25	23
Total	1036	353	683
<b>Classification B:</b>			
Agriculture, forestry, livestock farming, fishery	17	3	14
Mining	11	5	6
Manufacturing	788	358	430
Construction	26	18	8
Wholesale and retail	34	18	16
Information technology	89	75	14
Real estate	23	10	13
Others	48	32	16
Total	1036	519	517

**Table 2**

Univariate comparison results: Classification A

Firms are defined as urban firms if they are located in cities with more than 10 million people; otherwise, they are non-urban firms. Tobin's Q is the ratio of firm market value (book value of total assets plus market value of common equity minus book value of common equity) to book value of total assets. ROA1 is the ratio of net profit after deducting non-recurring profit and loss to total assets. ROA2 is the ratio of operating profit to total assets. Firm age is calculated since the firm is founded. Firm leverage is the ratio of long term liability to total assets. Total assets are shown in Chinese Yuan and US dollars (exchange rate is based on the rate of 31/12/2013, which is 6.0969). Independent directors is the ratio of independent directors to the total number of directors in the board. Compensation for top3 directors is the ratio of total annual emolument of top3 directors (excluding allowance and adjusted by living costs) to operating revenue, times 1000. Chairman and GM duality equals to 1 if the board chairman and the general manager are the same person; zero otherwise. Compensation for top3 executives is the ratio of total annual emolument of top3 executives (including allowance and adjusted by living costs) to operating revenue, times 1000. The significance of the difference of means is tested by t-test. Significance at 1%, 5%, and 10% is denoted by \*\*\*, \*\*, \*, respectively.

Variable	Full Sample	Urban	Non-urban	Difference	
<u>Panel A: Firm characteristics</u>					
Tobin's Q	2.5984	2.9878	2.3965	0.5913	***
ROA1	0.0362	0.0405	0.0340	0.0065	**
ROA2	0.0418	0.0450	0.0402	0.0048	
Firm age (years)	12.2597	12.0878	12.3485	-0.2607	
Log(firm age)	1.0503	1.0417	1.0547	-0.0130	
Firm leverage	0.0402	0.0340	0.0434	-0.0094	**
Total assets(¥, in billions)	3.8222	3.6596	3.9063	-0.2467	
Total assets(\$, in billions)	0.6269	0.6002	0.6407	-0.0405	
Log (total assets, ¥ )	9.3144	9.2796	9.3323	-0.0527	**
<u>Panel B: Governance characteristics</u>					
Number of shareholders	25550	24684	25997	-1313	
Log (number of shareholders)	4.2525	4.2205	4.2691	-0.0486	**
Frequency of meeting of shareholders (per year)	3.0676	3.1020	3.0498	0.0522	
AGM attendance rate	0.5506	0.5515	0.5501	0.0014	
Number of directors	8.3176	8.2040	8.3763	-0.1723	*
Independent directors	0.3782	0.3824	0.3761	0.0063	*
Frequency of meeting of board of directors (per year)	8.9624	9.1955	8.8419	0.3536	*
Number of directors holding the firm's share	3.6901	3.7818	3.6411	0.1407	
Number of non-paid directors	0.9247	0.8952	0.9400	-0.0448	
Proportion of shares held by board chairman	0.1649	0.1892	0.1524	0.0368	***
Compensation for top3 directors	1.1077	1.2022	1.0588	0.1434	
Chairman and GM duality	0.4025	0.4759	0.3646	0.1113	***
Proportion of shares held by GM	0.1015	0.1318	0.0858	0.0460	***
Compensation for top3 executives	1.1599	1.2887	1.0933	0.1954	*
Obs	1036	353	683		

**Table 3**

Cross-sectional analysis: Classification A

Location is a dummy variable equaling to one if the firm is located in cities with more than 10 million people; zero otherwise. Tobin's Q is the ratio of firm market value (book value of total assets plus market value of common equity minus book value of common equity) to book value of total assets. ROA1 is the ratio of net profit after deducting non-recurring profit and loss to total assets. ROA2 is the ratio of operating profit to total assets. Firm size is the log of total assets. Firm leverage is the ratio of long term liability to total assets. Firm age is the log of firm age. Shareholders is the number of shareholders. Sharehol-meetings is the frequency of shareholders meetings in the year 2013. Board meetings is the frequency of meeting of board of directors in 2013. Board size is the number of directors in the board. Indep-directors is the ratio of independent directors to the total number of directors in the board. Duality equals to 1 if the board chairman and the general manager are the same person; zero otherwise. Share-directors is number of directors holding the firm's share. Non-paid directors is the number of non-paid directors. Chairman ownership is proportion of shares held by board chairman. Directors' comp is the ratio of total annual emolument of top3 directors (excluding allowance and adjusted by living costs) to operating revenue, times 1000. GM ownership is the proportion of shares held by GM. Executives' comp is the ratio of total annual emolument of top3 executives (including allowance and adjusted by living costs) to operating revenue, times 1000. OLS regressions are used and significance at 1%, 5%, and 10% is denoted with \*\*\*, \*\*, \* respectively.

Dep. Variables:	1	2	3	4	5	6
	Tobin's Q		ROA1		ROA2	
<u>Panel A: Firm characteristics</u>						
Intercept	13.8868 *** <.0001	13.6722 *** <.0001	-0.1277 *** 0.0006	-0.1370 *** 0.0004	-0.1524 *** 0.0004	-0.1506 *** 0.0006
Location	0.5043 *** <.0001	0.2959 *** 0.0014	0.0059 * 0.0569	0.0026 0.4121	0.0040 0.2533	0.0012 0.7303
Firm size	-1.1965 *** <.0001	-1.0521 *** <.0001	0.0176 *** <.0001	0.0207 *** <.0001	0.0213 *** <.0001	0.0242 *** <.0001
Firm leverage	-1.8546 *** 0.0084	-2.1280 *** 0.0020	-0.1580 *** <.0001	-0.1585 *** <.0001	-0.1833 *** <.0001	-0.1898 *** <.0001
Firm age	-0.2286 0.3327	-0.3092 0.1742	0.0042 0.5877	0.0037 0.6270	0.0013 0.8820	0.0006 0.9425
Industry dummies:						
Agriculture		-1.3320 *** 0.0006		-0.0653 *** <.0001		-0.0739 *** <.0001
Mining		-0.6629 0.1460		-0.0149 0.3344		-0.0177 0.3166
Manufacturing		-1.1405 *** <.0001		-0.0184 *** 0.0080		-0.0271 *** 0.0007
Construction		-1.0696 *** 0.0014		-0.0207 * 0.0669		-0.0303 ** 0.0196
Wholesale and retail		-1.2146 *** <.0001		-0.0372 *** 0.0004		-0.0516 *** <.0001
IT		0.2238 0.3645		-0.0039 0.6390		-0.0196 ** 0.0408
Real estate		-0.9053 ** 0.0105		-0.0272 ** 0.0230		-0.0300 ** 0.0289
Obs	1031	1031	1031	1031	1031	1031
R square	0.1627	0.2381	0.0506	0.0853	0.0502	0.0812

