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Institutional Investors' Corporate Site Visits and Corporate Innovation*

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Institutional Investors' Corporate Site Visits and Corporate Innovation

Abstract

This study investigates whether and how institutional investors' site visits affect corporate innovation. Using all Chinese firms listed in the Shenzhen Stock Exchange from 2009 to 2013, we find that institutional investors' site visits significantly enhance corporate innovation and this effect is more pronounced for firms with a lower-quality information environment and poor corporate governance. We further find that the governance effect of site visits on innovation is consistent with career concerns rather than the quiet life hypothesis. We perform two stage-least square analysis to address possible endogeneity concerns and several robustness checks including using alternative measures of site visits and corporate innovation, alternative model specifications, and controlling for firm fixed effects. We also find that the effects of institutions' site visits are substitutes for the effects of institutional shareholding.

Keywords: Corporate site visits; Corporate innovation; Information environment; Career concern; Quiet life

JEL code: G23, G34, O31

Institutional Investors' Corporate Site Visits and Corporate Innovation

1. Introduction

Corporate innovation is an important contributor to a firm's comparative advantage (Porter, 1992) as well as a key engine of a country's economic growth (Solow, 1957). Therefore, investigating what influences corporate innovation is important in understanding a firm's prospects. Institutional investors are playing increasingly important roles in financial markets (Chen et al., 2007; An and Zhang, 2013). Prior literature finds that institutional investors can promote corporate innovation by reducing agency costs or in other ways, since they have an information advantage (Bushee, 1998; Wahal and McConnell, 2000; Eng and Shackell, 2001; Aghion et al., 2013). However, the research investigates only the effect of institutional ownership and neglects the impact of institutional investors' information acquisition process on corporate innovation. In this paper, we focus on one key type of information acquisition activity of institutional investors, that is, corporate site visits, one of the most prevalent and important types of information acquisition activities of institutional investors (Brown et al., 2015; Cheng et al., 2015, 2016).

As argued by Holmstrom (1989), innovation is a long, idiosyncratic, and unpredictable process that involves a very high probability of failure. Due to information asymmetry, corporate innovation often faces serious financing constraints (Hsu et al., 2014; Cornaggia et al., 2015) and agency conflicts arising from managers' career concerns and their preference for the quiet life always discourage corporate innovation (Aghion et al., 2013; Atanassov, 2013; Bernstein, 2015). Cheng et al., (2015, 2016) find that institutional investors' corporate site visits can facilitate their information acquisition by observing firms' operations and engaging in face-to-face discussions with managers and other employees, which can effectively reduce a firm's information asymmetry. Consequently, investors will (1) tolerate more short-term innovation failures to mitigate managerial myopia, (2) motivate managers more effectively to ensure they exert sufficient effort to create value for shareholders, and (3) require lower returns to compensate for the risk of future uncertainty arising from innovation. Hence, we propose that institutional investors' corporate site visit will promote corporate innovation.

Following Cheng et al. (2015, 2016), we use a unique data set of corporate site visits in China to evaluate the effect of institutional investors' site visits on corporate innovation. By using Chinese data, this study offers several advantages. First, the Shenzhen Stock Exchange (SZSE) has mandated its listed firms to disclose information related to investors' site visits in their annual reports since 2009. To our knowledge, the records of investors' site visits are seldom available in other markets. Such information provides us the opportunity to test the economic consequences of investors' information acquisition activities.

Second, as an emerging capital market, firms listed in China are associated with a poor information environment (Jin and Myers, 2006; Piotroski and Wong, 2012). Site visits, as a way of investors privately interacting with firms (Cheng et al., 2015), will play a more important role in reducing information asymmetry, which, in turn, will promote corporate innovation activities. Therefore, the Chinese setting increases the power of the tests in determining the impact of institutional investors' site visits on corporate innovation.

Third, China has become the world's second largest economy after the United States but is still an emerging economy. Empirical evidence from China will have implications for other emerging economies that dominate the world in terms of population and geographic size (Fan et al., 2011).

Using all Chinese firms listed in the SZSE during 2009–2013, we evaluate the effect of institutional investors' site visits on corporate innovation as measured by the number of patents granted to a firm. The results indicate a significantly positive relation between institutional investors' site visits and corporate innovation. The results are robust to several robustness checks including using alternative measures of site visits and corporate innovation, alternative model specifications, controlling for firm fixed effects, and accounting for possible endogeneity issue.

One material effect of site visits is that institutional investors can acquire more useful information by observing a firm's operations on site or by directly communicating with managers (Cheng et al., 2015, 2016). With such information acquired through site visits, institutional investors can better understand and tolerate managers' short-term failures, especially when these are purely stochastic, so that managers will not be blamed for poor performance due to more active innovative activities (the career concerns story). Moreover, institutional investors can better monitor managers by closely observing managers' behavior and firms' operations in site visits, which will improve managers' incentive to innovate (the quiet life story). Consistent with this improvement of the information environment hypothesis, we find that the positive relation between institutional investors' site visits and corporate innovation is more pronounced when a firm's information environment is less transparent and corporate governance is poor. We also find that the effects of institutions' site visits are substitutes for those of institutional shareholding found by Aghion et al. (2013)

Furthermore, we try to distinguish between the two arguments mentioned above related to the governance effect of institutional investors' site visits: the career concern hypothesis and the quiet life hypothesis. Although these two hypotheses will both result in positive relations between site visits and corporate innovation, the effect will be different for firms with differential levels of managerial entrenchment and product market competition. Further analysis indicates that institutional investors' site visits significantly promote corporate innovation for firms with non-entrenched managers or facing more intense product market competition. In contrast, such effects do not exist for firms with entrenched managers and firms in less intense product market competition. The results support the career concerns hypothesis rather than the quiet life hypothesis.

This paper contributes to the literature in the following ways. First, it adds to the literature about institutional investors and corporate innovation by carefully examining institutional investors' information acquisition process. The literature mainly focuses on the impact of institutional ownership on corporate innovation (Bushee, 1998; Wahal and McConnell, 2000; Eng and Shackell, 2001; Aghion et al., 2013). It finds that institutional ownership enhances corporate innovation and argues that institutional investors' better information collection ability is one of the fundamental reasons for this effect. However, few studies offer direct empirical evidence on how institutional investors' information acquisition process affects corporate innovation. We provide new insights on the relation between institutions and corporate innovation by looking at one important information acquisition channel of institutional investors, that is, site visits.

Second, this study extends the literature about corporate site visits. Cheng et al. (2015) show that site visits can help investors acquire valuable firm-specific information, while Cheng et al. (2016) find that site visits can help analysts improve their earnings forecast accuracy. Unlike these papers that emphasize the benefit of site visits to visitors, we extend their economic consequences to the firms being visited. In particular, we extend the impact of site visits to a vital dimension of corporate investment decision, namely, corporate innovation.

The remainder of the paper is organized as follows. Section 2 documents the institutional background for corporate site visits, reviews the literature, and develops our hypotheses. Section 3 introduces the sample, data, and research methodology. Section 4 presents the empirical results and the additional analysis is reported in Section 5. Section 6 concludes the paper.

2. Institutional background, literature review and hypothesis development

2.1 Institutional background of corporate site visit in China[1]

Corporate site visits refer to investors' field trips to a firm's headquarters and its operation facilities. During site visits, investors have the chance to talk to corporate managers and other employees (Cheng et al., 2015). Through site visits, investors can have the opportunities to observe the firms' operations and production facilities and obtain some information that is hard to get from simply analyzing firms' financial reports. By visually seeing firms' operational situation and talking in person with top executives, investors can know better about firms' operating performance, future prospects, and business risk exposure[2].

All investors can request to site visit listed firms and listed firms will try their best to accommodate these requests[3]. Although individual investors play an important role in Chinese capital market, they seldom visit listed firms because the time and efforts required and the expenses incurred are not cost effective for them. Consequently, most of the investors who visit listed firms are institutional investors.

Despite the importance of site visits, before 2008, the information about corporate site visits are not disclosed to the public. To level the playing field of all investors, starting from

[1] More detailed descriptions of the institutional background of site visit disclosure can be found in Cheng et al. (2015).

[2] It should be noted that, China prohibits managers from disclosing material non-public information to select investors. The "Fair Disclosure Guidelines" issued by the SZSE in 2006 specifically emphasize that firms should not disclose material non-public information during site visits (Cheng et al., 2015).

[3] Most companies have detailed site visit polices and follow the "Guidelines of Investor Relations Management" issued by the SZSE. The Guidelines states that "Listed companies should try to accommodate the request from investors, analysts, and fund managers to visit company headquarters and project sites to the greatest extent" and "Listed companies should arrange the site visits properly so that visitors may better understand the companies' business and operational situations." (Section 5 of the guidelines: www.szse.cn/upfiles/attach/1138/2003/11/11/tzzgxgl.doc).

2009, SZSE enforced a new disclosure rule that requires all listed firms in SZSE to disclose the information about how the firms manage investor relationship, including site visits by investors. This disclosure rule makes the site visit information otherwise only available to the participants now available to the public.

2.2 Literature review

This paper is related to two strands of the literature as follows.

2.2.1 Literature on corporate innovation

Inherently different from routine tasks, corporate innovation has characteristics of a long investment cycle and a high uncertainty of investment return (Holmstrom, 1989). Given the importance of corporate innovation to a firm's growth potential and future prospects, the factors that influence it have been attracting the increasing attention of researchers. To summarize, the emerging literature on innovation mainly focuses on two main types of factors, that is, finance and incentives for innovation. Regarding the finance for innovation, the literature documents that a firm's innovative investments often face serious financing constraints and have to rely on its internal cash flow due to the high uncertainty and risk of innovation (Hall, 2002). However, financial market development (Hsu et al., 2014) and bank industry competition (Cornaggia et al., 2015) will help reduce the firm's costs of external capital and promote corporate innovation.

With regard to incentives for innovation, the literature mainly follows a principal–agent framework. These studies argue that managers' laziness in enjoying the quiet life and their myopia due to career concerns will stifle a firm's innovation incentives (Aghion et al., 2013; Atanassov, 2013; Bernstein, 2015).

However, stronger shareholder protection and more long-term incentive compensation can mitigate agency problems and enhance corporate innovation (Lerner and Wulf, 2007; Brown et al., 2013).

