Foreign Institutional Investors' Site Visits and Tunnelling

Aijia Zhang[*][a]

[a]Adam Smith Business School, University of Glasgow, United Kingdom

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Abstract

This study investigates whether and how foreign institutional investors' (FIIs) site visits affect tunnelling through inter-corporate loans. Using all Chinese firms listed in the Shenzhen Stock Exchange from 2012 to 2022, we find that FIIs' site visits significantly curb tunnelling across three different measures of site visits. By performing propensity score matching and multi-period difference-in-difference analysis, we suggest this relation is causal. This effect is more pronounced when FIIs hold larger shareholdings, as their more intensive and frequent visits complement each other in mitigating tunnelling problems. The curbing effect of FIIs' site visits on tunnelling is more significant than that of site visits by other institutional investors, including Hong Kong, Macao, and Taiwan (HMT), Sino-foreign, and mainland institutional investors. Finally, we show that FIIs play an effective monitoring role if they visit in groups rather than alone. The study contributes to the literature on tunnelling problems and the disciplining role of FIIs in weak institutional environments.

Keywords: Foreign institutional investors (FIIs), Site Visits, Tunnelling, Inter-corporate loans

[*]Corresponding author. Email address: 2518635@student.gla.ac.uk (A. Zhang)

1 Introduction

Traditionally, the discussion about the agency problem has focused on the conflict between firm managers and a diffused group of shareholders. However, outside the U.S., relatively few companies have dispersed shareholdings, while large shareholders control most European and Asian companies (Djankov et al., 2008; Dyck and Zingales, 2004). In these firms with concentrated ownership, the controlling shareholders can use their power to expropriate minority shareholders. This phenomenon, commonly referred to as 'tunnelling' (Johnson et al., 2000), has attracted intensive research interest in the fields of finance and economics. Jiang et al. (2010) point out that high ownership concentration, weak minority shareholder protection, and the under-developed legal system facilitate tunnelling activities by controlling shareholders. However, the research only investigates the extent and economic consequences of tunnelling and neglects the factors that influence tunnelling behaviours. Given the challenges of detecting tunnelling and the prevalence of tunnelling behaviour, which seriously undermines corporate growth, it is imperative to explore ways to mitigate such a phenomenon.

Foreign institutional investors (FIIs) play an important role at both the firm level and within the overall economy, attracting more and more attention (Bena et al., 2017). With the capital market liberalisation, an increasing number of FIIs are entering emerging markets and exerting their disciplining role. In this paper, we argue that FIIs could contribute to curbing tunnelling behaviour by controlling shareholders in emerging economies for several reasons.

First, the interests of FIIs in emerging countries are better aligned with those of minority investors than they would be in developed countries. FIIs typically hold only small stakes in their target firms in emerging economies (Ferreira et al., 2011; Ferreira and Matos, 2008). For example, An et al. (2021) show that the majority of companies invested in by foreign institutional investors have less than 5% ownership by foreign institutions in China. This is largely because the FIIs are making portfolio investments and wish to maintain liquidity and/or due to host countries' regulations on concentrated ownership (Hattari and Rajan, 2011). Therefore, FIIs can act as representatives of minority shareholders and protect their interests from expropriation by controlling shareholders, thereby maximising the value of the shares they hold.

Second, FIIs are more likely to protect the interests of minority shareholders because they care

about maintaining their reputation. FIIs in developing countries are often active investors, such as hedge funds and private equity funds, who manage their portfolios internationally and influence corporate governance in developing markets (Huang and Zhu, 2015). Unlike pension funds, these active FIIs may be orientated towards building a good reputation and attracting potential investors, instead of focusing on stable returns. Marshall et al. (2022) document that FIIs may have an incentive to monitor rather than sell their shares, given the need to maintain their professional reputation. Selling their shares may imply poor prior decisions, which is a negative signal for attracting more investors to their institutions. Hence, FIIs might be motivated to protect the interests of minority shareholders rather than colluding with majority shareholders to preserve their good reputation.

Third, FIIs from countries with strong investor protection are more likely to prevent controlling shareholders from extracting undue benefits. Foreign institutions from developed countries adhere to a higher standard in terms of investor protection awareness (Aggarwal et al., 2011; Huang, 2016). They follow more stringent governance guidelines and judicial protection systems for small and medium shareholders than domestic shareholders do. For instance, FIIs from the U.S. or U.K. abide by strict requirements for information disclosure and transparency in their countries (Li et al., 2021). When investing in developing countries, those investors may demand a similar level of information disclosure, increasing the transparency of investee companies. The demand for transparency implies a reduction in information asymmetry and consequently prevents opportunistic behaviour, such as tunnelling by controlling shareholders.

Fourth, FIIs may not collude with controlling shareholders' tunnelling as they are concerned about the long-term growth of the investee firm. Compared to domestic institutional or individual investors, FIIs have a long-term horizon and are interested in the company's sustainable growth (Aggarwal et al., 2011; Gillan and Starks, 2003). For instance, Aggarwal et al. (2011) find that FIIs promote enhanced governance practices in non-U.S. firms and push for improvements, creating long-lasting effects on firm performance of investee firms. Colluding with controlling shareholders for short-term gains is shortsighted and can undermine a company's long-term development. For example, Jiang et al. (2010) find that firms with large inter-corporate loans, a form of tunnelling, experience worse future operating performance and are much more likely to become candidates for delisting. In light of the above, FIIs have both the incentives and the capabilities to reduce the

tunnelling problems in investee firms.

Regarding the channels of FIIs, we focus on the site visit activities, which are one of the most prevalent and important types of private interactions between external investors and firms (Brown et al., 2015; Cheng et al., 2016). During these visits, investors can physically inspect production facilities, observe employee engagement, and meet with managers. Different from the existing literature on institutional site visits that examines their influence on corporate innovation (Jiang and Yuan, 2018) and dividend payouts (Cao et al., 2022), our study proposes that FIIs may use site visits as governance mechanisms to mitigate expropriation by controlling shareholders.

We choose the Chinese market as the context of our research for the following reasons. First, unlike the limited corporate site visit data in the US and Europe, the Shenzhen Stock Exchange (SZSE) has mandated its listed firms to disclose information related to investors' site visits in their annual reports since 2009 (Jiang and Yuan, 2018). To our knowledge, records of investors' site visits are seldom available in other markets. Thus, such a unique dataset in the Chinese market allows us to test whether site visits could be a governance mechanism for FIIs to affect tunnelling problems.

Second, the Chinese stock market offers an opportunity to clearly identify and directly measure tunnelling by controlling shareholders. Previous studies have established the existence of tunnelling (Faccio et al., 2001; Shleifer and Vishny, 1997), but they offer few specifics on how it is conducted, as tunnelling can take various, often hidden forms. However, inter-corporate loans are a direct and unambiguous measure of tunnelling that can be adopted in the Chinese market. The controlling shareholders of many listed firms directly take funds from listed firms in the form of inter-corporate loans and are recorded as "other receivables"(Jiang et al., 2010). These receivables are loans found on the balance sheets of many Chinese firms and constitute about 15.9 per cent of the value of total tradable shares. Jiang et al. (2015) cite Fenghua Co. (stock code 600615) as an example. On 31 December 2002, the controlling shareholder and its affiliated companies borrowed 198.6 million RMB from the listed firm, an amount that exceeded the firm's total equity (116.21 million RMB). The controlling shareholder later declared bankruptcy, and a substantial portion of the loans were written off. Hence, we use inter-corporate loans in China as the direct measure of tunnelling as loan transactions are traceable through public sources and not matched with any normal business transactions (e.g., asset sales or product sales/purchases).

Third, tunnelling problems are prevalent in the Chinese market due to the weak institutional environment. The legal system in China offers few options for minority shareholders to take private enforcement action against controlling shareholders' misconduct. Huyghebaert and Wang (2012) argue that 'tunnelling' or 'expropriation' are common phenomena in China. For example, management uses loan guarantees or loan transactions to extract benefits from minority shareholders. Most loan holders do not pay any interest or pay very low interest. Therefore, the Chinese market is a suitable laboratory for figuring out how to mitigate tunnelling problems.