Dep. Variables:	Tobin's Q		ROA1		ROA2	
<u>Panel B: governance characteristics</u>						
Intercept	7.9631 <.0001	8.1101 *** <.0001	0.0807 ** 0.0164	0.0925 *** 0.0068	0.0933 ** 0.0142	0.1203 *** 0.0019
Location	0.4584 *** <.0001	0.2667 *** 0.0068	0.0062 * 0.0630	0.0025 0.4568	0.0047 0.2184	0.0014 0.7130
Shareholders	-1.2900 *** <.0001	-1.0559 *** <.0001	-0.0214 *** <.0001	-0.0192 *** 0.0005	-0.0235 *** 0.0002	-0.0224 *** 0.0003
Sharehol-meetings	-0.0744 ** 0.0375	-0.0598 * 0.0802	-0.0025 ** 0.0353	-0.0026 ** 0.0260	-0.0030 ** 0.0287	-0.0032 ** 0.0184
AGM attendance rate	-0.3189 0.3602	0.0723 0.8298	0.0444 *** 0.0001	0.0475 *** <.0001	0.0589 *** <.0001	0.0608 *** <.0001
Board meetings	0.0597 *** 0.0005	0.0550 *** 0.0014	0.0007 0.2404	0.0005 0.3707	0.0008 0.1968	0.0006 0.4107
Board size	-0.0556 0.2152	-0.0558 0.1912	0.0009 0.5685	0.0011 0.4654	0.0009 0.5864	0.0012 0.4900
Indep-directors	-0.4565 0.6745	-0.6768 0.5133	0.0271 0.4551	0.0296 0.4073	0.0150 0.7148	0.0196 0.6275
Duality	0.1422 0.2683	0.1227 0.3159	-0.0043 0.3161	-0.0039 0.3599	-0.0049 0.3153	-0.0043 0.3711
Share-directors	0.0316 0.3106	0.0144 0.6292	0.0037 *** 0.0003	0.0034 *** 0.0009	0.0038 *** 0.0012	0.0037 *** 0.0015
Non-paid directors	-0.0322 0.4943	-0.0559 0.2155	-0.0010 0.5147	-0.0011 0.5001	-0.0014 0.4337	-0.0013 0.4651
Chairman ownership	0.1146 0.7672	0.2715 0.4652	-0.0264 ** 0.0411	-0.0215 * 0.0936	-0.0273 * 0.0615	-0.0224 0.1224
Directors' comp	0.3193 *** 0.0032	0.2913 *** 0.0050	-0.0043 0.2305	-0.0053 0.1404	-0.0053 0.1936	-0.0062 0.1245
GM ownership	0.3871 0.4301	0.3038 0.5151	0.0160 0.3270	0.0134 0.4048	0.0123 0.5073	0.0108 0.5541
Executives' comp	-0.0977 0.2782	-0.0911 0.2910	0.0020 0.4985	0.0024 0.4267	0.0021 0.5410	0.0022 0.5113
Industry dummies:						
Agriculture		-1.5593 *** 0.0001		-0.0735 *** <.0001		-0.0856 *** <.0001
Mining		-0.8928 * 0.0724		-0.0038 0.8267		-0.0018 0.9249
Manufacturing		-1.2613 *** <.0001		-0.0233 *** 0.0023		-0.0332 *** 0.0001
Construction		-1.4341 *** <.0001		-0.0170 0.1690		-0.0259 * 0.0640
Wholesale and retail		-1.4536 *** <.0001		-0.0400 *** 0.0010		-0.0545 *** <.0001
IT		-0.0137 0.9578		-0.0103 0.2502		-0.0272 *** 0.0073
Real estate		-2.1585 *** <.0001		-0.0223 0.1233		-0.0226 0.1684
Obs	870	870	870	870	870	870
R square	0.1993	0.2834	0.0876	0.1261	0.0904	0.1304



Dep. Variables:	Tobin's Q		ROA1		ROA2	
<u>Panel C: Total variables</u>						
Intercept	11.4596 *** <.0001	10.7724 *** <.0001	-0.1135 ** 0.0283	-0.1151 ** 0.0297	-0.1139 * 0.0520	-0.0939 0.1167
Location	0.4431 *** <.0001	0.2540 *** 0.0097	0.0061 * 0.0651	0.0024 0.4726	0.0044 0.2353	0.0011 0.7626
Shareholders	-0.8077 *** <.0001	-0.7263 *** 0.0001	-0.0304 *** <.0001	-0.0289 *** <.0001	-0.0322 *** <.0001	-0.0307 *** <.0001
Sharehol-meetings	-0.0556 0.1206	-0.0465 0.1766	-0.0020 * 0.0931	-0.0021 * 0.0722	-0.0023 * 0.0841	-0.0025 * 0.0641
Board meetings	0.0753 *** <.0001	0.0622 *** 0.0004	0.0004 0.4699	0.0001 0.8000	0.0006 0.3626	0.0002 0.7935
AGM attendance rate	-0.0396 0.9113	0.2198 0.5218	0.0365 *** 0.0020	0.0389 *** 0.0009	0.0505 *** 0.0002	0.0520 *** <.0001
Board size	-0.0242 0.5917	-0.0313 0.4686	0.0001 0.9533	0.0003 0.8621	0.0002 0.9212	0.0004 0.7977
Indep-directors	-0.2091 0.8462	-0.4305 0.6767	0.0209 0.5571	0.0232 0.5090	0.0089 0.8258	0.0143 0.7180
Duality	0.1108 0.3849	0.1075 0.3781	-0.0037 0.3841	-0.0033 0.4235	-0.0043 0.3686	-0.0038 0.4180
Share-directors	0.0349 0.2614	0.0182 0.5442	0.0032 *** 0.0020	0.0029 *** 0.0048	0.0032 *** 0.0061	0.0031 *** 0.0073
Non-paid directors	-0.0313 0.5027	-0.0494 0.2719	-0.0010 0.5109	-0.0010 0.4978	-0.0014 0.4333	-0.0012 0.4838
Chairman ownership	-0.0371 0.9234	0.1757 0.6367	-0.0210 0.1003	-0.0158 0.2103	-0.0219 0.1299	-0.0169 0.2379
GM ownership	0.3193 0.5130	0.2660 0.5686	0.0139 0.3906	0.0122 0.4423	0.0099 0.5869	0.0093 0.6040
Directors' comp	0.2315 ** 0.0348	0.2320 ** 0.0276	-0.0021 0.5544	-0.0029 0.4176	-0.0031 0.4547	-0.0040 0.3278
Executives' comp	-0.0678 0.4491	-0.0777 0.3662	0.0015 0.6026	0.0017 0.5626	0.0016 0.6345	0.0015 0.6414
Firm size	-0.6419 *** 0.0005	-0.4610 ** 0.0119	0.0238 *** 0.0001	0.0263 *** <.0001	0.0250 *** 0.0003	0.0263 *** 0.0002
Firm leverage	-1.4082 * 0.0793	-1.2172 0.1233	-0.1234 *** <.0001	-0.1282 *** <.0001	-0.1419 *** <.0001	-0.1549 *** <.0001
Firm age	-0.1091 0.6794	-0.1315 0.6030	0.0273 *** 0.0018	0.0243 *** 0.0048	0.0285 *** 0.0040	0.0252 *** 0.0098
Industry dummies:						
Agriculture		-1.5713 *** 0.0001		-0.0704 *** <.0001		-0.0822 *** <.0001
Mining		-0.8328 * 0.0924		-0.0072 0.6669		-0.0053 0.7821
Manufacturing		-1.2754 *** <.0001		-0.0249 *** 0.0009		-0.0352 *** <.0001
Construction		-1.2971 *** 0.0003		-0.0234 * 0.0553		-0.0321 ** 0.0202
Wholesale and retail		-1.3932 *** <.0001		-0.0477 *** <.0001		-0.0628 *** <.0001