Since institutional investors play critical roles in reducing financing constraints (Wang and Zhang, 2009) and monitoring managers (Chen et al., 2007; An and Zhang, 2013), more and more studies have begun to discuss the impact of institutional investors on corporate innovation. Bushee (1998) finds that firms with greater institutional ownership are less likely to cut research and development (R&D) expenditures following poor earnings performance. Wahal and McConnell (2000) document a positive and statistically significant relation between R&D expenses and the fraction of shares owned by institutional investors. Aghion et al. (2013) also prove that greater institutional ownership is associated with more innovation. These studies consistently argue that the underlying reason for the above positive effect is that institutional investors have an information advantage.

In summary, the literature on corporate innovation establishes that financing constraints and agency problems are two important factors that impede innovation. Based on this, institutional investors with an information advantage can promote corporate innovation by reducing the cost of capital or by improving corporate governance. However, previous papers mainly explore the effect of institutional investors' ownership on corporate innovation and neglect their information acquisition activities. By examining the role of institutional investors' site visits on corporate innovation, this paper contributes to this line of research by filling this gap.

2.2.2 Literature on institutional investors' information acquisition activities

The emerging literature has begun to directly examine the economic consequences of institutional investors' information acquisition activities, such as earnings conference calls (Mayew et al., 2013), broker-hosted investor conferences (Green et al., 2014a, 2014b), and private interactions with firm managers (Soltes, 2014). Nevertheless, most of these papers primarily discuss the benefits of such information acquisition activities from the investors' side. Except for Green et al. (2014b), these authors explore the potential benefits for listed firms that participate in broker-hosted investor conferences. They find that broker-hosted investor conferences will help participating firms increase their market value and reduce their cost of capital.

Although corporate site visits are considered one of the most prevalent and important types of information acquisition activities in the market (Brown et al., 2015), there is little evidence due to lack of data. Taking advantage of the site visit data disclosed by listed firms in the Chinese capital market, Cheng et al. (2015, 2016) first document the information acquisition of corporate site visits and the impact of corporate site visits on analyst forecast behavior. Even so, there is still a lack of research about the impact of corporate site visits on firm behavior. Along this line, we extend the literature by investigating the impact of institutional investors' corporate site visits on corporate innovation.

2.3 Hypothesis development

Institutional investors' site visits could enhance corporate innovation for several reasons. First, due to information asymmetry, investors will infer a manager's ability from observing short-term performance (Aghion et al., 2013). They will easily attribute the firm's poor short-term performance to the incompetence of managers and hence fire them, which leads to managers' career concerns. After interviewing more than 400 executives, Graham et al. (2005) find 78% of their sample executives admit that they sacrifice firms' long-term values to meet or beat the desired short-term earnings target to protect their positions. Managers are more likely to sacrifice corporate innovation, because most of its expenditures will be expensed rather than capitalized, although its payoffs are long term (He and Tian, 2013). Through site visits, institutional investors can acquire more firm-specific information and deliver it to other investors by trading behavior or research reports. Consequently, the investors who visited firms will be more careful in evaluating managers' capabilities using the firm's short-term reported earnings. With these information acquired through site visits, investors will adopt a more tolerant attitude toward firms' early failures, which is crucial in motivating innovation (Manso, 2011).

Second, Bertrand and Mullainathan (2003) argue that managers prefer to enjoy a quiet life rather than work hard to create value for shareholders. Innovation is a complex and difficult task that will incur expensive personal costs for managers. For example, unlike standard, routine work, innovation projects require managers to divert substantial efforts to make decisions and force them to keep learning to fit the new environment created by innovation. Thus, without effective monitoring, managers who enjoy the quiet life could underinvest in corporate innovation (Aghion et al., 2013; Bernstein, 2015). Chen et al. (2007) find the monitoring effect of institutional investors largely depends on their information acquisition and process capabilities. Thus, institutional investors' site visits will enhance their monitoring ability to promote managers to innovate more.

Third, the information asymmetry between investors and firms will increase firms' cost of capital and limit their external financing (Myers and Majluf, 1984). Conducting innovation projects will exacerbate this problem since it is hard for investors to predict the outcome of innovation projects due to their long-term, uncertain, and risky characteristics and sparse information about their prospects (Allen and Gale, 1999). Site visits by investors could help mitigate this issue as investors can obtain useful information through corporate site visits by receiving more visual cues and communicating with firms' top executives (Cheng et al., 2015, 2016). As a consequence, firms will be able to divert more resources to support corporate innovation.

The above analyses lead to the first testable hypothesis, as follows.

H1: Institutional investors' site visits will promote corporate innovation.

Site visits will potentially benefit both investors and visited firms. On the one hand, institutional investors are able to acquire material information through site visits to mitigate information asymmetry problems. The benefit of acquiring information through site visits would be higher if the visited firms hold information not readily available to outside investors. By visually observing firms' operations and communicating in person with top managers, institutional investors can obtain new information or confirm their prior beliefs about the firms. In contrast, for firms with a good information environment, all the information is already available to investors. Institutional investors will not be able to obtain much new information from the firms in their site visits, even if they expect to hear something new.

On the other hand, during site visits, firm managers can communicate to investors their long-term strategy and plans for the firm's operation, which is not easy to communicate with investors in periodic and even voluntary announcements. In face-to-face communication, managers can inform investors the efforts they made to develop the firm and create value for investors, some of which might not be immediately reflected in firm performance, especially efforts in innovation projects. It is already well documented that managers' compensation contracts are incomplete. Managers are rewarded by a firm's performance instead of their efforts. As Feltham and Xie (1994) pointed out, performance measures are frequently incomplete or imperfect representations of the economic consequences of managers' actions. This is especially the case for corporate innovation activities, since things could go wrong for purely stochastic reasons or it will take a long time for the firm to recoup its investment expenditures in innovation projects. Consequently, managers might be lazy in their efforts in innovation projects. The problem will be more severe when the monitoring mechanism fulfilled by corporate governance is not functioning well in aligning the interests of managers and investors. To this end, corporate site visits can complement corporate governance in monitoring managers' true efforts in creating value for investors. Hence, the benefits of site visits will be greater when a firm's corporate governance is poor.

The above arguments lead to our following hypotheses.

H2A: The positive relation between institutional investors' site visits and corporate innovation will be more pronounced for firms with a poor information environment, ceteris paribus.

H2B: The positive relation between institutional investors' site visits and corporate innovation will be more pronounced for firms with poor corporate governance, ceteris paribus.

3. Sample, data, and methodology

3.1 Sample and data

The sample includes all Chinese A-share firms listed on the SZSE from 2009 to 2013.[4] The sample starts in 2009 because this is the first year the SZSE mandated all listed firms to disclose information about site visits in their annual reports. We then exclude (1) financial firms[5] and (2) observations without enough data for the control variables. The final sample consists of 5,307 firm–year observations. Table 1 illustrates descriptive statistics of site visits to listed firms in SZSE. Panel A reports the site visits by both institutional and individual investors. The results indicate that most of the site visits are done by institutional investors, consistent with our notion in Section 2.1 that it is not cost effective for most

[4] The sample period is actually from 2009 to 2013 for the measures of institutional investors' corporate site visits and control variables but from 2010 to 2014 for the measures of corporate innovation, which are one year ahead of corporate site visits.

[5] We eliminate financial firms because these firms have significantly different disclosure requirements and accounting rules.

individual investors to visit listed firms. Panel B shows that the proportion of firms whose sites were visited by institutional investors monotonically increases from 37.93% in 2009 to 74.66% in 2013. In addition, Panel C indicates firms experience more and more site visits over time. The number of site visits per firm in 2013 was three times that in 2009. The findings in Panels B and C collectively indicate that site visits are becoming increasingly common in the Chinese capital market, consistent with the fact that both firms and investors think site visits are an important communication channel. Panel D shows the descriptive statistics of site visits for the group of firms with at least one site visit as well as the entire sample. For the entire sample, a firm on average is visited by institutional investors around 14 times a year. However, if we only consider the firms that experienced at least one site visit, the average number of site visits by institutional investors becomes 27.

[Insert Table 1 about here]

We obtain the data for our study from several sources. China Stock Market & Accounting Research (CSMAR) only started compiling site visit data in 2012, so we retrieve site visit data for 2012 and 2013 from CSMAR and hand-collect the information on site visits for the 2009–2011 period from the annual reports of firms listed on the SZSE. Following Tan et al. (2015) and Fang et al. (2017), we obtain patent grant data from the State Intellectual Property Office of China (SIPOC). Institutional ownership information comes from the Wind Financial Database (WindDB). All other data are obtained from CSMAR.

3.2 Variables definition

3.2.1 Corporation innovation

In this study, we use the number of patent applications rather than R&D expenditures to proxy for corporate innovation. Unlike R&D expenditures, which capture only one particular observable input, patenting activity is considered a better measure of corporate innovation because it reflects the successful outputs of a firm after it invests all observable and unobservable innovation inputs (He and Tian, 2013; Fang et al., 2014).

There are three types of patents under Chinese patent law, namely, invention patents, utility model patents, and design patents. Among these, invention patents are the most original and design patents involve limited technological advancements. Consistent with Tan et al. (2015) and Fang et al. (2017), we measure corporate innovation based on a firm's total number of invention patents applications in a given year[6] that are eventually granted (*INVPAT*). If information on invention patents for a firm is not available from SIPOC, we set *INVPAT* to zero. Consistent with the innovation literature, we adjust the innovation output measure to address the truncation problems associated with our database. The truncation problem arises because of the lag between a patent's application year and its grant year. Following Hall et al. (2001, 2005) and Fang et al. (2014), we correct for this truncation bias in patent counts using "weight factors" computed from the application grant empirical distribution between 2005 and 2009.[7] Following prior literature (Fang et al., 2014; Tan et al., 2015; Fang et al., 2017), we use the natural logarithm of

[6] Previous literature (He and Tian, 2013; Fang et al., 2014) points out that, compared to the patent's grant year, its application year captures the actual time of innovation.

[7] Specially, we first calculate the time interval between a patent's application and grant years. We construct W_s as the percentage of patents applied for in a given year that are granted in s years. We then adjust the invention patent count, *INVPAT*, as

$$INVPAT = \frac{INVPAT_{raw}}{\sum_{s=0}^{2014-t} W_s}$$

where $INVPAT_{raw}$ is the raw number of invention patent applications that are eventually granted in year t ($2010 \le t \le 2014$).

patent counts as the main innovation measures in our analysis[8]. To avoid losing observations with zero patents, we add one to the actual values when calculating the natural logarithm.