Our paper contributes to the literature in four aspects. First, the sharp increase in foreign institutional ownership has attracted growing academic research to investigate its influences on corporate governance. Prior literature examines the disciplinary role of FIIs on firms' dividend policy (Cao et al., 2017), earnings management (Kim et al., 2016), stock price crash risk (Jin et al., 2016), CEO turnover (Aggarwal et al., 2011), and executive compensation (Cheng et al., 2022), while none discuss the monitoring role of FIIs on tunnelling. Previous tunnelling studies (e.g., Jiang et al. (2015); Chizema et al. (2020)) typically focus on the mechanisms of tunnelling but provide little evidence on who effectively monitors it. One study most closely related to ours is that of Jiang et al. (2015). They find that higher institutional shareholdings and better corporate governance are more likely to restrain controlling shareholders' tunnelling. Although closely related, our paper differs from this research in two important aspects: First, we examine a particular type of institutional investors, namely FIIs, while Jiang et al. (2015) focuses on institutional investors as a whole. Second, we involve corporate site visits as a novel mechanism of FIIs, while Jiang et al. (2015) ignore the mechanisms of institutional investors. In summary, our paper extends the research by Jiang et al. (2015) and examines how foreign institutional investors, as effective monitors, protect the interests of minority shareholders and prevent misappropriation.

Second, our study extends the research on institutional investors' site visits. Previous studies (e.g., Cheng et al., 2016) investigate how site visits benefit visitors. For example, Cheng et al. (2016) document that sell-side analysts who conduct site visits acquire more valuable firm-specific information, enhancing forecast accuracy. However, recent research emphasises the effect of institutional investors' site visits on corporate decisions and outcomes, such as dividend policy (Cao et al., 2022) and innovation (Jiang and Yuan, 2018). For instance, Cao et al. (2022) find that institutional investor site visits, considered a form of soft activism, lead to an increase in corporate cash

dividends. We expand this body of literature by first examining site visits by foreign institutional investors and how these visits serve as a mechanism to curb tunnelling problems in corporations. Moreover, we introduce a new measure of site visits, assessing the frequency of visits attended by FIIs. Unlike measuring the aggregate number of site visits in current literature (e.g., Jiang and Yuan, 2018), we argue that examining the frequency of investors' site visits is more indicative of the monitoring effect on listed firms.

Third, our study contributes to the strand of literature on foreign institutional investors by including Sino-foreign institutions and Hong Kong, Macao, or Taiwan (HMT) institutions. We are the first to classify institutions by region and to introduce the categories of Sino-foreign and HMT institutional investors, whereas prior literature has been limited to the classifications of foreign institutional investors (FIIs) and domestic institutional investors (DIIs). By comparing FIIs with Sino-foreign and HMT institutional investors, we can determine which characteristics are crucial for making them effective monitors. The existing literature (e.g., Cornett et al., 2007) demonstrates that institutional investors with independent, long-term perspectives, and low monitoring costs are more effective in governance than other institutional investors. Brav et al. (2008) find evidence to support this argument in the context of hedge funds and mutual funds. However, we are the first to test this argument in the context of FIIs and other institutional investors. We suggest that FIIs can regulate firms more effectively than Sino-foreign institutional investors and HMT institutional investors. Rather than focusing on the governance consequences and monitoring mechanisms of FIIs (e.g., Chen et al., 2013), we extend the literature on FIIs by comparing FIIs with other institutional investors and identifying the key characteristics that make FIIs effective monitors.

Fourth, we contribute to the literature by investigating the impact of FIIs on tunnelling in the context of China. The prevalence of controlling shareholders in most listed companies in China and the weak investor protection environment have led to serious tunnelling issues (Jiang et al., 2010). Furthermore, with increasing capital market liberalisation in China, the proportion of foreign institutional shareholdings has surged in recent years (Chen et al., 2013). Thus, the Chinese market is well-suited for discussing how the entrance of FIIs affects corporate governance and tunnelling problems.

The rest of this paper is organized as follows. Section 2 provides a general introduction to the background of institutional site visits in China and develops our hypotheses. Section 3 summarizes

the data, the measures of key variables, and presents summary statistics. Section 4 reports our baseline empirical results corresponding to our hypotheses. Section 5 presents our identification strategy, which attempts to address the concern of endogeneity. Section 6 discusses the effect of site visits by FIIs in groups and alone on tunnelling, and Section 7 concludes.

2 Institutional Background and Hypotheses development

2.1 Institutional Background of Site Visits in China

Corporate site visits refer to investors' field trips to a firm's headquarters and its operational facilities. During site visits, investors have the chance to talk to corporate managers and other employees (Cheng et al., 2016). Site visits are typically initiated by institutional or individual investors, such as financial analysts, mutual fund managers, and bankers. Visitors request a site visit in advance by contacting the investee firm's investor relations (IR) manager or board secretary, who commonly covers the visitors' travel expenses. All investors can request to visit listed firms, and listed firms will try their best to accommodate these requests (Jiang and Yuan, 2018). Through site visits, investors have the opportunity to observe the firms' operations and production facilities and obtain some information that is hard to get from simply analysing firms' financial reports. By visually observing firms' operational situation and talking in person with top executives, investors can gain a better understanding of firms' operating performance, prospects, and business risk exposure. Although individual investors play an important role in the Chinese capital market, they seldom visit listed firms because the time, effort, and expenses incurred are not cost-effective for them. Consequently, most of the investors who visit listed firms are institutional investors.

In China, the Shenzhen Stock Exchange (SZSE) requires all firms listed on the SZSE to disclose site visiting information publicly. The disclosure requirement has developed in three stages. The first stage began in 2006 when the SZSE required the disclosure of site visit information to the regulator. In August of that year, the SZSE issued the Fair Information Disclosure Guidelines, which require listed companies to record the details of each visit, including the date and location of the visit, the name and affiliation of the visitor, the content of the communication, and all other information related to the on-site visit. Companies are required to report upcoming visits to the China Securities Regulatory Commission (CSRC) two business days in advance and provide

a summary of the visit to the CSRC and the SZSE after the visit. In the second stage, starting in 2009, the SZSE implemented a new rule that required all listed companies to publicly disclose information about site visits in their annual reports. This requirement was strictly enforced, and the SZSE publicly announced the firms that did not comply. The third stage began in 2012 when the SZSE added a time constraint to the disclosure of site visits. They required all listed companies to disclose information about each site visit on their websites within two business days. This policy aimed to ensure the timely release of site-visit information.

The mandatory disclosure requirements for site visits in China provide us with great opportunities to investigate the effect of this type of private interaction activity. By utilising this unique dataset, we can analyze a novel mechanism through which institutional investors exercise monitoring over publicly listed firms. Specifically, the site visit reports include the names of the visiting institutions, allowing us to classify these institutions into various categories. This enables a more detailed investigation into how site visits by different types of institutional investors influence tunnelling activities within the firms. Such an analysis not only sheds light on the role of institutional investors in curbing expropriation but also contributes to a deeper understanding of how private interactions serve as an additional layer of monitoring beyond traditional governance mechanisms.

2.2 Hypotheses Development

We propose that FIIs can curb tunnelling through site visits for the following reasons. First, site visits by FIIs could directly help firms establish better corporate governance and reduce expropriations. Previous studies have demonstrated that foreign institutional investors play an active monitoring role in helping firms to improve corporate governance and reduce agency costs (e.g., Chen et al., 2013; Ferreira and Matos, 2008; Kacperczyk et al., 2021). During site visits, FIIs not only acquire first-hand information to benefit themselves but also scrutinise firms as external monitors. They can observe firms' actual operational processes and facilities, communicate with managers about corporate strategies and financial positions, and interact with general employees. These activities can help visiting investors uncover any unexposed insider abuse of resources. By asking questions and expressing concerns during Q&A sessions, visitors can exert pressure on managers to curb their incentives to engage in misconduct (Cheng et al., 2016; Jiang and Yuan, 2018). In particular, better corporate governance can shape the internal control system (Hoitash et al.,

2009; Johnstone et al., 2011). Ge et al. (2021) show that robust internal controls can safeguard corporate assets and prevent expropriation. Therefore, FIIs' site visits play a monitoring role in reducing resource extraction from firms through improved corporate governance.