IT		-0.0624		-0.0107		-0.0279 ***
		<i>0.8089</i>		<i>0.2241</i>		<i>0.0049</i>
Real estate		-1.8150 ***		-0.0192		-0.0162
		<i>&lt;.0001</i>		<i>0.1891</i>		<i>0.3270</i>
Obs	870	870	870	870	870	870
R square	0.2181	0.2933	0.1250	0.1645	0.1254	0.1673

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**Table4**

Univariate comparison results: Classification B

Firms are defined as urban firms if they are headquartered in the top-30 big cities; otherwise, they are non-urban firms. Tobin's Q is the ratio of firm market value (book value of total assets plus market value of common equity minus book value of common equity) to book value of total assets. ROA1 is the ratio of net profit after deducting non-recurring profit and loss to total assets. ROA2 is the ratio of operating profit to total assets. Firm age is calculated since the firm is founded. Firm leverage is the ratio of long term liability to total assets. Total assets are shown in Chinese Yuan and US dollars (exchange rate is based on the rate of 31/12/2013, which is 6.0969). Independent directors is the ratio of independent directors to the total number of directors in the board. Compensation for top3 directors is the ratio of total annual emolument of top3 directors (excluding allowance and adjusted by living costs) to operating revenue, times 1000. Chairman and GM duality equals to 1 if the board chairman and the general manager are the same person; zero otherwise. Compensation for top3 executives is the ratio of total annual emolument of top3 executives (including allowance and adjusted by living costs) to operating revenue, times 1000.

Variable	Full sample	Urban	Non-urban	Difference	
<u>Panel A: Firm characteristics</u>					
Tobin's Q	2.5984	2.8632	2.3310	0.5322	***
ROA1	0.0362	0.0391	0.0333	0.0058	**
ROA2	0.0418	0.0440	0.0396	0.0044	
Firm age (years)	12.2597	12.0347	12.4855	-0.4508	
Log(firm age)	1.0503	1.0410	1.0596	-0.0186	
Firm leverage	0.0402	0.0354	0.0450	-0.0096	**
Total assets(¥, in billions)	3.8222	3.9156	3.7285	0.1871	
Total assets(\$, in billions)	0.6269	0.6422	0.6115	0.0307	
Log (total assets, ¥)	9.3144	9.2982	9.3305	-0.0323	
<u>Panel B: Governance characteristics</u>					
Number of shareholders	25550	24863	26238	-1375	
log (number of shareholders)	4.2525	4.2279	4.2773	-0.0494	**
Frequency of meeting of shareholders (per year)	3.0676	2.9827	3.1528	-0.1701	*
AGM attendance rate	0.5506	0.5569	0.5442	0.0127	
Number of directors	8.3176	8.2717	8.3636	-0.0919	
Independent directors	0.3782	0.3799	0.3766	0.0033	
Frequency of meeting of board of directors (per year)	8.9624	9.0154	8.9091	0.1063	
Number of directors holding the firm's share	3.6901	3.7978	3.5751	0.2227	*
Number of non-paid directors	0.9247	0.8998	0.9497	-0.0499	
Proportion of shares hold by board chairman	0.1649	0.1826	0.1471	0.0355	***
Compensation for top3 directors	1.1077	1.1421	1.0731	0.0690	
Chairman and GM duality	0.4025	0.4316	0.3733	0.0583	*
Proportion of shares held by GM	0.1015	0.1210	0.0818	0.0392	***
Compensation for top3 executives	1.1599	1.2321	1.0874	0.1447	
Obs	1036	519	517		

**Table 5**

Cross-sectional analysis: Classification B

Location equals to 1 if firms are headquartered in the top-30 big cities; zero otherwise. Tobin's Q is the ratio of firm market value (book value of total assets plus market value of common equity minus book value of common equity) to book value of total assets. ROA1 is the ratio of net profit after deducting non-recurring profit and loss to total assets. ROA2 is the ratio of operating profit to total assets. Firm size is the log of total assets. Firm leverage is the ratio of long term liability to total assets. Firm age is the log of firm age calculated since the firm is founded. Shareholders is the number of shareholders. Sharehold-meetings is the frequency of shareholders meetings within the year 2013. Board meetings is the frequency of meeting of board of directors in 2013. Board size is the number of directors in the board. Indep-directors is the ratio of independent directors to the total number of directors in the board. Duality equals to 1 if the board chairman and the general manager are the same person; zero otherwise. Share-directors is number of directors holding the firm's share. Non-paid directors is the number of non-paid directors. Chairman ownership is proportion of shares held by board chairman. GM ownership is the proportion of shares held by GM. Directors' comp is the ratio of total annual emolument of top 3 directors (excluding allowance and adjusted by living costs) to operating revenue, times 1000. Executives' comp is the ratio of total annual emolument of top 3 executives (including allowance and adjusted by living costs) to operating revenue, times 1000. OLS regressions are used and significance at 1%, 5%, and 10% is denoted with \*\*\*, \*\*, \* respectively.