3.2.2 Institutional investors' site visits

We measure the intensity of institutional investors' site visits (*SV*) based on the number of site visits to a firm by all institutional investors during a given calendar year. For firms that do not disclose any information about institutional investors' site visits, *SV* is set to zero. We then take the natural logarithm of one plus this raw number to construct our main measure of institutional investors' site visits, Ln(*SV* + 1).

3.2.3 Control variables

Following He and Tian (2013), we include a series of control variables that could impact a firm's innovation activities in our regressions: *Ln(R&D* + 1), the natural logarithm of one plus a firm's R&D expenditures; *SIZE,* the natural logarithm of the firm's book value of assets; *Q,* Tobin's Q; *OCTA,* the net cash flow from operations over total assets; *PPETA,* net properties, plants, and equipment divided by total assets; *LEV,* total debt over total assets; *ROA,* the net margin of assets; *AGE,* the natural logarithm of one plus the number of years a firm has been listed; *FIRST*, the ownership of the largest shareholder; *MHOLD*, the ownership of the top managers; *SOE,* whether a firm is a state-owned enterprise; *INS,* the ownership of institutional investors; and *ANALYST,* the natural logarithm of one plus the number of analysts covering a firm. We also include industry and year dummies to control for industry and year fixed effects, respectively.

[8] We acknowledge that the variable we use mainly measures the quantity of patents instead of quality. Existing innovation literature typically uses the number of future citations a patent receives as a measure for patent quality, assuming that more influential and higher impact patents receive a larger number of subsequent citations. However, the database we use does not contain reliable citation information. To mitigate this concern, following Tan et al. (2015), we only focus on invention patents since they are the most original ones and all of them are of high quality and nontrivial. We also use the summation of invention patents and utility model patents, and R&D expenditure as alternative proxies of corporate innovation. The results are robust to alternative proxies of corporate innovation. Nevertheless, our results need to be explained with this caveat in mind.

3.3 Empirical models

To investigate the impact of institutional investors' site visits on corporate innovation, we estimate the following model:

$$Ln\left(INVPAT+1\right)_{i,t+1}=\alpha+\beta_1 Ln\left(SV+1\right)_{i,t}+\gamma\times ControlVariables_{i,t}+\varepsilon_{i,t} \quad (1)$$

where *i* indexes firm and *t* indexes time. Note that the dependent variable of corporate innovation *Ln*(*INVPAT* + 1) is one year ahead of the site visit variable *Ln*(*SV* + 1) and other control variables, so the data period for corporate innovation is from 2010 to 2014. Our focus in the analysis is β_1, which indicates the relation between corporate innovation and corporate site visits. We expect β_1 to be positive if corporate site visits lead to greater corporate innovation. To mitigate the effects of outliers, we winsorize all continuous variables at the 1% and 99% levels. Furthermore, following He and Tian (2013), standard errors are clustered at the firm level to account for any possible correlations between firms. The definition of all the variables can be found in the Appendix.

4. Empirical results and discussion

4.1 Descriptive statistics and correlation analysis

Panel A of Table 2 reports descriptive statistics for the variables to be used in our analyses. The mean value of *Ln*(*INVPAT* + 1) is 1.3092 and the corresponding original value of *INVPAT* is 13.9037. This result indicates that, on average, a firm in our sample has 13.9037 invention patents granted each year. The mean value (standard deviation) of Ln(*SV* + 1) is 1.3766 (1.5802), which corresponds to a value of 13.8084 for *SV*. This finding indicates that, on average, a firm's site is visited by institutional investors 13.8084 times a year, with significant variation in terms of the number of site visits across firms.

Panel B of Table 2 reports the Pearson and Spearman correlation matrix of these variables. From Panel B, we can see that the Pearson and Spearman correlations between future corporation innovation (Ln(*INVPAT* + 1)) and institutional investors' site visits (Ln(*SV* + 1)) are 0.216 and 0.178, respectively, both significant at the 1% level. The preliminary pairwise correlation results indicate a positive relation between institutional investors' site visits and corporate innovation. The correlation between INS and Ln(SV + 1) is positive and statistically significant, which indicates that firms with greater institutional shareholding will experience more site visits. In addition, the correlation between INS and Ln(SV + 1) is much smaller than one, which implies that institutions' shareholding and their site visits are two different mechanisms affecting corporate innovation.[9]

[Insert Table 2 about here]

4.2 Main regression results

We further conduct regression analysis by including control variables that are also related to corporate innovation. Column (1) of Table 3 reports the estimation of Eq. (1). The coefficient of Ln(*SV* + 1) is positive and significant at the 5% level, suggesting that institutional investors' site visits can enhance the innovation of the visited firms. It should be noted that this effect not only is statistically significant but also has an important economic significance. The coefficient of Ln(*SV* + 1) is 0.0559, which indicates that a one-standard-deviation increase in the number of institutional investors' site visits is associated with an

[9] Institutions can also visit the sites of firms even though they are not currently holding shares of these firms, since they might want to discover good potential candidates for future investments.

increase of 5.85% (= 0.0559×1.5802/1.5098) of a standard deviation in corporate innovation, ceteris paribus.

For the control variables, Ln(*R&D* + 1) and *SIZE* are both positive and significant, which is consistent with the finding of He and Tian (2013). The significantly positive coefficient of *OCTA* supports the argument of Hall (2002) that innovation projects have to depend more on internal cash flows. Younger firms (*AGE*) tend to innovate more, which is consistent with the results of Atanassov (2013). The variable *Q* is negatively related to innovation, which could be because Chinese firms with higher investment opportunities have less pressure to innovate. The tangibility (*PPETA*) of firms is negatively related with corporate innovation, which indicates that greater investments in tangible assets (higher *PPE*) could crowd out the resources for investments in innovation projects. The negative coefficient of *FIRST* implies that the larger the stake held by the largest shareholders, the more likely they are to cut down the risky innovation projects to reduce their investment risks. State-owned enterprises (SOEs), which are usually considered to have fewer financial constraints (Brandt and Li, 2003), could have more resource to innovate. Consistent with Aghion et al. (2013), we also find institutional ownership *(INS)* to be positively correlated with corporate innovation. The positive coefficient of *ANALYST* is consistent with the information hypothesis proposed by He and Tian (2013), but not with their pressure hypothesis. This could be due to the poor information environment (Piotroski and Wong, 2012) and nascent market of corporate control (Jiang and Kim, 2015) in China.

[Insert Table 3 about here]

In E.q. (1), we measure corporate innovation one year ahead of site visits and other independent variables to alleviate potential selection issues in which institutions might choose to visit firms when they anticipate a surge in their innovation. Hence, even after the above correction, the potential endogeneity problem may still exist. To further correct for the potential endogeneity problem between institutional investors' site visits and corporate innovation, we perform a two stage-least square (2SLS) regression analysis by employing two instrumental variables (IVs), the number of listed firms in the city in which the firm is located (Ln(*FNUM* + 1)) and the average number of industry-level site visits but excluding the firm itself (Ln(*INDSV* + 1)). Both of these variables are expected to be correlated with firm-level site visits, but not innovation. For example, investors might prefer to visit cities where there are more listed firms so that they can visit more firms in one trip to save time and expenses and some firms easily attract institutional investors' site visits simply because they belong to a frequently visited industry. However, these two variables are unexpected to be correlated with firm innovation.

The results from the 2SLS analysis are reported in columns (2) and (3) of Table 3. In the first stage, we estimate Ln(*SV* + 1) as a function of Ln(*FNUM* + 1), Ln(*INDSV* + 1), and other control variables in Eq. (1). The results from the first-stage analysis (column (2)) indicates that, as expected, the two IVs are significantly positively correlated with site visits and the *F*-test indicates that the two variables are not weak instruments. The overidentification test (Sargan statistic) shows that neither of the IVs is invalid and our structural model is specified correctly. As we can see from the results for the second-stage regression reported in column (3), the coefficient of Ln(*SV* + 1) is still significantly positive at the 1% level, with an even greater magnitude than that of column (1) . The results from the 2SLS analysis reinforce the findings in column (1). Therefore, we can conclude that corporate site visits are significantly positively related to corporate innovation, even after any possible endogeneity concerns are controlled for.

Overall, the results in Table 3 provide support for our first hypothesis that institutional investors' site visits can significantly enhance corporate innovation.

4.3 Robustness tests

In this section, we perform several robustness tests.

4.3.1 Dummy variable for corporate site visits

To help alleviate concerns about non-normality and any measurement error in the underlying corporate site visit data, we re-estimate Eq. (1) using a dummy variable set to one if institutional investors make more than one site visit and zero otherwise. However, if variation in the underlying continuous site visit data is informative, the use of an indicator variable could also weaken the power of the tests. The results are reported in Table 4. The estimations are very similar to the results reported in Table 3, which reinforce our inferences using the continuous variables for site visits.

[Insert Table 4 about here]

4.3.2 Alternative model specification

Since our dependent variable is count based and quite a few of the observations have zero patents, the error term of the dependent variables does not necessarily follow a normal distribution. We re-estimate column (1) in Tables 3 and 4 using a Poisson model and a negative binomial model, where the former model requires that the mean equal the variance but the latter relaxes this assumption. The results reported in Table 5 are qualitatively the same as in Tables 3 and 4. In both specifications, corporate innovation is positively associated with site visits, which is statistically significant at the 1% level.

[Insert Table 5 about here]

4.3.3 Alternative proxies for corporate innovation

Following Tan et al. (2015), we also use the total number of invention patents (*INVPAT*) and utility model patents (*UMPAT*) of a firm as an alternative proxy for corporate innovation. In particular, we use Ln(*INVPAT* + *UMPAT* + 1) as the dependent variable and rerun Eq. (1). The results are reported in columns (1) and (2) of Table 6. The coefficients of site visit variables are both positive and significant at the 1% level.

[Insert Table 6 about here]

In addition, we also use a firm's R&D expenditures, the input of innovation, as another proxy for corporate innovation. The results reported in columns (3) and (4) of Table 6 also show a positive and significant relation between site visits and corporate innovation.

4.3.4 Controlling for firm fixed effects

Although we have controlled for a set of firm-level control variables in the above analyses, some omitted correlated variables that were not accounted for could affect the results. To mitigate this concern, we further include firm fixed effects to control for firm-level time-invariant unobservables. The results are reported in Table 7. The coefficients of *Ln(SV+1)* are still positive, albeit a bit less significant than the corresponding results discussed above. The results in Table 7 indicate that the positive relation between corporate innovation and institutions' site visits still holds even after controlling for firm-level time-invariant unobservables.