Second, FIIs' site visits serve as a signal to investee firms and enhance the threat of divestment. Compared with private investors and mainland institutional investors, FIIs are perceived as having a longer-term horizon and are treated as long-term investors in investee firms (Bena et al., 2017), so the site visit signals to the firm that FIIs are interested in the company's growth and long-term interests. This signalling effect makes the threat of divestment more credible. Managers may realise that they risk the divestment of FIIs if firm performance fails to meet expectations. To prevent the exit of these long-term investors, executives may restrain themselves from expropriations and reduce tunnelling problems as a response to site visits.

Third, FIIs' site visits can enhance firms' information transparency, diminish insider information advantages, and constrain tunnelling problems. Previous studies indicate that tunnelling occurs due to controlling shareholders' access to private information (Zhang et al., 2017). For instance, by exploiting this information advantage, managers and controlling shareholders can easily transfer assets to their related parties (Jiang et al., 2010). The site visit activities of FIIs can boost information transparency by disseminating firm-specific and internal information to the market. Listed companies that undergo site visits are required to make timely and detailed disclosures of the visiting event within two business days (Jiang and Yuan, 2018). This disclosure includes questions from investors and managers' responses, which contain information that firms would not typically release to the public without site visits. Consequently, more information is released to all shareholders in the market, either through firm disclosures or from investors' information dissemination, reducing controlling shareholders' information advantages and decreasing the likelihood of them extracting benefits from minority shareholders. In light of the above, we argue that FIIs' site visits can play a significant role in addressing tunnelling issues.

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

Hypothesis 1 *Foreign institutional investors' site visits will reduce tunnelling by controlling shareholders.*

Institutional investors with expertise, low costs of monitoring, independence, and long-term

horizons are more likely to curb tunnelling than other types of investors. First, unlike FIIs, mainland institutional investors could be myopic and have various business ties with the firm they have invested in (Bena et al., 2017), so they are less likely to intervene in managers' misbehaviour. Management may persuade the mainland institutional investors to collude with them and extract interests from minority shareholders. Second, Sino-foreign institutional investors may have less incentive to intervene in management behaviour due to the high costs of monitoring. In the setting of Sino-foreign investment institutions, a foreign investor and a mainland investor jointly own the corporation. Conflicts may arise regarding who bears the cost of monitoring and who gains the benefits, leading to a reduced incentive to impede the misbehaviours of controlling shareholders. Third, HMT investors may not possess the expertise that FIIs have in monitoring companies. Most FIIs investing in mainland China are from the US and Europe, while HMT investors are from Hong Kong, Macao, or Taiwan. Consequently, HMT institutional investors may not have the developed expertise of FIIs, resulting in an inability to effectively regulate tunnelling. In summary, we argue that site visits by FIIs are more effective in curbing tunnelling than site visits by Mainland, Sino-foreign investment, and HMT institutional investors.

The above arguments lead to our following hypothesis:

Hypothesis 2 *In terms of alleviating tunnelling problems, site visits by FIIs are more effective than those by Sino-foreign investment, HMT, and Mainland institutional investors, ceteris paribus.*

As FIIs play a significant role in monitoring, we argue that the proportion of shares they hold enhances the effect of site visits on reducing tunnelling. An increasing body of literature proves that higher ownership by FIIs leads to better corporate governance in listed firms (Bena et al., 2017; Edmans and Holderness, 2017; Cheng et al., 2019; Ferreira and Matos, 2008). For instance, Chen et al. (2019) find that the impact of foreign institutional ownership on reducing excessive CEO compensation is more pronounced when the shares held by FIIs exceed 5%. FIIs may have a greater incentive to intervene in management behaviour when they hold significant shares.

Building on the existing literature, we argue that FIIs with large shareholdings may conduct site visits differently in two ways. Firstly, we hypothesize that compared to those who only have small shareholdings, FIIs with large shareholdings may monitor the firm via taking more intensive visits. These FIIs may ask more questions or require more information about corporate decisions

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during each visit. Secondly, we propose that FIIs with large shareholdings may take more frequent site visits to reduce tunnelling. FIIs may visit multiple times to keep an eye on the management, preventing them from extracting benefits from minority shareholders. In both ways, FIIs can reduce information asymmetry between controlling shareholders and minority shareholders, thereby reducing the possibility of expropriation.

The above arguments lead to our following hypotheses:

Hypothesis 3a *Foreign institutional investors with large shareholdings are likely to reduce tunnelling through more intensive site visits.*

Hypothesis 3b *Foreign institutional investors with large shareholdings are likely to reduce tunnelling through more frequent site visits.*

3 Data and Measures

3.1 Data and Sample

Our sample covers 2,810 A-share firms listed on the Shenzhen Stock Exchange (SZSE), from 2012 to 2022, excluding Special Treatment (ST) firms, which are confronted with financial troubles or other unusual difficulties, and firms in the financial sector. On 17 July 2012, the Shenzhen Stock Exchange (SZSE) issued a new regulation requiring firms to disclose a standard summary report on their official website within two trading days following a site visit (Chen et al., 2019). B-share[1] stocks are dropped because only 54 B-share firms are listed on the SZSE, and they are subject to different regulations (Fernald and Rogers, 2002). B-shares tend to be less liquid compared to A-shares due to a relatively smaller pool of investors. We obtain all the data from the China Stock Market and Accounting Research Database (CSMAR) and the Qichacha database. The CSMAR database offers data on the Chinese stock markets and the financial statements of China's listed companies, which is commonly used in a high volume of literature (e.g., Al Mamun et al., 2020; An et

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[1]B-shares on the Shanghai and Shenzhen stock exchanges refer to those that are traded in foreign currencies (e.g., Hong Kong dollars, US dollars, etc.). Shares that are traded on the two mainland Chinese stock exchanges in Renminbi, the currency in mainland China, are called A shares. Historically, B-shares were aimed at foreign investors as a way to access the Chinese market without using the local currency. Recently, B-shares' significance has diminished due to the gradual opening of the Chinese financial markets and the introduction of mechanisms like the Qualified Foreign Institutional Investor (QFII) program and Stock Connect, which allow foreign investors to trade A-shares directly.

al., 2021; Chen et al., 2013). The Qichacha database is an enterprise information search platform in China, providing enterprise registration information, legal representative information, shareholder information, enterprise annual reports and other aspects of enterprise data. We manually merge the institutional-type data collected from the Qichacha database with the investor site visit list obtained from the CSMAR database. We also extract all firm-level financial data from the CSMAR database.

Figure 1 displays the process of how we collect and sort the site visit data. We collect the 102,635 site visit reports for 2,810 firms during 2012-2022 from the CSMAR database. Then, we extract the names of all institutions that participated in the site visit from each report and compile a list of 1,392,907 institution names (including duplicates). The list of institution names is almost 13 times larger than the number of site visit reports because, in most cases, a corporate site visit is attended by more than one institution. Although Cao et al. (2022) group the type of investors into nine categories following the instructions of the Chinese Research Data Services Platform (CNRDS) database, we are the first to classify institutions by the region where investors are located [2]. We group 1,392,907 institutions into five categories: foreign institutions, Sino-foreign investment institutions, Hong Kong, Macao, or Taiwan (HMT) institutions, mainland institutions, and others [3]. Specifically, Sino-Foreign Investment Institutions [4] are a comprehensive category comprising three types of institutions financed by both mainland and foreign shareholders: Sino-Foreign Joint Ventures (JVs), Foreign-Invested Partnerships (FIPs), and Foreign-Invested Commercial Enterprises (FICEs). The definitions of these four types of institutions are presented in Appendix A.