Dependent variable:	1	2	3	4	5	6
	Tobin's Q		ROA1		ROA2	
<b>Panel A: Firm characteristics</b>						
Intercept	13.9584 *** <.0001	13.7094 *** <.0001	-0.1265 *** 0.0007	-0.1363 *** 0.0004	-0.1515 *** 0.0004	-0.1501 *** 0.0006
Location	0.4681 *** <.0001	0.2729 *** 0.0019	0.0049 * 0.0928	0.0018 0.5485	0.0033 0.3247	0.0008 0.8209
Firm size	-1.2136 *** <.0001	-1.0606 *** <.0001	0.0174 *** <.0001	0.0206 *** <.0001	0.0212 *** <.0001	0.0242 *** <.0001
Firm leverage	-1.8157 *** 0.0100	-2.1131 *** 0.0022	-0.1578 *** <.0001	-0.1586 *** <.0001	-0.1831 *** <.0001	-0.1899 *** <.0001
Firm age	-0.2074 0.3802	-0.2980 0.1908	0.0044 0.5713	0.0038 0.6248	0.0014 0.8712	0.0006 0.9423
Industry dummies:						
Agriculture		-1.3337 *** 0.0006		-0.0656 *** <.0001		-0.0741 *** <.0001
Mining		-0.6511 0.1536		-0.0149 0.3343		-0.0177 0.3162
Manufacturing		-1.1476 *** <.0001		-0.0186 *** 0.0073		-0.0272 *** 0.0007
Construction		-1.0903 *** 0.0011		-0.0209 * 0.0649		-0.0304 ** 0.0193
Wholesale and retail		-1.2316 *** <.0001		-0.0374 *** 0.0004		-0.0517 *** <.0001
IT		0.2177 0.3781		-0.0039 0.6432		-0.0196 ** 0.0413
Real estate		-0.9046 ** 0.0106		-0.0272 ** 0.0226		-0.0300 ** 0.0286
Obs	1031	1031	1031	1031	1031	1031
R square	0.1617	0.2377	0.0498	0.0851	0.0499	0.0812

Dependent variable:	Tobin's Q		ROA1		ROA2	
<u>Panel B: Governance characteristics</u>						
Intercept	7.9309 *** <.0001	8.1057 *** <.0001	0.0818 ** 0.0152	0.0946 *** 0.0057	0.0949 ** 0.0128	0.1228 *** 0.0015
Location	0.3922 *** <.0001	0.2044 ** 0.0306	0.0031 0.3332	-0.0008 0.8072	0.0012 0.7311	-0.0022 0.5438
Shareholders	-1.2997 *** <.0001	-1.0602 *** <.0001	-0.0217 *** <.0001	-0.0193 *** 0.0005	-0.0237 *** 0.0001	-0.0225 *** 0.0003
Sharehol-meetings	-0.0659 * 0.0665	-0.0553 0.1074	-0.0025 ** 0.0411	-0.0026 ** 0.0256	-0.0029 ** 0.0306	-0.0032 ** 0.0170
AGM attendance rate	-0.3861 0.2687	0.0361 0.9146	0.0434 *** 0.0002	0.0472 <.0001 ***	0.0582 *** <.0001	0.0607 *** <.0001
Board meetings	0.0600 *** 0.0005	0.0553 *** 0.0014	0.0007 0.2269	0.0005 0.3616	0.0009 0.1848	0.0006 0.4016
Board size	-0.0547 0.2239	-0.0557 0.1929	0.0008 0.5844	0.0010 0.4844	0.0009 0.6060	0.0011 0.5110
Indep-directors	-0.3993 0.7140	-0.6406 0.5366	0.0283 0.4357	0.0305 0.3930	0.0161 0.6947	0.0205 0.6119
Duality	0.1593 0.2159	0.1325 0.2795	-0.0041 0.3441	-0.0037 0.3753	-0.0047 0.3337	-0.0042 0.3809
Share-directors	0.0294 0.3468	0.0136 0.6513	0.0038 *** 0.0003	0.0035 *** 0.0008	0.0039 *** 0.0011	0.0038 *** 0.0013
Non-paid directors	-0.0311 0.5105	-0.0551 0.2224	-0.0010 0.5331	-0.0010 0.5165	-0.0014 0.4493	-0.0012 0.4802
Chairman ownership	0.1345 0.7288	0.2849 0.4440	-0.0262 ** 0.0429	-0.0213 * 0.0976	-0.0272 * 0.0628	-0.0222 0.1261
Directors' comp	0.3419 *** 0.0017	0.3031 *** 0.0035	-0.0041 0.2556	-0.0053 0.1406	-0.0052 0.2044	-0.0063 0.1201
GM ownership	0.4040 0.4113	0.3191 0.4948	0.0170 0.3000	0.0143 0.3761	0.0133 0.4719	0.0117 0.5205
Executives' comp	-0.1161 0.1992	-0.1007 0.2438	0.0019 0.5352	0.0024 0.4283	0.0020 0.5583	0.0023 0.5014
Industry dummies:						
Agriculture		-1.5847 *** 0.0001		-0.0753 *** <.0001		-0.0876 *** <.0001
Mining		-0.9068 * 0.0684		-0.0045 0.7935		-0.0026 0.8919
Manufacturing		-1.2719 *** <.0001		-0.0240 *** 0.0017		-0.0341 *** <.0001
Construction		-1.4498 *** <.0001		-0.0168 0.1732		-0.0256 * 0.0670
Wholesale and retail		-1.4652 *** <.0001		-0.0405 *** 0.0009		-0.0550 *** <.0001
IT		-0.0118 0.9636		-0.0099 0.2684		-0.0267 *** 0.0083
Real estate		-2.1772 *** <.0001		-0.0228 0.1153		-0.0230 0.1595
Obs	870	870	870	870	870	870
R square	0.1955	0.2811	0.0849	0.1256	0.0889	0.1306