[Insert Table 7 about here]

4.4 Effect of the information environment

To test H2A, we employ two metrics to measure the information environment. The first is stock price synchronicity (*SYNCH*). Most of the literature (Morck et al., 2000; Jin and Myers, 2006) has argued that a higher *SYNCH* value indicates lower firm-specific information contained in stock prices. Following Jin and Myers (2006), we measure *SYNCH* as follows. For each year, we estimate the following regression:

$$r_{i,d,t} = \alpha + \beta_{1i} r_{m,d-2,t} + \beta_{2i} r_{m,d-1,t} + \beta_{3i} r_{m,d,t} + \beta_{4i} r_{m,d+1,t} + \beta_{5i} r_{m,d+2,t} + \varepsilon_{i,d,t} \quad (2)$$

where $r_{i,d,t}$ is the daily return of stock *i* on day *d* of year *t* and $r_{m,d,t}$ is the value-weighted A-share market return on day *d* of year *t*. To circumvent the bounded nature of R^2 within [0, 1], we use the following logistic transformation according to the literature:

$$SYNCH_{i,t} = \log\left(\frac{R_{i,t}^{\ 2}}{1 - R_{i,t}^{\ 2}}\right) \quad (3)$$

where $SYNCH_{i,t}$ is the stock price synchronicity for firm *i* in year *t* and $R_{i,t}^{2}$ is the coefficient of determination from Eq. (2) for firm *i* in year *t*.

The second metric is the price impact of information asymmetry (*IAPI*), following Amihud (2002). Ferreira et al. (2011) argue that the magnitude of the price impact (*IAPI*) should be a positive function of the perceived amount of informed trading on a stock. The variable *IAPI* is defined as

$$IAPI_{i,t} = \frac{1}{D_i} \sum_{d=1}^{D_i} \frac{|r_{i,d,t}|}{VOLD_{i,d,t}} \quad (4)$$

where D_i is the number of trading days of stock *i* in year *t*, $r_{i,d,t}$ is the daily return of stock *i* on day *d* of year *t*, and $VOLD_{i,d,t}$ is the daily trading volume, measured in billions of yuan.

Then, in each year, we partition the whole sample into low- and high-quality information environment groups along the median of *SYNCH* and *IAPI*, respectively. Table 8 reports the results from regressions of innovation on institutional investors' site visits for different information environment groups. The results indicate that the positive relation between Ln(*SV* + 1) and Ln(*INVPAT* + 1) is much higher for firms with a lower-quality information environment than firms with a higher-quality information environment. The difference between the coefficients of Ln(*SV* + 1) for the two groups is statistically significant, which supports H2A that site visits have greater effects on corporate innovation of firms with poor information environment.

[Insert Table 8 about here]

4.5 Effect of corporate governance

We also want to see whether the effect of corporate site visits on corporate innovation is larger for firms with a low quality of corporate governance. To this end, we use nine corporate governance variables (*First*, *MHOLD*, *SOE*, *INS*, *AF*, *RID*, *SHARE2_10*, *BHSHARE*, and *TOP8*)[10] to construct a corporate governance index (*CGI*) for each firm–year observation following Bai et al. (2002) and Xu et al. (2017). Among the above nine variables, the first set of variables (*First*, *MHOLD*, *INS*, *ANALYST*, *INDEPENDENT*, *SHARE2_10*, *BHSHARE*, and *AUDIT*) have a positive impact on governance and the second set of variables (*SOE*) have a negative impact on governance. For each year, we sort the firms based on each of the variables in the first set in descending order and the variable in the second set in ascending order. Then the ranking of all firms is generated accordingly for each variable. We next divide the ranking by the total number of available observations in the study in that year and multiply the resulting measure by 100 to

[10] The definition of these nine variables can be found in the Appendix.

obtain a normalized value from 0 to 100. Finally, a firm's CGI is constructed as the equally weighted average of all the nine rankings for the nine variables of each firm as follows:

$$CGI_{i,t} = \frac{1}{9}\sum_{j=1}^{9}\left(100 - \frac{Rank\_CG_{i,j,t} - 1}{Number\ of\ \ firms - 1} * 100\right) \quad (5)$$

where j indicates the jth kind of corporate governance variable and $Rank\_CG_{i,j,t}$ indicates the rank of the jth kind of corporate governance variable for firm i in year t. A higher value of *CGI* indicates better corporate governance for the firm.

We next divide the sample into low- and high-corporate governance groups according to the median of *CGI* each year. The results reported in Table 9 indicate that the relation between Ln(*SV* + 1) and Ln(*INVPAT* + 1) is significantly positive for both groups of firms. However, the magnitude of the coefficient of Ln(*SV* + 1) is significantly larger in the low-quality corporate governance group than that in the high-quality group. The results imply that the effect of corporate site visits on corporate innovation is significantly greater for low-quality corporate governance firms, which is supportive of H2B.

[Insert Table 9 about here]

5. Further analysis

5.1 Potential channels for corporate governance effect: Career concerns or the quiet life hypothesis

In the above analysis, we find that institutional site visits promote corporate innovation, with the effect being more pronounced in firms with poor corporate governance. These findings are consistent with both managers' career concerns and quiet life theories, as documented by Aghion et al. (2013) and Bernstein (2015). A further question is which one of the two theories can potentially explain the improved corporate governance as a result of institutional investors' site visits in terms of innovation output improvement? Although these two theories will both result in positive relations between site visits and corporate innovation, the effect will be different for firms with differential levels of managerial entrenchment or product market competition.

We next perform tests in an attempt to distinguish between the two theories by investigating firms with different levels of managerial entrenchment or product market competition. First, we partition the whole sample based on a measure of managerial entrenchment. Presumably, an entrenched manager has fewer concerns about being fired (Bernstein, 2015). If the career concerns theory holds, we will find no site visits effects on corporate innovation for firms with entrenched chief executive officers (CEOs). However, after site visits, non-entrenched CEOs will worry less about temporary poor performance and will invest more in innovation projects since investors now know better about their efforts. On the contrary, if the quiet life theory holds, the effect of site visits on innovation will be more prominent for firms with entrenched CEOs since the entrenched CEOs who enjoyed quiet life before are pushed to exert efforts in innovation projects. Following Bernstein (2015), we use CEO duality *(DUAL)* to measure managerial entrenchment with the dummy variable *DUAL* equal to one if the CEO is also the chair of the board, and zero otherwise. We then examine the site visit effects for firms with entrenched and non-entrenched CEOs separately. The results are reported in the first two columns of Table 10. Consistent with the career concerns theory, the relation between Ln(*SV*+1) and Ln(*INVPAT*+1) is significantly positive only for firms with a non-entrenched CEO (*DUAL* = 0) but insignificant for firms with an entrenched CEO (*DUAL* = 1), with the difference between them being statistically significant.

[Insert Table 10 about here]

We next conduct a second analysis to differentiate between career concerns and quiet life theories by looking at the site visit effects for firms with different product market competition levels following Aghion et al. (2013). If quiet life theory holds, site visits effects will be minimal for firms facing higher product market competition because the managers are already disciplined by the threat of bankruptcy or takeover to work hard. In contrast, following career concerns theory, managers of firms facing more intense product market competition will cut down innovation projects to boost firms' short term performance and avoid being fired for poor performance. Site visits will help investors differentiate reasons of firms' poor performance and encourage managers to exert more efforts on innovation projects. Hence, career concerns theory will predict more pronounced effects of site visits on corporate innovation for firms facing more intense product market competition. Following Aghion et al. (2013), we measure a firm's product market competition using *Lerner index*[11], with lower *Lerner index* indicating more intense product market competition. The results are reported in columns (3) and (4) of Table 10. The site visits effects are only statistically significant for firms facing more intense product market competition (lower *Lerner index*), which again supports the career concerns theory rather than the quiet life theory.

Taken together, the above findings imply that corporate site visits help alleviate career concerns but not the quiet life problem in terms of innovation investment.

5.2 Effects on SOEs and non-SOEs

SOEs are deemed to have poor corporate governance but suffer less from financial constraints than non-SOEs do. An interesting question worthy of examination is whether site visits have more or less effect on SOEs. We therefore partition the whole sample into SOEs and non-SOEs and look at the site visit effects for these two groups of firms separately. The results are reported in Table 11. As indicated by the

[11] Variable definition can be found in the Appendix.

results, the coefficient of Ln(SV + 1) is greater for SOEs than for non-SOEs; however, the difference is not statistically significant.

[Insert Table 11 about here]

5.3 Effects of institutional shareholding and site visits on corporate innovation: Complements or substitutes?

Aghion et al. (2013) find that greater institutional ownership is associated with greater corporate innovation. Our results reported above show that site visits have a positive effect on corporate innovation after institutional ownership (*INS*) is controlled for. One natural question is whether these two effects are complements or substitutes. One possibility is that institutions with greater ownership try to obtain more information from the firms for their investment decisions and hence the effect will be greater. Alternatively, as a result of the effect of institutional ownership on corporate innovation (Aghion et al., 2013), a firm's innovation is already close to its optimal level. Hence site visits by institutions will add less value to the firm in terms of promoting corporate innovation. We investigate this issue by dividing the entire sample into two groups along the median value of institutional ownership *(INS)* and estimate the effect separately. The results reported in Table 12 show that the effect of site visits on corporate innovation is greater for the group of firms with lower institutional shareholding and the difference between these two groups is statistically significant, which is consistent with the notion that institutional ownership and site visits are substitutes for each other in terms of enhancing corporate innovation.

[Insert Table 12 about here]

5.4 Effect of visits by mutual funds with and without shareholdings on visited firms' shares

The effects of site visits by mutual funds holding the visited firm's shares could differ from those of site visits by mutual funds that do not hold the firm shares, since the incentives of the two types of institutions could be different. The former type of mutual funds visit firms to confirm their prior beliefs of the firms' prospects or else they will reduce their holdings of these firms. By contrast, the latter type of mutual funds visit firms to identify potential candidates for future investments. Consequently, the effects of their site visits on innovation could be different. To examine this issue, we separately look at the visits by these two types of mutual funds. The results reported in columns (1) and (2) of Table 13 show that the effects of their visits on corporate innovation are both significantly positive. Further, when we include both of them in one regression in column (3), we do not find any significant differences between them.