In summary, we perform the following steps: 1) We remove duplicate institution names and compile a list of 99,746 unique institution names; 2) We classify all institutions with only English names as foreign institutions; 3) We categorise institutions as foreign institutions if the name of the institution contains the name of an overseas country, e.g., Jinda UK Co.; 4) We classify institutions with the names of 23 Chinese provinces as mainland institutions, e.g. Xi'an Jiuzhi Investment Management Co.; 5) We hand-collect the institution types data from the Qichacha database for 47,348 institutions that remain unclassified after the four steps above. The site visits

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[2]The types of visitors in the CNRDS database include individual investors, asset management companies, media, government/regulatory institutions, foreign institutions, banks, investment companies, private equity, insurance companies, trusts, funds, securities and others.

[3]Others include individual investors and investors whose type we are unable to identify.

[4]The Sino-Foreign Investment Institutions in our sample are primarily financial joint venture institutions, with only a small number being entity firms funded by FDI.

data collection process is illustrated in Figure 1, and the final sample includes 17,978 firm-year observations. We mitigate the influence of outliers by winsorizing all continuous variables at the 5th and 95th percentiles by year.
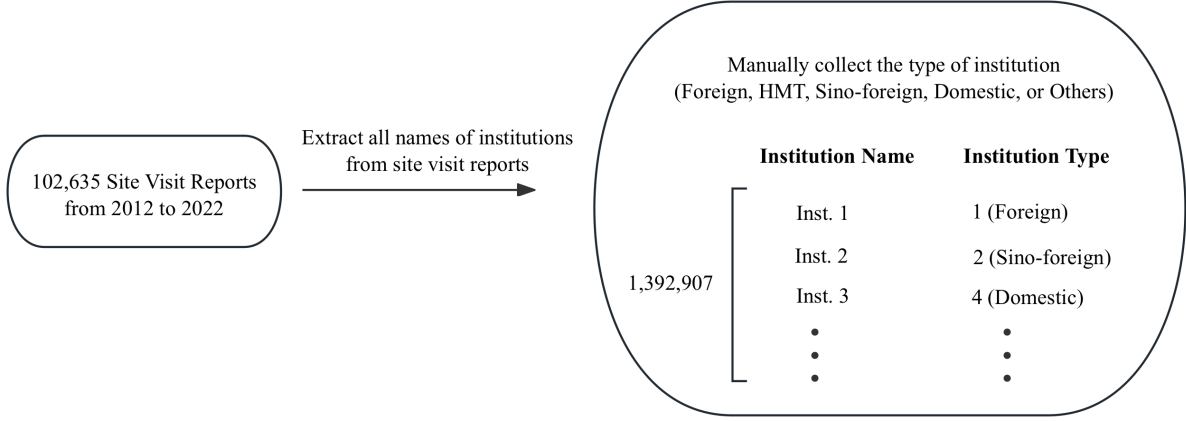

Figure 1: Site Visit Data Collection Process

This figure shows the manual collection process of site visit data. We first obtain a list of institutions from the site visit reports and then manually determine the type of institution for each institution on the list.

3.2 Variable Construction

3.2.1 Measures of Site Visits

We intend to evaluate a firm's site visit from three key dimensions: the total number of investors' site visits, the frequency of investors' site visits, and the dummy of investors' site visits. We drop the category of "Others", and the remaining four categories are all institutional investors. Regarding the three dimensions, we construct three variables to capture institutional investors' site visits: 1) *Sum* is defined as the total number of institutional investors in all site visits for each firm in the calendar year; 2) *Frequency* is defined as the total number of site visits involving at least one institutional investors for each firm in the calendar year; 3) *Dummy* is set to one if at least one institutional investors visit the firm in the calendar year. We involve the above three variables for each category of institutional investors, namely FIIs, sino-foreign investment institutional investors, HMT institutional investors, and Mainland institutional investors. For example, we include *ForeignSum*, *ForeignFrequency*, and *ForeignDummy* to measure site visits by foreign institutional investors. *ForeignSum* measures the total number of FIIs in all site visits

for each firm in the calendar year. *ForeignFrequency* is defined as the total amount of site visits involving at least one FII for each firm in the calendar year. *ForeignDummy* is set to one if at least one FII visits the firm in the calendar year.

3.2.2 Measures of Tunnelling

Given the difficulty in measuring the nature and magnitude of tunnelling, most researchers must rely on indirect measurements, such as the price paid for corporate control or the changes in firms' market value around specific events. Previous studies have indirectly estimated tunnelling from the premiums paid for controlling shares (Dyck and Zingales, 2004; Nenova, 2003; Zingales, 1994), the market price reaction to mergers within Korean business groups (Bae et al., 2002), or the market price changes surrounding announcements of related-party transactions with controlling shareholders (Cheung et al., 2006).

Recently, one group of studies has attempted to examine a direct measure of tunnelling, namely related-party transactions. The transactions examined in the literature include private securities offerings to group members (Baek et al., 2006), loan guarantees to related parties (Berkman et al., 2009), and sales of goods/services to related parties (Cheung et al., 2006; Huyghebaert and Wang, 2012; Jian and Wong, 2010). However, we do not choose this measure because many scholars argue that loan guarantees are not an appropriate measure of tunnelling (e.g., Huyghebaert and Wang, 2012; Jiang et al., 2015). Firstly, although these transactions could be used as means of tunnelling, they could also be normal operational transactions within a business group. For instance, a vertically integrated firm group should have numerous inter-group transactions, and whether these transactions can be identified as tunnelling depends on the transfer prices (Jiang et al., 2015). Moreover, even if these transactions are identified as tunnelling activities, the actual benefits that controlling shareholders have extracted from listed firms cannot be clearly measured. Secondly, in an attempt to better protect stock market investors, the China Securities Regulatory Commission (CSRC) introduced a new regulation in June 2000, prohibiting the issuance of any new debt guarantees to the benefit of the parent firm. For these reasons, we are unable to use loan guarantees as a proxy for tunnelling.

Another group of studies tries to identify inter-corporate loans as a direct measure of tunnelling (e.g., Jiang et al., 2015; Jiang et al., 2010; Liu and Lu, 2007; Liu and Tian, 2012; Zhang et al.,

2017), which is a common channel of expropriation in China used by controlling shareholders to divert funds from publicly listed firms. Our study follows the measure of Jiang et al. (2010) and uses inter-corporate loans as the proxy of tunnelling for the following reasons. Firstly, inter-corporate loans were not associated with typical business transactions, so they are a useful instrument for this purpose (Jiang et al., 2015). Secondly, inter-corporate loans are traceable through public sources and do not require a 'fair value' test, as would be necessary in other asset transfers between related parties (Jiang et al., 2010). Thirdly, by using a direct measure of tunnelling that is independent of firm value, we can gauge the prevalence of the phenomenon across all listed firms, not just those with particular ownership structures or within related business groups (Jiang et al., 2010). Finally, because the number of other receivables is reported at regular intervals, we can evaluate the response of institutional investors. Specifically, we construct the variable *Tunnelling_OTHREC*, which is calculated as other receivables scaled by total year-end assets in a given year, to capture the inter-corporate loans.

3.2.3   Measures of Firm-level Characteristics

We also consider firm characteristics that may affect tunnelling through inter-corporate loans by including firm controls included in the literature (Jiang et al., 2015; Zhang et al., 2017). These controls include the natural logarithm of Leverage *Log(Leverage)*, the ownership held by the largest shareholder *Top1_Shareholdings*, the proportion of independent directors in the board *Board Independence*, the dummy variable of whether the firm is state-owned enterprises *State-Owned Enterprises*, the firm age *Firm_Age*, the natural logarithm of total assets *Firm_Size*, the duality of CEO *CEO_Duality*, the foreign institutional ownership *Foreign_Shareholdings*, and *Tobin's_Q*. Appendix B provides detailed variable definitions.