Dependent variable:	Tobin's Q		ROA1		ROA2	
<u>Panel C: All variables</u>						
Intercept	11.5564 *** <.0001	10.8298 *** <.0001	-0.1113 ** 0.0318	-0.1131 ** 0.0327	-0.1119 * 0.0565	-0.0919 0.1245
Location	0.3892 *** <.0001	0.1986 ** 0.0351	0.0027 0.3895	-0.0012 0.7082	0.0008 0.8290	-0.0028 0.4448
Shareholders	-0.8027 *** <.0001	-0.7240 *** 0.0001	-0.0305 *** <.0001	-0.0289 *** <.0001	-0.0323 *** <.0001	-0.0307 *** <.0001
Sharehol-meetings	-0.0468 0.1926	-0.0418 0.2250	-0.0019 0.1059	-0.0021 * 0.0708	-0.0023 * 0.0883	-0.0025 * 0.0594
Board meetings	0.0759 *** <.0001	0.0626 *** 0.0003	0.0004 0.4406	0.0002 0.7859	0.0006 0.3392	0.0002 0.7820
AGM attendance rate	-0.0933 0.7934	0.1892 0.5816	0.0356 0.0026	0.0386 *** 0.0010	0.0499 *** 0.0002	0.0519 *** <.0001
Board size	-0.0222 0.6224	-0.0306 0.4782	0.0001 0.9669	0.0002 0.8844	0.0001 0.9410	0.0004 0.8227
Indep-directors	-0.1488 0.8904	-0.3923 0.7043	0.0223 0.5325	0.0242 0.4902	0.0101 0.8025	0.0153 0.6996
Duality	0.1266 0.3212	0.1165 0.3398	-0.0035 0.4130	-0.0032 0.4388	-0.0041 0.3863	-0.0037 0.4262
Share-directors	0.0328 0.2918	0.0174 0.5623	0.0032 0.0019	0.0029 *** 0.0043	0.0032 *** 0.0055	0.0032 *** 0.0064
Non-paid directors	-0.0304 0.5158	-0.0487 0.2798	-0.0010 0.5316	-0.0010 0.5179	-0.0013 0.4509	-0.0012 0.5026
Chairman ownership	-0.0209 0.9568	0.1866 0.6164	-0.0209 0.1024	-0.0156 0.2164	-0.0219 0.1305	-0.0167 0.2426
GM ownership	0.3287 0.5014	0.2783 0.5513	0.0149 0.3572	0.0132 0.4071	0.0111 0.5443	0.0104 0.5630
Directors' comp	0.2505 ** 0.0226	0.2421 ** 0.0218	-0.0020 0.5876	-0.0029 0.4149	-0.0030 0.4679	-0.0041 0.3170
Executives' comp	-0.0849 0.3443	-0.0867 0.3143	0.0014 0.6372	0.0017 0.5617	0.0015 0.6480	0.0016 0.6271
Firm size	-0.6652 *** 0.0004	-0.4717 ** 0.0102	0.0237 *** 0.0001	0.0263 *** <.0001	0.0249 *** 0.0003	0.0264 *** 0.0002
Firm leverage	-1.4123 * 0.0790	-1.2254 0.1213	-0.1244 *** <.0001	-0.1294 *** <.0001	-0.1430 *** <.0001	-0.1563 *** <.0001
Firm age	-0.1046 0.6924	-0.1320 0.6024	0.0270 0.0020	0.0239 *** 0.0055	0.0282 *** 0.0044	0.0247 ** 0.0112
Industry dummies:						
Agriculture		-1.5934 *** <.0001		-0.0723 *** <.0001		-0.0844 *** <.0001
Mining		-0.8441 * 0.0885		-0.0080 0.6336		-0.0061 0.7479
Manufacturing		-1.2847 *** <.0001		-0.0257 *** 0.0006		-0.0361 *** <.0001
Construction		-1.3095 *** 0.0003		-0.0232 * 0.0575		-0.0318 ** 0.0215
Wholesale and retail		-1.4016 *** <.0001		-0.0482 *** <.0001		-0.0634 *** <.0001

IT		-0.0621 <i>0.8102</i>		-0.0103 <i>0.2427</i>		-0.0275 *** <i>0.0057</i>
Real estate		-1.8270 *** <i>&lt;.0001</i>		-0.0196 <i>0.1816</i>		-0.0166 <i>0.3176</i>
Obs	870	870	870	870	870	870
R square	0.2153	0.2914	0.1222	0.1641	0.1240	0.1677

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**Table 6**

## Robustness tests

Population is the millions of population of the city reported by 2000 Census. Tobin's Q is the ratio of firm market value (book value of total assets plus market value of common equity minus book value of common equity) to book value of total assets. ROA1 is the ratio of net profit after deducting non-recurring profit and loss to total assets. ROA2 is the ratio of operating profit to total assets. Firm size is the log of total assets. Firm leverage is the ratio of long term liability to total assets. Firm age is the log of firm age calculated since the firm is founded. Shareholders is the number of shareholders. Sharehol-meetings is the frequency of shareholders meetings within the year 2013. Board meetings is the frequency of meeting of board of directors in 2013. Board size is the number of directors in the board. Indep-directors is the ratio of independent directors to the total number of directors in the board. Duality equals to 1 if the board chairman and the general manager are the same person; zero otherwise. Share-directors is number of directors holding the firm's share. Non-paid directors is the number of non-paid directors. Chairman ownership is proportion of shares held by board chairman. GM ownership is the proportion of shares held by GM. Directors' comp is the ratio of total annual emolument of top 3 directors (excluding allowance and adjusted by living costs) to operating revenue, times 1000. Executives' comp is the ratio of total annual emolument of top 3 executives (including allowance and adjusted by living costs) to operating revenue, times 1000. OLS regressions are used and significance at 1%, 5%, and 10% is denoted with \*\*\*, \*\*, \* respectively.

Dependent variable:	1	2	3	4	5	6
	Tobin's Q		ROA1		ROA2	
<u>Panel A: Firm characteristics</u>						
Intercept	13.6781 *** <.0001	13.6015 *** <.0001	-0.1326 *** 0.0004	-0.1401 *** 0.0003	-0.1568 *** 0.0002	-0.1537 *** 0.0005
Population	0.0443 *** <.0001	0.0248 *** 0.0007	0.0007 *** 0.0044	0.0004 * 0.0953	0.0005 ** 0.0482	0.0003 0.2469
Firm size	-1.1969 *** <.0001	-1.0573 *** <.0001	0.0177 *** <.0001	0.0207 *** <.0001	0.0214 *** <.0001	0.0242 *** <.0001
Firm leverage	-1.8376 *** 0.0088	-2.1271 *** 0.0020	-0.1571 *** <.0001	-0.1576 *** <.0001	-0.1823 *** <.0001	-0.1888 *** <.0001
Firm age	-0.2330 0.3217	-0.3107 0.1718	0.0042 0.5833	0.0039 0.6128	0.0014 0.8759	0.0008 0.9262
Industry dummies:						
Agriculture		-1.3301 *** 0.0006		-0.0642 *** <.0001		-0.0726 *** <.0001
Mining		-0.6883 0.1308		-0.0150 0.3307		-0.0177 0.3172
Manufacturing		-1.1316 *** <.0001		-0.0178 ** 0.0105		-0.0264 *** 0.0010
Construction		-1.0568 *** 0.0016		-0.0204 * 0.0707		-0.0300 ** 0.0206
Wholesale and retail		-1.2089 *** 0.0001		-0.0366 *** 0.0005		-0.0510 *** <.0001
IT		0.1935 0.4339		-0.0047 0.5707		-0.0204 ** 0.0339
Real estate		-0.8905 ** 0.0119		-0.0266 ** 0.0261		-0.0294 ** 0.0322
Obs	1031	1031	1031	1031	1031	1031
R square	0.1690	0.2390	0.0547	0.0872	0.0527	0.0823