[Insert Table 13 about here]

6. Conclusions

In this study, we examine whether and how institutional investors' site visits affect corporate innovation. Unlike previous studies focusing on institutional investors' ownership effects, we investigate the effects of their information acquisition activities on corporate innovation by utilizing unique site visit data in China. Using all Chinese firms listed in the SZSE from 2009 to 2013, we find that institutional investors' site visits significantly enhance corporate innovation. This positive effect is more pronounced for firms with an opaque information environment and poor corporate governance. These results indicate that improving the information environment and corporate governance quality are two important ways in which site visits affect corporate innovation. We further distinguish two hypotheses related to the governance effect of institutional investors' corporate site visits and find that the results are consistent with career concerns rather than the quiet life hypothesis. We also find that the effects of institutions' site visits are substitutes for the effects of institutional shareholding effect found by Aghion et al. (2013).

This paper contributes to the literature in two ways. First, it directly links institutional investors' information acquisition activities to corporate innovation and enriches the literature about institutional investors and corporate innovation, which has mainly focused on institutional investors' ownership structure. Second, this paper extends the literature about corporate site visits by providing evidence that site visits are beneficial to the firms visited, in addition to the visitors themselves (Cheng et al., 2015, 2016).

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Appendix: Variable definitions

Variable	Definition
Measures of innovation	
$\text{Ln}(INVPAT + 1)_{i,t+1}$	Natural logarithm of one plus firm *i*'s total number of invention patent applications in year *t* + 1. Following Hall et al. (2001, 2005) and Fang et al. (2014), we correct for truncation bias in patent counts using the weight factors computed from the application grant empirical distribution between 2005 and 2009.
Measures of institutional investors' site visits	
$\text{Ln}(SV + 1)_{i,t}$	Natural logarithm of one plus firm *i*'s total number of institutional investors' site visits in year *t*.
Measures of information environment	
$SYNCH_{i,t}$	Stock price synchronicity for firm *i* in year *t*. The variable *SYNCH* is estimated following Jin and Myers (2006). See Eqs. (2) and (3) for details.
$IAPI_{i,t}$	The price impact of information asymmetry as defined by Amihud (2002). See Eq. (4) for details.
Measures of corporate governance	
$CGI_{i,t}$	Corporate governance index constructed based nine corporate governance variables (*First*, *MHOLD*, *SOE*, *INS*, *ANALYST*, *INDEPENDENT*, *SHARE2_10*, *BHSHARE*, and *AUDIT*) following Bai et al. (2002) and Xu et al. (2017). See section 4.5 for more details.
Measures of other variables	
$\text{Ln}(R\&D+1)_{i,t}$	Natural logarithm of one plus firm *i*'s R&D expenditures in year *t*.
$SIZE_{i,t}$	Natural logarithm of firm *i*'s book value of assets at the end of year *t*.

$Q_{i,t}$	Firm *i*'s Tobin's Q at the end of year *t*. Tobin's Q = (market value of equity at the end of year + book value of debt)/book value of assets.
$OCTA_{i,t}$	Firm *i*'s net cash flow from operations divided by total assets
$PPETA_{i,t}$	Firm *i*'s property, plant, and equipment divided by total assets at the end of year *t*.
$LEV_{i,t}$	Firm *i*'s leverage ratio, calculated as total debt over total assets at the end of year *t*.
$ROA_{i,t}$	Firm *i*'s profitability, calculated as net income over total assets.
$AGE_{i,t}$	Natural logarithm of one plus the number of years that firm *i* has been listed on a stock exchange at the end of year *t*.
$FIRST_{i,t}$	The proportion of shares held by the largest immediate shareholder of firm *i* at the end of year *t*.
$MHOLD_{i,t}$	The proportion of shares held by the top managers of firm *i* at the end of year *t*.
$SOE_{i,t}$	A dummy variable that equals 1 if the firm is an SOE and 0 otherwise.
$INS_{i,t}$	The proportion of shares held by institutional investors for firm *i* at the end of year *t*.
$ANALYST_{i,t}$	Natural logarithm of one plus the number of analysts covering firm *i* in year *t*.
$BHSHARE_{i,t}$	A dummy variable that equals 1 if firm *i* also issues B or H shares in year *t* and 0 otherwise.
$INDEPENDENT_{i,t}$	The percentage of independent directors on the board.
SHARE2_10	Sum of the square of ownership of the second to 10th largest shareholders.
$AUDIT_{i,t}$	A dummy variable that equals 1 if firm *i* is audited by one of the top eight accounting firms in year *t* and 0 otherwise.
$DUAL_{i,t}$	A dummy variable that equals 1 if firm *i*'s CEO also holds the position of chairman of the board of the same firm and 0 otherwise.
Lerner index	*Lerner index* is defined as operating profit over sales adjusted for average value in each industry. Operating profits are obtained by subtracting from sales the cost of goods sold and general and administrative expenses. We then calculate the *Lerner index* as the

	difference between the firm's *Lerner index* and that of its industry. The industry *Lerner index* is the average *Lerner inde*x across firms in the industry and industries are defined using China Securities Regulatory Commission (CSRC)'s industry classifications issued in 2012[12].
Year dummy	Year dummies that control for year fixed effects.
Industry dummy	Industry dummies that control for industry fixed effects. The industry classification is based on the CSRC's industry classifications issued in 2012.

[12] We follow the "Guidelines for the Industry Classification of Listed Companies" issued by Chinese Securities Regulatory Commission in 2012 to classify industries. We use three digits for manufacturing industry (C13, C14……C42, C43) since the majority of the listed firms in Chinese capital market are manufacturing firms, and use one digit for other industries (such as A,B, D, and so on). The industry classification document can be accessed here: http://www.csrc.gov.cn/pub/csrc_en/laws/overrule/Announcement/201302/W020130225570141407159.doc.

Table 1. Sample distribution

This table reports the number of site visits by institutional and individual investors in Panel A, the sample distribution and number of firms experiencing at least one site visits across the sample period of 2009 to 2013 in Panel B, summary of the number of site visits by institutional investors per year in Panel C, and descriptive statistics of site visits for the whole sample and a subsample of firms with at least one site visit in Panel D, respectively.

Panel A: Site visits by institutional investors and individual investors.

Visitor type	# of visits	% of total visits
Institutional investors	73281	98.64%
Individual investors	1009	1.36%
Total	74290	100%

Panel B: Sample distribution from 2009 to 2013.

Year	Obs.	Obs. with at least one institutional investor site visit	Proportion
2009	675	256	37.93%
2010	764	293	38.35%
2011	1073	416	38.77%
2012	1335	693	51.91%
2013	1460	1090	74.66%
Total	5307	2748	51.78%

Panel C: Site visits by institutional investors

Year	Obs.	Mean value of SV	Std dev of SV
2009	675	8.4133	18.7397

2010	764	9.6021	20.6762
2011	1073	9.6980	21.5540
2012	1335	9.4562	21.1756
2013	1460	25.5041	41.9792
Total	5307	13.8084	29.1431

Panel D: Descriptive statistics of site visits for the whole sample and the subsample of firms with at least one site visit

Variable: SV	N	Mean	Std dev	25th Pctl.	Median	75th Pctl.
In full sample	5307	13.8084	29.1431	0	1	15
In sample with SV >0	2748	26.6670	36.0206	5	14	35

Table 2. Descriptive statistics

This table reports descriptive statistics for the variables in Panel A and their correlation matrix in Panel B. The sample period is from 2009 to 2013 for all the variables except corporate innovation (Ln(*INVPAT* + 1)), which is one year ahead of other variables. Panel B reports the Pearson and Spearman correlation matrix, with the Pearson correlations below the main diagonal and the Spearman correlations above it. The bold values indicate statistical significance at the 5% level or lower. All variables are defined in the Appendix.

Panel A: Basic statistics

Variables	N	Mean	Std dev	25th pctl.	Median	75th pctl.
Ln(INVPAT+1)	5307	1.3092	1.5098	0.0000	0.8920	2.4293
Ln(SV+1)	5307	1.3766	1.5802	0	0.6931	2.7726
Ln(R&D+1)	5307	12.5794	7.6190	0	16.6377	17.6445
SIZE	5307	21.5450	1.0912	20.7820	21.3883	22.1342
Q	5307	2.5234	1.6326	1.4706	2.0202	2.9683
OCTA	5307	0.0406	0.0772	-0.0001	0.0398	0.0848
PPETA	5307	0.2276	0.1578	0.1056	0.1994	0.3226
LEV	5307	0.4096	0.2240	0.2243	0.3941	0.5853
ROA	5307	0.0439	0.0540	0.0167	0.0414	0.0706
AGE	5307	1.8409	0.7994	1.0986	1.7918	2.6391
FIRST	5307	0.3535	0.1483	0.2347	0.3335	0.4542
MHOLD	5307	0.1562	0.2241	0	0.0024	0.3193
SOE	5307	0.2768	0.4475	0	0	1
INS	5307	0.0473	0.0741	0.0007	0.0111	0.0625
ANALYST	5307	1.6138	1.1443	0.6931	1.6094	2.5649