3.3   Summary Statistics

Figure 2 displays the distribution of site visits by different categories of institutional investors. Mainland institutional investors conducted the majority of site visits in our sample, totalling 164,995, which represents 76.07%; whereas only 0.82% of site visits are conducted by HMT institutions. In stark contrast, the number of site visits by FIIs and Sino-foreign institutional investors are comparable, accounting for 11.85% and 10.44% of the total, respectively.
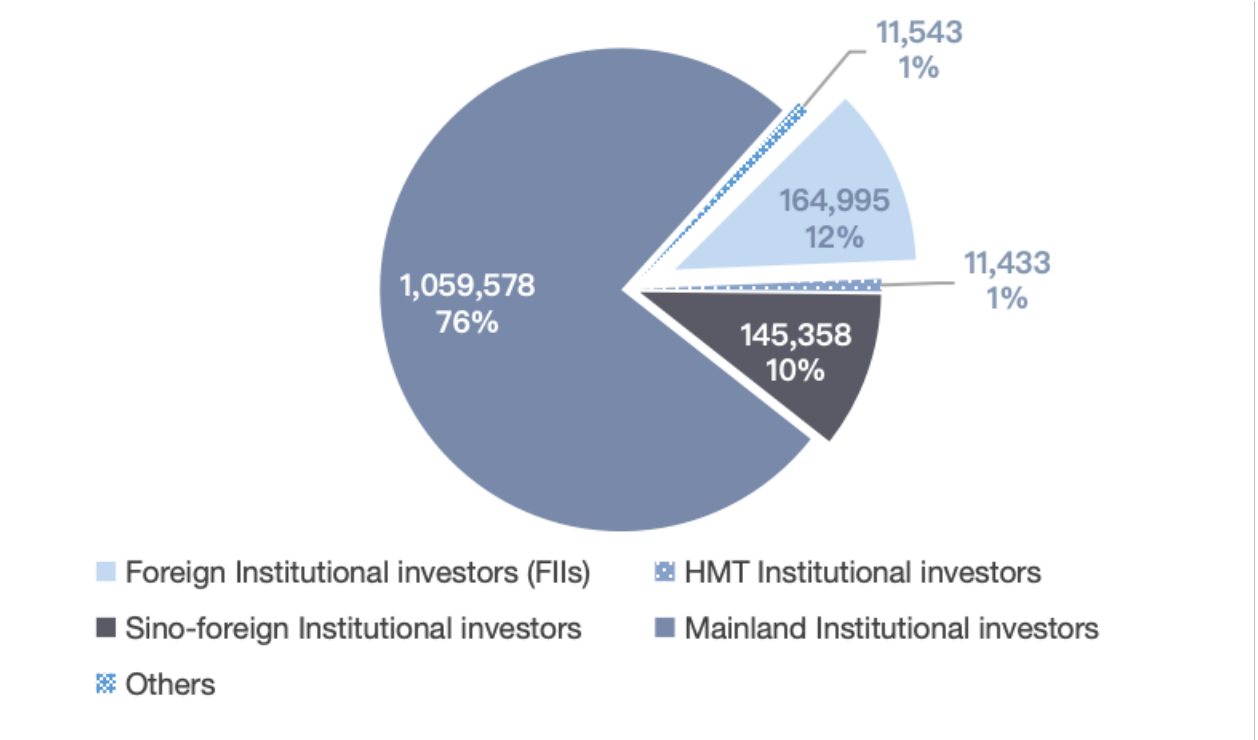
Figure 2: Percentage of Site Visits by Different Institutional Investors [5]

This figure shows the percentage of the total number of site visit activities conducted by the different types of institutional investors from 2012 to 2022.

Table 1 presents the summary statistics of our sample. The ratio of inter-corporate loans to total assets averages 1.286% per annum. In terms of site visits, on average, 55.3% of firms are visited by FIIs and 88.2% of firms by mainland institutional investors. Over the sample period, the average number of visits by FIIs to a firm is 2.437 times per year. The average age of the firms is 10 years, with total assets of approximately CNY 3.18 billion, a largest shareholder ownership percentage of 31.65%, a leverage ratio of 40.8%, and a Tobin's Q of 2.064. These figures are all in line with previous literature, such as that by Cao et al. (2022) and Jiang and Yuan (2018).

4   Baseline Regression

In this section, we examine the relationship between institutional investors' site visits and tunnelling. We include three subsections to present the main findings corresponding to our three hypotheses. Subsection 4.1 shows the effect of FIIs' site visits on tunnelling, validating our Hy-

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[5]We categorise institutional investors into five different types. Except for Foreign (Sino-foreign/HMT/Mainland) institutional investors, the type of "Others" represents the site visits by institutions whose type we can not identify.

Table 1: Summary Statistics

This table reports the statistics of variables in our sample (observation, mean, standard deviation, 25th percentile, 50th percentile, 75th percentile, and max). The sample comprises all listed firms in the Shenzhen Stock Exchange (SZSE) from 2012 to 2022. Variable definitions are provided in the Appendix B. All continuous variables are winsorized at the 5th and 95th percentiles.

	N	Mean	S.D	Min	p25	p50	p75	Max
Dependent Variable								
Tunnelling_OTHREC (%)	21,365	1.29	1.54	0.04	0.29	0.71	1.60	8.12
Independent Variables								
Log (ForeignSum)	14,754	0.89	1.04	0.00	0.00	0.69	1.61	4.03
Log (ForeignFrequency)	14,754	0.65	0.70	0.00	0.00	0.69	1.10	2.40
Dummy_Foreign	14,754	0.55	0.50	0.00	0.00	1.00	1.00	1.00
Log (SinoForeignSum)	14,754	0.15	0.36	0.00	0.00	0.00	0.00	1.61
Log (SinoForeignFrequency)	14,754	0.13	0.31	0.00	0.00	0.00	0.00	1.39
Dummy_SinoForeign	14,754	0.16	0.36	0.00	0.00	0.00	0.00	1.00
Log (HMTSum)	14,754	1.14	1.16	0.00	0.00	0.69	1.95	4.22
Log (HMTFrequency)	14,754	0.78	0.75	0.00	0.00	0.69	1.39	2.57
Dummy_HMT	14,754	0.62	0.49	0.00	0.00	1.00	1.00	1.00
Log (MainlandSum)	14,754	2.66	1.58	0.00	1.39	2.77	3.83	6.14
Log (MainlandFrequency)	14,754	1.38	0.81	0.00	0.69	1.39	1.95	2.94
Dummy_Mainland	14,754	0.88	0.32	0.00	1.00	1.00	1.00	1.00
Control Variables								
Log (Leverage)	17,372	-1.03	0.55	-2.49	-1.38	-0.92	-0.59	-0.25
Top1_Shareholdings	21,344	31.65	13.14	11.15	21.13	29.77	40.70	63.41
Board_Independence	21,341	37.65	4.87	33.33	33.33	33.33	36.42	50.00
State-Owned_Enterprises	21,344	0.15	0.36	0.00	0.00	0.00	0.00	1.00
Firm_Age	17,372	9.97	6.63	2.00	5.00	8.00	14.00	26.00
CEO_Duality	21,086	0.34	0.47	0.00	0.00	0.00	1.00	1.00
Firm_Size	21,365	21.93	1.18	14.94	21.11	21.78	22.60	28.29
Tobin's_Q	20,632	2.06	1.09	0.94	1.31	1.71	2.44	8.14
Foreign_Shareholdings	15,691	1.38	3.53	0.00	0.00	0.64	2.00	22.30

pothesis 1. With regard to Hypothesis 2, Subsection 4.2 documents the effect of other institutional investors' field visits on tunnelling and compares it with the effect of FIIs. As for Hypothesis 3a and Hypothesis 3b, Subsection 4.3 demonstrates the impact of FII shareholdings and site visits on the tunnelling behaviour, as well as the channels through which site visits are implemented.