Dependent variable:	Tobin's Q		ROA1		ROA2	
<b>Panel B: Governance characteristics</b>						
Intercept	7.8720 *** <.0001	8.0763 *** <.0001	0.0792 ** 0.0186	0.0916 *** 0.0074	0.0920 ** 0.0157	0.1194 *** 0.0020
Population	0.0401 *** <.0001	0.0215 *** 0.0060	0.0006 ** 0.0255	0.0003 0.3059	0.0005 0.1230	0.0002 0.5205
Shareholders	-1.2979 *** <.0001	-1.0652 <.0001	-0.0215 *** <.0001	-0.0193 *** 0.0005	-0.0235 *** 0.0002	-0.0224 *** 0.0003
Sharehol-meetings	-0.0622 * 0.0819	-0.0534 0.1193	-0.0023 * 0.0508	-0.0026 ** 0.0313	-0.0028 ** 0.0375	-0.0031 ** 0.0208
Board meetings	0.0539 *** 0.0017	0.0526 *** 0.0024	0.0006 0.3092	0.0005 0.4029	0.0008 0.2387	0.0005 0.4334
AGM attendance rate	-0.3468 0.3179	0.0450 0.8935	0.0441 *** 0.0002	0.0472 *** <.0001	0.0586 *** <.0001	0.0607 *** <.0001
Board size	-0.0563 0.2078	-0.0564 0.1861	0.0008 0.5696	0.0011 0.4640	0.0009 0.5859	0.0012 0.4873
Indep-directors	-0.4928 0.6494	-0.6831 0.5093	0.0264 0.4659	0.0293 0.4127	0.0144 0.7252	0.0192 0.6338
Duality	0.1539 0.2293	0.1300 0.2879	-0.0041 0.3330	-0.0038 0.3661	-0.0048 0.3261	-0.0043 0.3730
Share-directors	0.0258 0.4066	0.0120 0.6897	0.0036 *** 0.0005	0.0034 *** 0.0010	0.0037 *** 0.0015	0.0037 *** 0.0017
Non-paid directors	-0.0360 0.4439	-0.0574 0.2035	-0.0011 0.4896	-0.0011 0.4880	-0.0014 0.4172	-0.0013 0.4563
Chairman ownership	0.1443 0.7085	0.2840 0.4447	-0.0260 ** 0.0443	-0.0214 * 0.0947	-0.0270 * 0.0646	-0.0224 0.1227
GM ownership	0.3110 0.5257	0.2723 0.5602	0.0148 0.3668	0.0128 0.4278	0.0112 0.5446	0.0102 0.5748
Directors' comp	0.3198 *** 0.0031	0.2931 *** 0.0047	-0.0043 0.2300	-0.0053 0.1412	-0.0053 0.1931	-0.0062 0.1247
Executives' comp	-0.1015 0.2585	-0.0932 0.2800	0.0020 0.5090	0.0024 0.4297	0.0020 0.5483	0.0022 0.5124
Industry dummies:						
Agriculture		-1.5694 *** 0.0001		-0.0731 *** <.0001		-0.0851 *** <.0001
Mining		-0.9088 * 0.0673		-0.0038 0.8263		-0.0017 0.9282
Manufacturing		-1.2505 *** <.0001		-0.0230 *** 0.0027		-0.0329 *** 0.0001
Construction		-1.4186 *** <.0001		-0.0168 0.1733		-0.0258 * 0.0651
Wholesale and retail		-1.4376 *** <.0001		-0.0397 *** 0.0011		-0.0542 *** <.0001
IT		-0.0336 0.8969		-0.0106 0.2349		-0.0275 *** 0.0067
Real estate		-2.1559 *** <.0001		-0.0222 0.1261		-0.0224 0.1718
Obs	870	870	870	870	870	870
R square	0.2041	0.2836	0.0893	0.1266	0.0913	0.1307

Dep. Variables:	Tobin's Q		ROA1		ROA2	
<u>Panel C: All variables</u>						
Intercept	11.3872 ***	10.7785 ***	-0.1148 **	-0.1155 **	-0.1150 **	-0.0945
	<.0001	<.0001	0.0265	0.0291	0.0497	0.1145
Population	0.0397 ***	0.0214 ***	0.0006 **	0.0003	0.0004	0.0002
	<.0001	0.0061	0.0247	0.3200	0.1253	0.5496
Shareholders	-0.8057 ***	-0.7277 ***	-0.0304 ***	-0.0289 ***	-0.0321 ***	-0.0307 ***
	<.0001	0.0001	<.0001	<.0001	<.0001	<.0001
Sharehol-meetings	-0.0429	-0.0397	-0.0018	-0.0020 *	-0.0022	-0.0024 *
	0.2300	0.2489	0.1279	0.0843	0.1054	0.0706
Board meetings	0.0698 ***	0.0599 ***	0.0003	0.0001	0.0005	0.0002
	<.0001	0.0006	0.5650	0.8409	0.4208	0.8202
AGM attendance rate	-0.0649	0.1955	0.0362 ***	0.0387 ***	0.0504 ***	0.0520 ***
	0.8548	0.5685	0.0022	0.0009	0.0002	<.0001
Board size	-0.0240	-0.0311	0.0001	0.0003	0.0002	0.0004
	0.5928	0.4702	0.9494	0.8576	0.9169	0.7928
Indep-directors	-0.2431	-0.4341	0.0203	0.0229	0.0083	0.0140
	0.8209	0.6740	0.5683	0.5140	0.8365	0.7246
Duality	0.1208	0.1136	-0.0035	-0.0033	-0.0042	-0.0038
	0.3413	0.3510	0.4011	0.4295	0.3788	0.4190
Share-directors	0.0288	0.0156	0.0031 ***	0.0028 ***	0.0031 ***	0.0031 ***
	0.3531	0.6033	0.0028	0.0054	0.0075	0.0079
Non-paid directors	-0.0350	-0.0508	-0.0011	-0.0011	-0.0014	-0.0012
	0.4516	0.2582	0.4861	0.4867	0.4167	0.4749
Chairman ownership	-0.0125	0.1843	-0.0206	-0.0158	-0.0216	-0.0169
	0.9740	0.6202	0.1059	0.2117	0.1346	0.2379
GM ownership	0.2422	0.2324	0.0126	0.0116	0.0089	0.0088
	0.6190	0.6188	0.4349	0.4659	0.6274	0.6258
Directors' comp	0.2309 **	0.2326 **	-0.0022	-0.0029	-0.0031	-0.0040
	0.0345	0.0271	0.5516	0.4173	0.4524	0.3270
Executives' comp	-0.0711	-0.0795	0.0015	0.0017	0.0016	0.0015
	0.4254	0.3553	0.6131	0.5653	0.6413	0.6418
Firm size	-0.6474 ***	-0.4690 **	0.0238 ***	0.0262 ***	0.0249 ***	0.0262 ***
	0.0005	0.0105	0.0001	<.0001	0.0003	0.0002
Firm leverage	-1.4797 *	-1.2604	-0.1243 ***	-0.1285 ***	-0.1425 ***	-0.1550 ***
	0.0641	0.1101	<.0001	<.0001	<.0001	<.0001
Firm age	-0.1265	-0.1417	0.0270 ***	0.0243 ***	0.0284 ***	0.0252 ***
	0.6304	0.5749	0.0020	0.0048	0.0042	0.0097
Industry dummies:						
Agriculture		-1.5757 ***		-0.0701 ***		-0.0817 ***
		0.0001		<.0001		<.0001
Mining		-0.8448 *		-0.0072		-0.0051
		0.0875		0.6671		0.7865
Manufacturing		-1.2627 ***		-0.0246 ***		-0.0348 ***
		<.0001		0.0011		<.0001
Construction		-1.2794 ***		-0.0232 *		-0.0320 **
		0.0004		0.0573		0.0207
Wholesale and retail		-1.3755 ***		-0.0473 ***		-0.0625 ***
		0.0001		<.0001		<.0001