Panel B: Pearson and Spearman correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.*Ln(INVPAT+1)*	1	**0.178**	**0.505**	**0.027**	**0.022**	**0.040**	-0.017	**-0.168**	**0.156**	**-0.274**	0.005	**0.251**	**-0.095**	**0.178**	**0.241**
2.*Ln(SV+1)*	0.216	1	**0.190**	**0.243**	**-0.023**	**0.065**	**-0.068**	**-0.039**	**0.168**	**-0.039**	0.021	**0.110**	-0.019	**0.309**	**0.375**
3.*Ln(R&D+1)*	0.411	0.120	1	**0.137**	**-0.032**	**0.028**	**-0.031**	**-0.191**	**0.174**	**-0.288**	0.015	**0.287**	**-0.102**	**0.235**	**0.294**
4.*SIZE*	0.098	0.250	-0.080	1	**-0.575**	**0.049**	**0.046**	**0.487**	-0.023	**0.360**	**0.138**	**-0.211**	**0.293**	**0.350**	**0.352**
5.*Q*	-0.045	-0.034	-0.010	-0.464	1	**0.148**	**-0.120**	**-0.379**	**0.396**	**-0.228**	**-0.029**	**0.127**	**-0.200**	**0.158**	**0.123**
6.*OCTA*	0.040	0.068	-0.010	0.034	0.176	1	**0.233**	**-0.119**	**0.363**	**0.050**	**0.034**	**-0.042**	**0.047**	**0.174**	**0.191**
7.*PPETA*	-0.058	-0.073	-0.047	0.096	-0.121	0.223	1	**0.157**	**-0.204**	**0.111**	**0.030**	**-0.161**	**0.154**	**-0.086**	**-0.067**
8.*LEV*	-0.142	-0.050	-0.303	0.464	-0.247	-0.133	0.184	1	**-0.431**	**0.501**	0.015	**-0.362**	**0.285**	-0.021	**-0.104**
9.*ROA*	0.125	0.177	0.132	0.028	0.288	0.368	-0.208	-0.409	1	**-0.252**	**0.085**	**0.220**	**-0.142**	**0.414**	**0.508**
10.*AGE*	-0.229	-0.039	-0.433	0.366	-0.103	0.058	0.154	0.511	-0.196	1	**-0.125**	**-0.578**	**0.399**	-0.020	**-0.206**
11.*FIRST*	-0.006	0.017	-0.010	0.163	-0.042	0.036	0.028	0.021	0.091	-0.095	1	**-0.128**	**0.119**	-0.019	**0.085**
12.*MHOLD*	0.183	0.072	0.324	-0.280	0.082	-0.074	-0.177	-0.388	0.138	-0.608	-0.078	1	**-0.426**	**0.117**	**0.207**
13.*SOE*	-0.070	-0.025	-0.173	0.291	-0.142	0.051	0.187	0.284	-0.111	0.413	0.119	-0.411	1	0.002	**-0.045**
14.*INS*	0.146	0.252	0.070	0.232	0.258	0.179	-0.103	-0.009	0.379	0.022	-0.079	-0.002	-0.009	1	0.698
15.*ANALYST*	0.247	0.412	0.181	0.378	0.092	0.187	-0.063	-0.117	0.469	-0.206	0.080	0.115	-0.044	0.574	1

Table 3. Institutional investors' corporate site visits and corporate innovation

This table reports the impact of institutional investors' corporate site visits on corporate innovation. Column (1) reports the results using ordinary least square (OLS) model and Columns (2) and (3) report the results of two-stage least squares (2SLS) analysis. We use two IVs in the 2SLS analysis: Ln(*INDSV* + 1) and Ln(*FNUM* + 1). The IV Ln(*INDSV* + 1) is the natural logarithm of one plus the average number of site visits in the industry that the firm belongs to in a year and Ln(*FNUM* + 1) is the number of listed firms in the city in which the firm is located. All other variables are defined in the Appendix. The *t*-statistics reported in parentheses are based on standard errors clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	OLS analysis	2SLS analysis	
	Full Sample	Stage 1	Stage 2
	Dep. var. = Ln(1 + *INVPAT*)	Dep. var. = Ln(*SV* + 1)	Dep. var. = Ln(1 + *INVPAT*)
	(1)	(2)	(3)
Ln(SV+1)	0.0559***		0.4817***
	(4.3105)		(4.7293)
Ln(R&D+1)	0.0225***	-0.0108***	0.0350***
	(6.9507)	(-3.2167)	(9.4966)
SIZE	0.1490***	0.1101***	0.1204***
	(5.3597)	(3.8400)	(3.7002)
Q	-0.0450***	-0.0549***	-0.0102
	(-2.9483)	(-3.4764)	(-0.5851)
OCTA	1.0347***	0.1535	0.7467**
	(3.9411)	(0.5565)	(2.5573)
PPETA	-0.5370***	-0.3007**	-0.6234***
	(-3.7158)	(-2.0503)	(-3.8423)
LEV	0.0734	-0.1636	0.1139
	(0.6409)	(-1.3723)	(0.8889)
ROA	0.3227	-0.1598	-0.1821
	(0.7208)	(-0.3418)	(-0.3678)

AGE	-0.1362***	0.1310***	-0.2134***
	(-3.9401)	(3.6185)	(-5.2848)
FIRST	-0.2523**	-0.0997	-0.2365*
	(-2.0092)	(-0.7576)	(-1.7029)
MHOLD	0.0360	0.1255	0.0906
	(0.3508)	(1.1693)	(0.7894)
SOE	0.0971**	-0.0596	0.1603***
	(2.1331)	(-1.2572)	(3.1835)
INS	1.0171***	0.5928*	0.7639**
	(3.2520)	(1.8105)	(2.1656)
ANALYST	0.1474***	0.5505***	-0.1047*
	(5.9896)	(22.4565)	(-1.6743)
Ln(FNUM+1)		0.1091***	
		(7.8499)	
Ln(INDSV+1)		0.2534***	
		(6.6037)	
Constant	-2.8122***	-3.1211***	-2.1331***
	(-4.8482)	(-5.2117)	(-3.1628)
Year dummy	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes
N	5307	5307	5307
Adj. R^2	0.3241	0.3086	0.3290
Cragg–Donald F		53.781***	
Sargan statistic		0.098	

Table 4. Robustness checks: An alternative proxy for corporate site visits

This table reports the impact of institutional investors' corporate site visits on corporate innovation. Column (1) reports the results using ordinary least square (OLS) model and Columns (2) and (3) report the results of two-stage least squares (2SLS) analysis. In column (1), we use a dummy variable, *SV_DUM*, as the variable of interest and *SV_DUM* equals one when the firm has at least one institutional investor site visit in year *t* and zero otherwise. Columns (2) and (3) illustrate the results for the 2SLS analysis, where we use two IVs: Ln(*INDSV* + 1) and Ln(*FNUM* + 1). The IV Ln(*INDSV* + 1) is the natural logarithm of one plus the average number of site visits in the industry that the firm belongs to in a year and Ln(*FNUM* + 1) is the number of listed firms in the city in which the firm is located. In column (2), we use a probit model to estimate the probability of a firm being visited by institutional investors. We then include the predicted value from column (2) to re-examine the impact of *SV_DUM* on corporate innovation in column (3). All other variables are defined in the Appendix. The t-statistics reported in parentheses are based on standard errors clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	OLS analysis	2SLS analysis	
	Dep. var. = Ln(1 + *INVPAT*)	Stage 1 Dep. var. = *SV_DUM*	Stage 2 Dep. var. = Ln(1 + *INVPAT*)
	(1)	(2)	(3)
SV_DUM	0.1019***		1.4923***
	(2.6551)		(4.3251)
Ln(R&D+1)	0.0222***	-0.0075**	0.0341***
	(6.8441)	(-2.1745)	(10.0652)
SIZE	0.1527***	0.0639**	0.1406***
	(5.4901)	(2.1500)	(4.8240)
Q	-0.0439***	-0.1506***	0.0291
	(-2.8583)	(-8.3293)	(1.3653)
OCTA	1.0376***	0.2103	0.7228***
	(3.9477)	(0.7364)	(2.6762)
PPETA	-0.5487***	-0.3716**	-0.6353***
	(-3.7935)	(-2.4402)	(-4.1751)
LEV	0.0738	-0.3107**	0.1595
	(0.6442)	(-2.4718)	(1.3065)

ROA	0.2988	0.5528	-0.4718
	(0.6669)	(1.0955)	(-1.0369)
AGE	-0.1348***	0.1675***	-0.2338***
	(-3.8926)	(4.5181)	(-5.8416)
FIRST	-0.2570**	0.0609	-0.3032**
	(-2.0438)	(0.4524)	(-2.3595)
MHOLD	0.0405	0.1420	0.0861
	(0.3943)	(1.2776)	(0.8070)
SOE	0.0954**	-0.0585	0.1577***
	(2.0936)	(-1.2054)	(3.3920)
INS	1.0691***	-0.6146*	1.3678***
	(3.4141)	(-1.8068)	(4.2067)
ANALYST	0.1665***	0.3661***	-0.0199
	(6.9401)	(14.1981)	(-0.4073)
Ln(FNUM+1)		0.0541***	
		(3.7795)	
Ln(INDSV+1)		0.2246***	
		(5.6852)	
Constant	-2.9150***	-2.6027***	-2.9320***
	(-5.0256)	(-4.1919)	(-5.0086)
Year dummy	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes
N	5307	5307	5307
Adj./Pseudo-R^2	0.3226	0.1636	0.2816

Table 5. Robustness checks: Alternative model specifications

In this table, we use the Poisson and negative binomial models to re-estimate the results in column (1) of Tables 3 and 4. All variables are defined in the Appendix. The *t*-statistics reported in parentheses are based on standard errors clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Dep. var. = *INVPAT*	Poisson model		Negative binomial model	
	(1)	(2)	(3)	(4)
Ln(SV+1)	0.0729***		0.0785***	
	(28.4339)		(3.8424)	
SV_DUM		0.2200***		0.2102***
		(23.9271)		(3.3341)
Ln(R&D+1)	0.0149***	0.0138***	0.0367***	0.0364***
	(18.8568)	(17.5650)	(7.4986)	(7.4296)
SIZE	0.4681***	0.4813***	0.4228***	0.4341***
	(88.1084)	(90.5219)	(9.0992)	(9.4150)
Q	-0.0977***	-0.0885***	-0.0463*	-0.0398
	(-24.0140)	(-21.7525)	(-1.7569)	(-1.5033)
OCTA	1.9301***	1.9213***	1.6132***	1.6133***
	(28.7019)	(28.6189)	(3.4801)	(3.4786)
PPETA	-0.7941***	-0.7733***	-0.9835***	-0.9874***
	(-22.9346)	(-22.3244)	(-3.9994)	(-4.0160)
LEV	0.0982***	0.0867***	0.2642	0.2560
	(3.3583)	(2.9582)	(1.3330)	(1.2935)
ROA	0.2999**	0.2714**	0.1333	0.0295
	(2.4873)	(2.2547)	(0.1706)	(0.0378)
AGE	-0.0613***	-0.0721***	-0.3564***	-0.3590***
	(-7.6765)	(-9.0285)	(-5.9091)	(-5.9387)

FIRST	0.0289	0.0053	-0.2026	-0.2243
	(1.0762)	(0.1984)	(-0.9665)	(-1.0716)
MHOLD	0.2435***	0.2533***	0.1827	0.1901
	(10.9797)	(11.4153)	(1.1406)	(1.1854)
SOE	0.1727***	0.1787***	0.2580***	0.2537***
	(17.4238)	(18.0005)	(3.4300)	(3.3707)
INS	2.1418***	2.1887***	1.1254**	1.1997**
	(34.8645)	(35.6553)	(2.2541)	(2.3971)
ANALYST	0.1465***	0.1663***	0.2227***	0.2402***
	(26.5677)	(30.9074)	(5.5068)	(6.0530)
Constant	-9.9140***	-10.2589***	-8.5868***	-8.8876***
	(-80.7420)	(-83.5472)	(-8.9022)	(-9.2861)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
N	5307	5307	5307	5307
Pseudo-R^2	0.4741	0.4731	0.0812	0.0810