4.1 Effects of foreign institutional site visits on tunnelling

We perform ordinary least squares (OLS) regression to examine the association between site visits by FIIs and tunnelling. We develop the following specifications to test our Hypothesis 1:

$$\mathrm{Tunnelling\_OTHREC}_{i,t} = \alpha + \beta \mathrm{Log(ForeignSum)}_{i,t} + \mathrm{Controls}_{i,t} + \delta_t + \omega_i + \epsilon_{i,t} \tag{1}$$

$$\mathrm{Tunnelling\_OTHREC}_{i,t} = \alpha + \beta \mathrm{Log(ForeignFrequency)}_{i,t} + \mathrm{Controls}_{i,t} + \delta_t + \omega_i + \epsilon_{i,t} \tag{2}$$

$$\mathrm{Tunnelling\_OTHREC}_{i,t} = \alpha + \beta \mathrm{Dummy\_Foreign}_{i,t} + \mathrm{Controls}_{i,t} + \delta_t + \omega_i + \epsilon_{i,t} \tag{3}$$

where $Tunnelling\_OTHREC_{i,t}$ is a proxy of tunnelling through inter-corporate loans. The proxy is calculated as other receivables divided by total assets for firm i in year t. $Log\ (ForeignSum)_{i,t}$, $Log\ (Foreignfrequency)_{i,t}$, and $ForeignDummy_{i,t}$ represent the three measures used to capture site visits, which serve as the independent variables in Equations (1) to (3), respectively. In each equation, the coefficient of interest is β which represents the effect of site visits by FIIs on tunnelling. $Controls_{i,t}$ is a set of firm-level characteristics that influence tunnelling including leverage ratio (*Log (Leverage)*), the proportion of largest shareholdings (*Top1_Shareholdings*), the percentage of independent directors sitting on board (*Board_Independence*), the classification of state-owned enterprises (*State-Owned_Enterprises*), the firm age (*Firm_Age*), the duality of CEO (*CEO_Duality*), firm size (*Firm_Size*), the shareholdings of foreign institutional investors (*Foreign_Shareholdings*), and (*Tobin's_Q*). We also include year fixed effects (δ_t) and firm fixed effects (ω_i) to control for unobservable individual and time-invariant effects.

Table 2 presents the regression results of Equation (1), (2), and (3). Columns (1) to (3) present the results for the explanatory variables *Log(ForeignSum)*, *Log (ForeignFrequency)*, and *Dummy_Foreign* respectively. All the columns show a significantly negative relationship between foreign institutional site visits and tunnelling through inter-corporate loans, consistent with our expected signs. In column (1), the coefficient of *Log(ForeignSum)* is -0.035, which is significantly

negative at the 1% level when all control variables are included. This result indicates that more foreign institutional investors would trigger a significant decrease in tunnelling by controlling shareholders. Economically, a one-standard-deviation increase in *Log(ForeignSum)*, on average, predicts a 0.036% (-0.035*1.04) decrease in tunnelling. In column (2), the coefficient of *Log (ForeignFrequency)* is -0.051 and significant at the 1% level, declaring more frequent site visits by FIIs would incur a statistically significant decrease in the tunnelling of removing firms' cash. In economic terms, a one-standard-deviation increase in *Log (ForeignFrequency)*, on average, leads to a 0.036% (-0.051*0.7) decrease in tunnelling. In column (3), the coefficient of *Dummy_Foreign* is -0.044 and is significant at the 10% level. The dummy variable is the weakest measure of FIIs' site visits, as the number and frequency of visits by FIIs is a more important measure of their impact on the management than whether or not FIIs visit a company. Overall, the results in Table 2 are consistent with our Hypothesis 1, showing a significantly negative relationship between FIIs' site visits and tunnelling.

4.2 Effects of other institutional site visits on tunnelling

We compare the effect of site visits by other institutional investors with that of site visits by FIIs. We jointly regress tunnelling on FIIs' site visits and other institutional investors' site visits. Therefore, we apply the following model to test our Hypothesis 2:

$$\mathrm{T}unnelling\_\mathrm{OTHREC}_{i,t} = \alpha + \beta \mathrm{L}og(\mathrm{F}oreign\mathrm{S}um)_{i,t} + \theta \mathrm{O}ther\mathrm{S}ite\mathrm{V}isits_{i,t}$$
$$+ \mathrm{C}ontrols_{i,t} + \delta_t + \omega_i + \epsilon_{i,t} \tag{4}$$

where *Log (ForeignSum)$_{i,t}$* is one of the measures of FIIs' site visits, which is the same as the independent variable in Equation (1). *OtherSiteVisits$_{i,t}$* represents site visit variables of other investors, namely *Log (HMTSum)$_{i,t}$*, *Log (SinoForeignSum)$_{i,t}$*, and *Log (MainlandSum)$_{i,t}$*. Other variables remain the same as in Equation (1). The coefficient β intends to capture the impact of FIIs' site visits on tunnelling, while θ represents the impact of site visits by HMT, Sino-foreign, and Mainland institutional investors on expropriation. For robustness check, we also apply the other two measures of FIIs' site visits, namely *Log (Foreignfrequency)$_{i,t}$* and *ForeignDummy$_{i,t}$*, and the results are shown in Appendix C.

Table 2: FIIs' site visits and Tunnelling

This table reports the impact of FIIs' site visits on tunnelling through corporate loans. Columns (1) to (3) regress tunnelling on three different measures of site visits by FIIs and our expected signs of the corresponding coefficients are all negative. The dependent variable is *Tunnelling_OTHREC* which is a proxy of tunnelling behaviours. The explanatory variable in column (1) is *Log (ForeignSum)*, measuring the total number of FIIs' site visits. Column (2) includes *Log (ForeignFrequency)*, which measures the frequency of FIIs' site visits. Column (3) contains a dummy variable *Dummy_Foreign* which captures whether the firm is visited by at least one FII. Firm-level and year-level fixed effects are included in all models. Standard errors are clustered by firm and the corresponding t-values are reported in parentheses. Variable definitions are provided in the Appendix B. All continuous variables are winsorized at the 5th and 95th percentiles. Significance at 1%, 5%, and 10% levels are indicated by ***, **, and *, respectively.

	Exp. Sign	(1)	(2)	(3)
		Tunnelling_OTHREC		
Log (ForeignSum)	-	-0.035***		
		(0.013)		
Log (ForeignFrequency)	-		-0.051***	
			(0.018)	
Dummy_Foreign	-			-0.044*
				(0.023)
Log (Leverage)		0.242***	0.243***	0.245***
		(0.037)	(0.037)	(0.037)
Top1_shareholdings		-0.009***	-0.009***	-0.009***
		(0.002)	(0.002)	(0.002)
Board_Independence		-0.002	-0.002	-0.002
		(0.003)	(0.003)	(0.003)
State-Owned Enterprise		-0.050	-0.050	-0.049
		(0.036)	(0.036)	(0.036)
Firm_Age		-0.023	-0.024	-0.025
		(0.048)	(0.048)	(0.048)
CEO_Duality		-0.012	-0.012	-0.012
		(0.033)	(0.033)	(0.033)
Firm_Size		-0.042	-0.046	-0.055*
		(0.029)	(0.029)	(0.028)
Tobin's_Q		0.039**	0.038**	0.034**
		(0.015)	(0.015)	(0.015)
Foreign_Shareholdings		-1.245***	-1.299**	-1.334**
		(0.596)	(0.595)	(0.595)
N		11879	11879	11879
Adjusted R-squared		0.499	0.499	0.499
FirmFE		YES	YES	YES
YearFE		YES	YES	YES

Table 3 summarizes the regression results corresponding to Equation (4). Only the coefficient of *Log (ForeignSum)* is negative and statistically significant among all the columns. In Column (1), we regress tunnelling on FIIs' site visits and HMT's site visits. The coefficient of *Log (ForeignSum)* is -0.038 and is significant at the 1% level, while the coefficient of *Log (HMTSum)* is not significant at all. This result demonstrates that site visits by FIIs are more effective than site visits by HMT institutional investors. In column (2), the coefficients of *Log (ForeignSum)* is -0.049 and is significant at the 1% level, while the coefficient of *Log (SinoForeignSum)* is not significant. Similarly, in column (3), the coefficient of *Log (ForeignSum)* is -0.036 and is significant at the 5% level, while the coefficient of *Log (MainlandSum)* is not significant. These results indicate that FIIs' site visits can significantly curb tunnelling, and Sino-foreign and mainland institutional investors' site visits nearly have no impact on tunnelling. In the light of above, site visits by FIIs are more effective than site visits by other institutional investors in reducing tunnelling problems, which is consistent with our Hypothesis 2.