IT		-0.0844 <i>0.7440</i>		-0.0110 <i>0.2100</i>		-0.0282 <i>0.0046</i> ***
Real estate		-1.8010 *** <i>&lt;.0001</i>		-0.0190 <i>0.1948</i>		-0.0160 <i>0.3336</i>
Obs	870	870	870	870	870	870
R square	0.2238	0.2940	0.1267	0.1649	0.1263	0.1675

**Table 7**

Univariate tests of dividends: Classification A

Firms are defined as urban firms if they are located in cities with more than 10 million people; otherwise, they are non-urban firms. D is the percentage of firms that pay cash dividends. Dividend yield is the ratio of cash dividends to the market value of the firm, times 100. Dividend payout ratio is the ratio of cash dividends to net income (if net income is positive).

Variable	Full Sample	Urban Firms	Non-urban Firms	Difference
D	0.8253	0.8414	0.8170	0.0244
Dividend yield	0.9866	0.8007	1.0855	-0.2848 ***
Dividend payout ratio	0.4183	0.3371	0.4615	-0.1244 ***

**Table 8**

Cross-sectional analysis: Classification A

Location equals to one if the firm is located in cities with more than 10 million people; zero otherwise. Dividend yield is the ratio of cash dividends to the market value of the firm, times 100. Firm size is the log of total assets. Firm leverage is the ratio of long term liability to total assets. Firm age is the log of firm age calculated since the firm is founded. ROA is the ratio of net profit after deducting non-recurring profit and loss to total assets. Market-to-book ratio is the ratio of firm market value (book value of total assets plus market value of common equity minus book value of common equity) to book value of total assets. Shareholders is the number of shareholders. Sharehol-meetings is the frequency of shareholders meetings within the year 2013. Board meetings is the frequency of meeting of board of directors in 2013. Board size is the number of directors in the board. Independent directors is the ratio of independent directors to the total number of directors in the board. Duality equals to 1 if the board chairman and the general manager are the same person; zero otherwise. Share-directors is number of directors holding the firm's share. Non-paid directors is the number of non-paid directors. Chairman ownership is proportion of shares held by board chairman. GM ownership is the proportion of shares held by GM. Directors' comp is the ratio of total annual emolument of top 3 directors (excluding allowance and adjusted by living costs) to operating revenue, times 1000. Executives' comp is the ratio of total annual emolument of top 3 executives (including allowance and adjusted by living costs) to operating revenue, times 1000. OLS regression results are reported and significance at 1%, 5%, and 10% is denoted with \*\*\*, \*\*, \* respectively.

Dep. Variable: Dividend yield	1	2	3
Intercept	-2.3773 *** <i>0.0048</i>	-3.7007 *** <i>&lt;.0001</i>	-3.6821 *** <i>0.0009</i>
Location	-0.1793 *** <i>0.0033</i>	-0.1945 *** <i>0.0063</i>	-0.1806 *** <i>0.0049</i>
Firm size	0.3645 *** <i>&lt;.0001</i>		0.1770 <i>0.1582</i>
Firm leverage	0.1843 <i>0.7224</i>		-0.1012 <i>0.8602</i>
Firm age	0.0840 <i>0.5781</i>		0.0270 <i>0.8715</i>
ROA	12.0177 *** <i>&lt;.0001</i>		12.1977 *** <i>&lt;.0001</i>
Market-to-book	-0.2729 *** <i>&lt;.0001</i>		-0.2668 *** <i>&lt;.0001</i>
Shareholders		0.7620 *** <i>&lt;.0001</i>	0.5673 *** <i>&lt;.0001</i>
Sharehol-meetings		-0.0082 <i>0.7393</i>	0.0065 <i>0.7713</i>
Board meetings		-0.0232 * <i>0.0562</i>	-0.01546 <i>0.1678</i>
AGM attendance rate		1.2664 *** <i>&lt;.0001</i>	0.8771 *** <i>0.0001</i>
Board size		0.0490 <i>0.1204</i>	0.0135 <i>0.6385</i>
Independent directors		0.9627 <i>0.2170</i>	0.1758 <i>0.8024</i>
Duality		-0.0586 <i>0.5138</i>	-0.0056 <i>0.945</i>
Share-directors		0.0560 ** <i>0.0119</i>	0.0276 <i>0.1709</i>
Non-paid directors		0.0805 ** <i>0.0166</i>	0.0771 ** <i>0.0108</i>
Chairman ownership		-0.5438 ** <i>0.0402</i>	-0.2737 <i>0.2535</i>
GM ownership		0.0193 <i>0.9540</i>	0.0970 <i>0.7468</i>
Directors' comp		-0.1806 * <i>0.0556</i>	-0.1056 <i>0.2213</i>
Executives' comp		0.1263 <i>0.1330</i>	0.1277 * <i>0.0915</i>
Industry dummies:			
Agriculture	-0.2515 <i>0.4054</i>	-0.1849 <i>0.5978</i>	-0.2252 <i>0.4773</i>
Mining	-0.1483 <i>0.6219</i>	-0.0462 <i>0.8958</i>	0.0111 <i>0.9722</i>
Manufacturing	0.1125 <i>0.4013</i>	0.2306 <i>0.1360</i>	0.1047 <i>0.4606</i>
Construction	-0.2566 <i>0.2412</i>	-0.0242 <i>0.9213</i>	-0.2394 <i>0.2842</i>