Table 6. Robustness checks: Alternative proxies for corporate innovation

This table reports the results of using alternative measures of corporate innovation as the dependent variable. In columns (1) and (2), the dependent variable $Ln(1 + INVPAT_{t+1} + UMPAT_{t+1})$ is the natural logarithm of one plus firm i's total number of invention patent (*INVPAT*) and utility model patent (*UMPAT*) applications in year t + 1. Following Hall et al. (2001, 2005) and Fang et al. (2014), we correct for truncation bias in patent counts using the weight factors computed from the application grant empirical distribution between 2005 and 2009. In columns (3) and (4), we use R&D expenditures to measure corporate innovation. All other variables are defined in the Appendix. The *t*-statistics reported in parentheses are based on standard errors clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Dep. var. = Ln(1 + $INVPAT_{t+1}$ + $UMPAT_{t+1}$)		Dep. var. = Ln(1 + $R\&D_{t+1}$)	
	(1)	(2)	(3)	(4)
Ln(SV+1)	0.0620***		0.1321***	
	(4.3594)		(3.5886)	
SV_DUM		0.1178***		0.3272***
		(2.7990)		(3.0063)
Ln(R&D+1)	0.0302***	0.0298***	0.6816***	0.6811***
	(8.4857)	(8.3816)	(74.1080)	(74.0550)
SIZE	0.1498***	0.1538***	0.2631***	0.2698***
	(4.9105)	(5.0392)	(3.3322)	(3.4186)
Q	-0.0750***	-0.0736***	-0.0423	-0.0356
	(-4.4822)	(-4.3679)	(-0.9761)	(-0.8171)
OCTA	0.9252***	0.9280***	-1.8725**	-1.8720**
	(3.2121)	(3.2185)	(-2.5123)	(-2.5107)
PPETA	-0.3743**	-0.3866**	0.2845	0.2680
	(-2.3605)	(-2.4365)	(0.6934)	(0.6532)
LEV	0.0140	0.0149	-0.0862	-0.0787
	(0.1118)	(0.1187)	(-0.2652)	(-0.2419)

ROA	1.0630**	1.0362**	2.4314*	2.3695*
	(2.1646)	(2.1080)	(1.9134)	(1.8641)
AGE	-0.1894***	-0.1881***	-0.3444***	-0.3460***
	(-4.9933)	(-4.9506)	(-3.5090)	(-3.5205)
FIRST	-0.0895	-0.0949	-0.0800	-0.0952
	(-0.6499)	(-0.6883)	(-0.2244)	(-0.2670)
MHOLD	0.0843	0.0889	0.2327	0.2374
	(0.7489)	(0.7895)	(0.7989)	(0.8150)
SOE	0.0867*	0.0849*	0.2320*	0.2300*
	(1.7365)	(1.6993)	(1.7965)	(1.7803)
INS	1.4161***	1.4748***	2.8467***	2.9886***
	(4.1273)	(4.2934)	(3.2063)	(3.3645)
ANALYST	0.1361***	0.1566***	0.0416	0.0756
	(5.0404)	(5.9523)	(0.5948)	(1.1105)
Constant	-2.6443***	-2.7571***	-0.0192	-0.2415
	(-4.1554)	(-4.3331)	(-0.0117)	(-0.1468)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
N	5307	**5307**	**5307**	5307
Adj. R^2	0.4219	0.4207	0.7632	0.7631

Table 7. Robustness checks: Controlling for firm fixed effects

This table reports the results after controlling for firm fixed effects. All variables are defined in the Appendix. The *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Dep. var. = Ln(1 + $INVPAT_{t+1}$)	Dep. var.= Ln(1 + $INVPAT_{t+1}$ + $UMPAT_{t+1}$)	Dep. var. = Ln(1 + $R\&D_{t+1}$)
	(1)	(2)	(3)
Ln(SV+1)	0.0315**	0.0334*	0.0339*
	(2.1057)	(1.9194)	(1.7152)
Ln(R&D+1)	0.0220***	0.0252***	0.2434***
	(5.2009)	(5.1259)	(10.9003)
SIZE	-0.0113	-0.0154	0.1252
	(-0.1586)	(-0.1865)	(0.4519)
Q	-0.0245	-0.0281	0.0854
	(-1.0764)	(-1.0597)	(1.0014)
OCTA	0.4414*	0.5071	-0.8783
	(1.6458)	(1.6257)	(-0.9898)
PPETA	0.2712	0.3012	-1.7282
	(1.0210)	(0.9748)	(-1.5978)
LEV	0.1709	0.1549	1.4906*
	(0.7311)	(0.5697)	(1.6788)
ROA	0.5619	0.6517	1.9255
	(1.1297)	(1.1265)	(0.9996)
AGE	0.8671***	0.9043***	-1.1087**
	(6.6743)	(5.9847)	(-2.3306)

FIRST	-1.0003**	-1.2004**	-0.7320
	(-2.3171)	(-2.3907)	(-0.4176)
MHOLD	0.5162	0.6347	1.8117
	(1.2828)	(1.3560)	(1.2348)
SOE	0.0755	0.0922	-0.0848
	(0.8318)	(0.8727)	(-0.1839)
INS	0.6806*	0.7679	-0.5589
	(1.6627)	(1.6129)	(-0.4265)
ANALYST	-0.0101	-0.0011	-0.0843
	(-0.3161)	(-0.0310)	(-0.7998)
Constant	-0.0957	0.2435	7.8117
	(-0.0640)	(0.1399)	(1.3037)
Year dummy	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
N	5307	5307	5307
R^2 within	0.1910	0.1567	0.2111

Table 8. Corporate site visits, the information environment, and corporate innovation

This table reports the relation between institutional investors' corporate site visits and corporate innovation for firms with good/poor information environment, where the firms are partitioned based on the median values of the quality of the information environment. We use two constructs, *SYNCH* and *ILLIQ,* to proxy for information environment quality. All variables are defined in the Appendix. The t-statistics reported in parentheses are based on standard errors clustered by firm. The superscripts *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Dep. var. = Ln(1 + $INVPAT_{t+1}$)	Information Quality based on *SYNCH*		Information Quality based on *ILLIQ*	
	Low	High	Low	High
Ln(SV+1)	0.0868***	0.0385**	0.0848***	0.0311
	(4.4318)	(2.2039)	(4.0019)	(1.6063)
Ln(R&D+1)	0.0163***	0.0264***	0.0236***	0.0278***
	(3.5148)	(5.8283)	(4.3849)	(5.9229)
SIZE	0.1525***	0.1405***	0.1342***	0.0716
	(3.6430)	(3.5823)	(2.7682)	(1.5798)
Q	0.0242	-0.0432**	-0.0748***	-0.0600***
	(0.7573)	(-2.3777)	(-2.6162)	(-2.8578)
OCTA	1.0097**	0.9032**	1.4778***	1.0142***
	(2.5688)	(2.5669)	(3.1340)	(2.9727)
PPETA	-0.5174**	-0.6173***	-1.3320***	-0.0758
	(-2.4737)	(-3.0680)	(-5.0522)	(-0.4041)
LEV	0.1983	-0.0016	0.3080	-0.0996
	(1.1523)	(-0.0103)	(1.3927)	(-0.6846)
ROA	0.6257	-0.1954	-0.0947	0.6663
	(0.8625)	(-0.3420)	(-0.1121)	(1.1841)

AGE	-0.1857***	-0.1188**	-0.2190***	-0.1264***
	(-3.6897)	(-2.4669)	(-3.4386)	(-2.7512)
FIRST	-0.3004	-0.1237	0.0263	-0.4062**
	(-1.6347)	(-0.7162)	(0.1145)	(-2.4478)
MHOLD	-0.0713	0.1366	0.0307	0.0587
	(-0.4537)	(1.0074)	(0.1436)	(0.4885)
SOE	0.1313**	0.0870	0.1886**	-0.0009
	(2.0524)	(1.3399)	(2.4474)	(-0.0140)
INS	1.7881***	1.1634***	2.0557***	-0.1163
	(2.9805)	(3.0708)	(4.0916)	(-0.2360)
ANALYST	0.1336***	0.1352***	0.1100**	0.1931***
	(3.7902)	(3.8454)	(2.4471)	(5.9280)
Constant	-2.8688***	-2.6829***	-2.4267**	-0.9927
	(-3.2320)	(-3.2700)	(-2.4012)	(-1.0453)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
N	2655	2652	2652	2655
Adj. R^2	0.3482	0.3063	0.3759	0.2989
Comparison coefficients of *Ln(SV+1)* for two groups	χ^2= 3.13 *p-value* = 0.0771		χ^2= 3.33 *p-value* = 0.0679	

Table 9. Corporate site visits, corporate governance, and corporate innovation

This table reports the cross-sectional variation of the effects of institutional investors' site visits on corporate innovation across firms with different quality of corporate governance. We divide the entire sample into two groups along the median value of corporate governance index (CGI). The higher the value of *CGI*, the better the firm corporate governance quality is. All variables are defined in the Appendix. The *t*-statistics reported in parentheses are based on standard errors clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Dep. var. = Ln(1 + $INVPAT_{t+1}$)	Corporate governance index (CGI)	
	Low	High
Ln(SV+1)	0.0982***	0.0369**
	(4.7969)	(2.0479)
Ln(R&D+1)	0.0140***	0.0363***
	(3.4876)	(6.8120)
SIZE	0.1612***	0.1581***
	(4.2390)	(3.6543)
Q	0.0039	-0.0950***
	(0.1843)	(-3.8619)
OCTA	0.6793**	1.6022***
	(2.0935)	(3.7693)
PPETA	-0.3237*	-0.7387***
	(-1.8288)	(-3.0347)
LEV	0.1223	0.1312
	(0.9295)	(0.6312)
ROA	0.8053	0.0016
	(1.5810)	(0.0018)