Table 3: Comparison of the effectiveness of site visits by FIIs and other institutional investors

This table reports the joint effects of site visits by FIIs and other institutional investors on tunnelling. Column (1) includes both FIIs' site visits (*Log (ForeignSum)*) and HMT IIs' site visits (*Log (HMTSum)*). Column (2) regresses the dependent variable (*Tunnelling_OTHREC*) on both FIIs' site visits (*Log (Foreign-Sum)*) and Sino-foreign IIs' site visits (*Log (SinoForeignSum)*). In column (3), both site visits by FIIs (*Log (ForeignSum)*) and DIIs (*Log (MainlandSum)*) are included in the regression model. Firm-level and year-level fixed effects are included in all models. Standard errors are clustered by firm and the corresponding t-values are reported in parentheses. Variable definitions are provided in the Appendix B. All continuous variables are winsorized at the 5th and 95th percentiles. Significance at 1%, 5%, and 10% levels are indicated by ***, **, and *, respectively.

	Foreign & HMT	Foreign & Sino-Foreign	Foreign & Domestic
	(1) Tunnelling_OTHREC	(2) Tunnelling_OTHREC	(3) Tunnelling_OTHREC
Log (ForeignSum)	-0.038***	-0.049***	-0.036**
	(0.014)	(0.017)	(0.017)
Log (HMTSum)	0.011		
	(0.036)		
Log (SinoForeignSum)		0.016	
		(0.016)	
Log (MainlandSum)			-0.000
			(0.012)
N	11879	11879	11879
Adjusted R-squared	0.499	0.499	0.499
Controls	YES	YES	YES
FirmFE	YES	YES	YES
YearFE	YES	YES	YES

In the context of China, it is not appropriate to simply divide all institutions into FIIs and Domestic institutional investors (DIIs). HMT and Sino-foreign institutional investors are two types of investment shareholders from outside mainland China. These institutions may share similar characteristics with FIIs when monitoring the investee firms, such as independence from local businesses and holding diversified portfolios. Thus, we broaden the definition of FIIs by including HMT and Sino-foreign institutional investors and construct three independent variables: *Foreign_HMT*, *Foreign_SinoForeign*, and *Foreign_Combined. Foreign_HMT* is the aggregate number of site visits by both FIIs and Hong Kong, Macao, or Taiwan (HMT) institutional investors. *Foreign_SinoForeign* represents the total number of site visits by both FIIs and Sino-foreign institutional investors. *Foreign_Combined* denotes the total number of site visits by FIIs, Sino-foreign, and HMT institutional investors.

In Table 4, column (1) shows the impact of FIIs' site visits on tunnelling, the same as the baseline results (column (1) of Table 2). Columns (2) to (4) display the effect of site visits by both FIIs and HMT IIs; both FIIs and Sino-foreign IIs; and FIIs, HMT IIs, and Sino-foreign IIs, respectively. Compared to the results presented in column (1), the coefficient in column (2) shows only a slight decrease and remains significant at the 1% level. This is attributable to the low percentage of site visits conducted by HMT IIs, as illustrated in Figure 2. Consequently, the inclusion of HMT institutional investors' site visits does not result in a substantial reduction in the coefficient. However, in columns (3) and (4), both the magnitude and statistical significance of the coefficients decline. This suggests that the curbing effect of FIIs on tunnelling is weakened after including site visits by HMT and Sino-foreign institutional investors. The findings imply that HMT and Sino-foreign institutional investors play a less significant role in mitigating tunnelling compared to FIIs. The possible explanations are that HMT institutions with less expertise and Sino-foreign institutions with high monitoring costs may not be efficient in regulating management. This finding further supports our Hypothesis 2 that FIIs' site visits are more effective than site visits by other institutional investors in mitigating tunnelling. [6]

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[6]We also conduct separate regressions of tunnelling on HMT IIs' site visits, Sino-foreign IIs' site visits, and Mainland IIs' site visits, with the results available upon request.

Table 4: The combination of site visits by FIIs and other institutional investors

This table reports the impact of non-mainland institutional investors' site visits on tunnelling. Column (1) shows the curbing effect of FIIs' site visits on tunnelling. From column (2) to (4), we broaden the definition of FIIs by constructing three new explanatory variables: *Log (Foreign_HMT)*, *Log (Foreign_SinoForeign)*, and *Log (Foreign_Combined)*. Column (2) examines site visits by FIIs and HMT IIs; Column (3) includes site visits by FIIs and Sino-foreign IIs; Column (4) includes site visits by FIIs, HMT IIs, and Sino-foreign IIs. Firm-level and year-level fixed effects are included in all models. Standard errors are clustered by firm and the corresponding t-values are reported in parentheses. Significance at 1%, 5%, and 10% levels are indicated by ***, **, and *, respectively.

	(1)	(2)	(3)	(4)
	Tunnelling_OTHREC			
Log (ForeignSum)	-0.035***			
	(0.013)			
Log (Foreign_HMT)		-0.031***		
		(0.012)		
Log (Foreign_SinoForeign)			-0.017*	
			(0.010)	
Log (Foreign_Combined)				-0.019*
				(0.010)
N	11879	11879	11879	11879
Adjusted R-squared	0.499	0.499	0.498	0.499
Controls	YES	YES	YES	YES
FirmFE	YES	YES	YES	YES
YearFE	YES	YES	YES	YES

4.3 Effects of institutional shareholding and site visits on tunnelling

According to the existing literature (e.g., Yi et al., 2023; Bena et al., 2017), FIIs with large shareholdings have a higher incentive to monitor the firm and regulate the management than those who only hold small shareholdings. As shown in Figure 3, FIIs with large shareholdings may tend to visit firms in two distinct ways. One way is that these FIIs may ask more questions about the firm's decisions to conduct intensive monitoring during each visit. Alternatively, these FIIs could visit firms more frequently to keep an eye on management, thereby reducing opportunities for management to take action that undermines the value of minority shareholders.
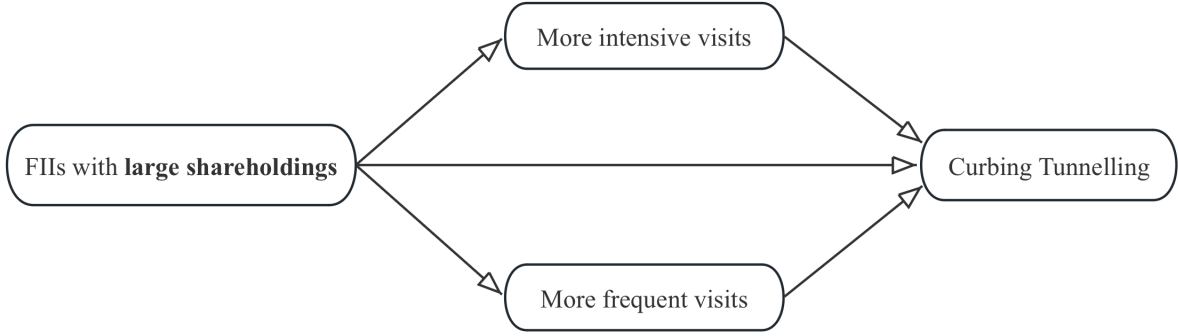

Figure 3: Foreign Shareholdings and Site Visits
This reasoning figure implies that FIIs with larger shareholdings can curb tunnelling by undertaking more intensive or frequent site visits compared to FIIs with smaller shareholdings.