Wholesale and retail	0.0632 <i>0.7702</i>	0.4109 <i>0.1205</i>	0.2592 <i>0.2829</i>
IT	0.1008 <i>0.5226</i>	0.0024 <i>0.9895</i>	0.1007 <i>0.5379</i>
Real estate	0.0666 <i>0.7969</i>	0.6414 <i>0.0433</i> **	0.3580 <i>0.2263</i>
Obs	855	742	742
R square	0.2867	0.1757	0.3403

**Table 9**

Univariate tests of dividends: Classification B

Firms are defined as urban firms if they are located in the top-30 big cities; otherwise, they are non-urban firms. D is the percentage of firms that pay cash dividends. Dividend yield is the ratio of cash dividends to the market value of the firm, times 100. Dividends payout ratio is the ratio of cash dividends to net income (if net income is positive).

Variable	Full Sample	Urban Firms	Non-urban Firms	Difference
D	0.82529	0.845857	0.804642	0.041215
Dividend yield	0.9866	0.8795	1.0995	-0.22 ***
Dividend payout ratio	0.4183	0.3934	0.4445	-0.0511

**Table 10**

Cross-sectional analysis: Classification B

Location equals to one if the firm is located in top-30 big cities; zero otherwise. Dividend yield is the ratio of cash dividends to the market value of the firm, times 100. Firm size is the log of total assets. Firm leverage is the ratio of long term liability to total assets. Firm age is the log of firm age calculated since the firm is founded. ROA is the ratio of net profit after deducting non-recurring profit and loss to total assets. Market-to-book ratio is the ratio of firm market value (book value of total assets plus market value of common equity minus book value of common equity) to book value of total assets. Shareholders is the number of shareholders. Sharehol-meetings is the frequency of shareholders meetings within the year 2013. Board meetings is the frequency of meeting of board of directors in 2013. Board size is the number of directors in the board. Independent directors is the ratio of independent directors to the total number of directors in the board. Duality equals to 1 if the board chairman and the general manager are the same person; zero otherwise. Share-directors is number of directors holding the firm's share. Non-paid directors is the number of non-paid directors. Chairman ownership is percentage of shares held by board chairman. GM ownership is the percentage of shares held by GM. Directors' comp is the ratio of total annual emolument of top 3 directors (excluding allowance and adjusted by living costs) to operating revenue, times 1000. Executives' comp is the ratio of total annual emolument of top 3 executives (including allowance and adjusted by living costs) to operating revenue, times 1000. OLS regression results are reported and significance at 1%, 5%, and 10% is denoted with \*\*\*, \*\*, \* respectively.

Dep. Variable: Dividend yield	1	2	3
Intercept	-2.39948 *** <i>0.0045</i>	-3.65538 *** <i>&lt;.0001</i>	-3.73931 *** <i>0.0008</i>
Location	-0.11211 * <i>0.0559</i>	-0.17087 ** <i>0.0134</i>	-0.14223 ** <i>0.0226</i>
Firm size	0.36599 *** <i>&lt;.0001</i>		0.19007 <i>0.1313</i>
Firm leverage	0.17765 <i>0.7329</i>		-0.14707 <i>0.7986</i>
Firm age	0.08429 <i>0.5781</i>		0.03338 <i>0.842</i>
ROA	11.99002 *** <i>&lt;.0001</i>		12.09635 *** <i>&lt;.0001</i>
Market-to-book	-0.27511 *** <i>&lt;.0001</i>		-0.26686 *** <i>&lt;.0001</i>
Shareholders		0.76006 *** <i>&lt;.0001</i>	0.55893 *** <i>&lt;.0001</i>
Sharehol-meetings		-0.01155 <i>0.639</i>	0.00375 <i>0.8673</i>
Board meetings		-0.02336 * <i>0.0548</i>	-0.01579 <i>0.1596</i>
AGM attendance rate		1.29403 *** <i>&lt;.0001</i>	0.901 *** <i>&lt;.0001</i>
Board size		0.04775 <i>0.131</i>	0.01224 <i>0.6708</i>
Independent directors		0.93438 <i>0.2311</i>	0.14695 <i>0.8346</i>
Duality		-0.06459 <i>0.4714</i>	-0.01152 <i>0.8869</i>
Share-directors		0.05704 ** <i>0.0105</i>	0.02833 <i>0.1613</i>
Non-paid directors		0.08099 ** <i>0.0161</i>	0.07708 ** <i>0.011</i>
Chairman ownership		-0.56288 ** <i>0.0337</i>	-0.2917 <i>0.2241</i>
GM ownership		0.01344 <i>0.9679</i>	0.08905 <i>0.7675</i>
Directors' comp		-0.18596 ** <i>0.0491</i>	-0.1082 <i>0.211</i>
Executives' comp		0.13008 <i>0.1224</i>	0.12992 * <i>0.0867</i>
Industry dummies:			
Agriculture	-0.22472 <i>0.4586</i>	-0.17675 <i>0.6144</i>	-0.20981 <i>0.5089</i>
Mining	-0.15031 <i>0.6182</i>	-0.0366 <i>0.9174</i>	0.01818 <i>0.9545</i>
Manufacturing	0.12513 <i>0.3517</i>	0.23539 <i>0.1284</i>	0.11002 <i>0.4389</i>
Construction	-0.24923 <i>0.2569</i>	-0.0064 <i>0.9791</i>	-0.23016 <i>0.3045</i>

Wholesale and retail	0.07829 <i>0.7183</i>	0.41439 <i>0.1177</i>	0.25996 <i>0.2826</i>
IT	0.09745 <i>0.5381</i>	0.00934 <i>0.959</i>	0.10421 <i>0.5248</i>
Real estate	0.07536 <i>0.7714</i>	0.65362 <i>0.0396</i>	** 0.36824 <i>0.2141</i>
Obs	855	742	742
R square	0.2825	0.1742	0.3377

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