AGE	-0.2766***	-0.0318
	(-6.2457)	(-0.5643)
FIRST	-0.3829**	-0.1675
	(-2.3548)	(-0.8439)
MHOLD	0.1001	0.0612
	(0.5040)	(0.4483)
SOE	0.2002***	-0.0397
	(3.7085)	(-0.4248)
INS	-0.1674	1.3643***
	(-0.2763)	(3.4117)
ANALYST	0.1165***	0.1789***
	(3.3806)	(4.4676)
Constant	-2.8088***	-3.3603***
	(-3.5045)	(-3.7649)
Year dummy	Yes	Yes
Industry dummy	Yes	Yes
N	2653	2654
Adj. R^2	0.3348	0.2812
Comparison coefficients of *Ln(SV+1)* on different groups	χ^2 = 4.68 *p-value* = 0.0306	

Table 10. Effect of corporate site visits on corporate innovation: Career concerns or quiet life hypothesis

This table reports the cross-sectional variation of the effects of institutional investors' site visits on corporate innovation across firms with different levels of managerial entrenchment. We partition the entire sample into two groups along the median value of each of the two variables, *DUAL* and *Lerner index*. The two variables *DUAL* and the *Lerner index* are used to measure managerial entrenchment and industry competitiveness, respectively. A CEO who has the dual roles of CEO and chair is regarded as entrenched, while a firm with a lower Lerner index is regarded as being in a more competitive industry. All variables are defined in the Appendix. The t-statistics reported in parentheses are based on standard errors clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Entrenchment		Competitiveness	
Dep. var. = Ln(1+*INVPAT*)	*DUAL* = 0	*DUAL* = 1	Lower Lerner index	Higher Lerner index
	(1)	(2)	(3)	(4)
Ln(SV+1)	0.0842***	-0.0006	0.0883***	0.0212
	(5.5803)	(-0.0219)	(4.5825)	(1.1947)
Ln(R&D+1)	0.0207***	0.0283***	0.0157***	0.0285***
	(5.7230)	(3.9361)	(3.4557)	(6.0626)
SIZE	0.1525***	0.1382**	0.1977***	0.1468***
	(4.9063)	(2.2282)	(4.9173)	(3.6220)
Q	-0.0408**	-0.0744**	-0.0120	-0.0968***
	(-2.3361)	(-2.3142)	(-0.5441)	(-4.0780)
OCTA	1.1828***	0.7262	1.0216***	1.0850***
	(3.9702)	(1.3399)	(2.7079)	(2.9029)
PPETA	-0.4496***	-0.7046**	-0.7956***	-0.1525
	(-2.7751)	(-2.1881)	(-3.9083)	(-0.7224)
LEV	0.0755	0.1837	0.1747	-0.0985
	(0.5861)	(0.7461)	(1.1427)	(-0.5485)

ROA	0.2739	1.1776	1.2377**	1.5400*
	(0.5506)	(1.1769)	(2.1985)	(1.6769)
AGE	-0.1425***	-0.0973	-0.1080**	-0.1882***
	(-3.6215)	(-1.3174)	(-2.1296)	(-3.8505)
FIRST	-0.5241***	0.4908*	-0.1098	-0.2393
	(-3.6678)	(1.8260)	(-0.6069)	(-1.3347)
MHOLD	-0.0304	-0.0024	0.3762**	-0.1791
	(-0.2383)	(-0.0130)	(2.4113)	(-1.3062)
SOE	0.1264***	-0.0172	0.1025	0.1074
	(2.6083)	(-0.1376)	(1.6444)	(1.5900)
INS	0.6147*	2.1458***	0.6388	1.3691***
	(1.7238)	(3.3651)	(1.3195)	(3.2959)
ANALYST	0.1263***	0.1865***	0.1017***	0.1718***
	(4.4906)	(3.7298)	(2.9069)	(4.8517)
Constant	-2.7826***	-2.9369**	-4.0004***	-2.6829***
	(-4.2901)	(-2.2594)	(-4.7637)	(-3.1878)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
N	3789	1518	2652	2655
Adj. R^2	0.3546	0.2741	0.3516	0.3105
Comparison	χ^2 = 7.84		χ^2 = 5.98	
of *Ln(SV+1)*	p-value = 0.0051		*p-value* = 0.0145	

Table 11. Differential effects of site visits on SOEs versus non-SOEs

This table reports the effects of institutional investors' corporate site visits and corporate innovation for both SOEs and non-SOEs. All variables are defined in the Appendix. The *t*-statistics reported in parentheses are based on standard errors clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Dep. var. = Ln(1+*INVPAT*)	*SOE* = 1	*SOE* = 0
	(1)	(2)
Ln(SV+1)	0.0816***	0.0482***
	(3.1305)	(3.1211)
Ln(R&D+1)	0.0189***	0.0217***
	(3.4397)	(5.2455)
SIZE	0.1961***	0.1098***
	(3.9236)	(3.1846)
Q	-0.0582*	-0.0530***
	(-1.7833)	(-2.9889)
OCTA	0.5803	1.3122***
	(1.1452)	(4.2481)
PPETA	-0.3891	-0.4659***
	(-1.5392)	(-2.5853)
LEV	0.0697	0.1293
	(0.3286)	(0.9329)
ROA	1.1860	0.1505
	(1.3964)	(0.2822)
AGE	-0.1892***	-0.1559***
	(-2.7830)	(-3.6902)

FIRST	-0.3338	-0.1974
	(-1.3993)	(-1.3056)
MHOLD	-1.2967	0.0459
	(-1.0293)	(0.4262)
INS	0.7315	1.2705***
	(1.1647)	(3.5034)
ANALYST	0.0499	0.1749***
	(1.0093)	(6.1105)
Constant	-3.4382***	-2.0677***
	(-3.2864)	(-2.8591)
Year dummy	Yes	Yes
Industry dummy	Yes	Yes
N	1469	3838
Adj. R^2	0.4010	0.2971
Comparison coefficients of *Ln(SV+1)* on different groups	$\chi^2 = 1.14$ *p-value* = 0.2851	

Table 12. Institutional shareholding and site visits: Complements or substitutes?

This table reports the effects of institutional investors' corporate site visits and corporate innovation for firms with low and high institutional shareholding, partitioned based on the median value of institutional ownership (*INS*). All variables are defined in the Appendix. The *t*-statistics reported in parentheses are based on standard errors clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Dep. var. = Ln(1+*INVPAT*)	Higher *INS*	Lower *INS*
	(1)	(2)
Ln(SV+1)	0.0311*	0.1162***
	(1.8222)	(5.4813)
Ln(R&D+1)	0.0313***	0.0181***
	(6.4593)	(4.1631)
SIZE	0.2254***	0.1153***
	(5.5629)	(2.8565)
Q	-0.0749***	-0.0224
	(-3.2980)	(-1.0631)
OCTA	1.6560***	0.5855*
	(3.9782)	(1.7874)
PPETA	-0.6862***	-0.2526
	(-3.0128)	(-1.3824)
LEV	0.1697	-0.0050
	(0.8655)	(-0.0364)
ROA	0.7522	0.4605
	(0.9556)	(0.8829)
AGE	-0.1703***	-0.1536***
	(-3.2355)	(-3.3475)

FIRST	-0.3927**	-0.2362
	(-2.0533)	(-1.4561)
MHOLD	0.0871	0.0468
	(0.5434)	(0.3608)
SOE	-0.0054	0.2001***
	(-0.0794)	(3.3481)
ANALYST	0.1813***	0.1069***
	(4.7719)	(3.2859)
Constant	-4.5102***	-1.9605**
	(-5.4198)	(-2.2915)
Year dummy	Yes	Yes
Industry dummy	Yes	Yes
N	2655	2652
Adj. R^2	0.3456	0.2810
Comparison coefficients of *Ln(SV+1)* on different groups	χ^2 = 8.82 *p-value* = 0.0030	

Table 13. Effects of site visits by mutual funds with/without shareholdings on visited firms

This table reports the effects of site visits by mutual funds with and without shareholdings on corporate innovation. All variables are defined in the Appendix. The variable *HMSV* is defined as the number of site visits by mutual funds holding shares of the visited firms, while *NHMSV* is defined as the number of site visits by mutual funds that do not hold shares on the visited firms. All other variables are defined in the Appendix. The t-statistics reported in parentheses are based on standard errors clustered by firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Dep. var. = Ln(1+*INVPAT*)	(1)	(2)	(3)
Ln(HMSV+1)	0.0970***		0.0626*
	(3.5647)		(1.8528)
Ln(NHMSV+1)		0.0639***	0.0389*
		(3.4926)	(1.7101)
Ln(R&D+1)	0.0221***	0.0222***	0.0223***
	(6.8382)	(6.8568)	(6.8729)
SIZE	0.1392***	0.1569***	0.1459***
	(4.9446)	(5.6459)	(5.1355)
Q	-0.0529***	-0.0466***	-0.0501***
	(-3.4629)	(-3.0554)	(-3.2629)
OCTA	1.0396***	1.0464***	1.0424***
	(3.9578)	(3.9835)	(3.9690)
PPETA	-0.5519***	-0.5461***	-0.5458***
	(-3.8190)	(-3.7772)	(-3.7763)
LEV	0.0798	0.0655	0.0745
	(0.6964)	(0.5717)	(0.6501)
ROA	0.3543	0.3102	0.3399
	(0.7907)	(0.6926)	(0.7586)

AGE	-0.1359***	-0.1325***	-0.1356***
	(-3.9281)	(-3.8334)	(-3.9184)
FIRST	-0.2494**	-0.2534**	-0.2512**
	(-1.9847)	(-2.0165)	(-1.9991)
MHOLD	0.0380	0.0378	0.0355
	(0.3703)	(0.3685)	(0.3460)
SOE	0.0922**	0.0962**	0.0945**
	(2.0267)	(2.1139)	(2.0753)
INS	0.8773***	1.0067***	0.9129***
	(2.7724)	(3.2154)	(2.8794)
AF	0.1601***	0.1553***	0.1522***
	(6.6445)	(6.3461)	(6.2075)
Constant	-2.5586***	-2.9620***	-2.7073***
	(-4.3411)	(-5.1096)	(-4.5450)
Year dummy	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes
N	5307	5307	5307
Adj. R^2	0.3233	0.3233	0.3236
Comparison coefficients			*F* = 0.22
of *Ln(HMSV+1)* and *Ln(NHMSV+1)*			*p-value* = 0.6396

Highlights

- Institutional investors' site visits to firms promote corporate innovation.
- The site visits effects are more pronounced for firms with poor information environment or weak corporate governance.
- The findings are consistent with career concerns theory instead of quiet life theory.
- Institutions' site visits are substitutes to institutional ownership in terms of promoting corporate innovation.