We examine whether FIIs with large shareholdings would visit firms more intensively. We use the Two-stage Least Squares (2SLS) method and develop the following two-stage models:

$$\mathrm{Q}uestion\_\mathrm{L}ength_{i,t} = \alpha + \beta \mathrm{F}oreign\_Shareholdings_{i,t} + \mathrm{C}ontrols_{i,t} + \delta_t + \omega_i + \epsilon_{i,t} \qquad (5)$$

$$\mathrm{T}unnelling\_\mathrm{OTHREC}_{i,t} = \gamma + \lambda \mathrm{Q}ues\widehat{tion\_\mathrm{L}}ength_{i,t} + \mathrm{C}ontrols_{i,t} + \delta_t + \omega_i + \epsilon_{i,t} \qquad (6)$$

where $Question\_Length_{i,t}$ is defined as the total number of words of questions asked by institutional investors during site visits in firm i and year t. We use $Question\_Length$ as the proxy of the intensity of FIIs' site visits. In the first stage, we examine the relationship between the number of question words and foreign shareholdings in Equation (5). In the second stage, we regress tunnelling on the fitted value of $Question\_Length$ in Equation (6), which is extracted from the first stage regression.

Similarly, we examine whether FIIs with large shareholdings would visit firms more frequently

by applying a 2SLS analysis in Equation (7) and (8). In the first stage, we aim to verify the correlation between foreign shareholdings and the frequency of site visits by FIIs. In the second stage, we test whether the increased frequency of visits reduces tunnelling problems.

$$\mathrm{Log}(\mathrm{F}oreign\mathrm{F}requency)_{i,t} = \alpha + \beta \mathrm{F}oreign\_Shareholdings_{i,t} + \mathrm{C}ontrols_{i,t} + \delta_t + \omega_i + \epsilon_{i,t} \quad (7)$$

$$\mathrm{T}unnelling\_\mathrm{OTHREC}_{i,t} = \gamma + \lambda \mathrm{L}og(\widehat{\mathrm{F}oreign\mathrm{F}requency})_{i,t} + \mathrm{C}ontrols_{i,t} + \delta_t + \omega_i + \epsilon_{i,t} \quad (8)$$

Table 5 represents the regression results of Equation (5), (6), (7), and (8). Columns (1) and (2) show the 2SLS analysis for intensity tests of FIIs' site visits, while Columns (3) and (4) display the 2SLS analysis for frequency tests of FIIs' site visits. The result from the first-stage analysis (Column (1)) indicates that, as expected, the foreign shareholdings are significantly positively correlated with the total number of question words. As we can see from the results for the second-stage regression reported in column (2), the coefficient of the fitted value of *Question_Length* is significantly negative at the 1% level. These results indicate that FIIs with large shareholdings are more likely to ask more questions during each site visit, a way of intensive regulation, which is consistent with our Hypothesis 3a.

For the frequency test, in the first stage (Column (3)), we find that FIIs with large shareholdings are more likely to take more frequent visits. In the second stage (Column (4)), the fitted value of *Log (ForeignFrequency)* is negatively correlated with tunnelling through inter-corporate loans. This suggests that the increased frequency of FIIs' site visits is effective in mitigating the tunnelling problem, which is consistent with our Hypothesis 3b.

Overall, we find that both intensive visits and frequent visits are possible channels for FIIs with large shareholdings to exercise corporate monitoring. One natural question is whether these two channels are complements or substitutes. One possibility is that FIIs who visit intensively may reduce the frequency of their site visits, as such monitoring activities are both costly and time-consuming (Cao et al., 2022). Alternatively, asking more questions and obtaining more information during the visit may signal that these FIIs are more active in monitoring. Similarly, these FIIs may also be motivated to visit more frequently. We investigate this issue by dividing the entire sample into two groups along the median value of question length asked by investors (*Question_Length*) and estimate the effect separately. The results reported in Table 6 show that the curbing effect of

the frequency of FIIs' site visits on tunnelling is greater for the group of firms with longer question length, and the difference between these two groups is statistically significant ($\chi^2 = 9.4864$, p-value $= 0.0020$). This is consistent with the notion that intensive visits and frequent visits are complements of each other in terms of curbing tunnelling.

5 Addressing concern for endogeneity

One issue with drawing causal inferences based on the results in our baseline regressions is potential endogeneity. First, the reverse causality may exist that firms with more serious tunnelling problems are more likely to attract FIIs to visit. Due to the costs associated with site visits, FIIs may prioritize visiting firms with significant issues. Second, the decision to visit a firm may be influenced by unobservable factors related to tunnelling, leading to an omitted variable problem. Third, there could be a sample selection bias; for instance, firms that receive site visits from FIIs are typically larger in size. Therefore, we employ a multi-period Difference-in-Differences (DID) approach to address the above endogeneity concerns.

We first apply a propensity score matching (PSM) approach by comparing the tunnelling of the treatment and control firms. To select treatment and control firms, for each firm with FIIs' site visits (treatment group), we identify a matching firm that has never been visited but shares similar firm characteristics, including firm size, leverage ratio, the largest shareholdings, board independence, state-owned enterprise, CEO duality, foreign shareholdings and Tobin's Q. We apply a one-to-one nearest neighbour methodology with replacement with the caliper set to 0.01.[7] Our post-matched sample includes 1652 firm-year observations, 810 of which are treatment group and 842 are classified as control group. Given FIIs visit firms across different years, we employ a multi-period Difference-in-Difference (DiD) analysis, following the approaches of Beck et al. (2010), Cao et al. (2022), and Yi et al. (2023). We then estimate a multivariate regression using the following model[8]:

$$\mathrm{T}unnelling\_\mathrm{OTHREC}_{i,t} = \alpha + \beta \mathrm{F}oreign\mathrm{A}fter\mathrm{V}isit_{i,t} + \mathrm{C}ontrols_{i,t} + \mathrm{Y}ear\mathrm{FE} + \mathrm{F}irm\mathrm{FE} + \epsilon_{i,t} \quad (9)$$

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[7] In the matching exercise, we specify a caliper of 0.01 to 0.05. The results are robust for different chosen calipers. We report matching results with a caliper of 0.01.

[8] We add the matching weights to the regression, that is, if an observation is matched a higher number of times, then it has a larger weight in the estimation.

Table 5: Intensity and Frequency Tests: Foreign shareholdings and site visits

This table reports the regression results of the intensity and frequency tests by conducting the two-stage least squares (2SLS) analysis. Columns (1) and (2) illustrate the results for intensity test. In column (1), we use *Question_Length* as a proxy of visit intensity and *Question_Length* measures the word count of questions asked during site visits. In column (2), we include the predicted value from column (1) to re-examine the impact of *Question_Length* on tunnelling. Similarly, columns (3) and (4) show the results for the frequency test. In column (3), we regress the frequency of FIIs' site visits (*Log (ForeignFrequency)*) on FIIs' shareholdings (*Foreign_Shareholdings*). In column (4), we then examine the relationship between the predicted value of *Log (ForeignFrequency)* from column (3) and tunnelling. Firm-level and year-level fixed effects are included in all models. Standard errors are clustered by firm and the corresponding t-values are reported in parentheses. Significance at 1%, 5%, and 10% levels are indicated by ***, **, and *, respectively.

	Intensity Test		Frequency Test	
	(1) D.V.: Question_Length	(2) D.V.: Tunnelling_OTHREC	(3) D.V.: Log (ForeignFrequency)	(4) D.V.: Tunnelling_OTHREC
Foreign_Shareholdings	11.103***		0.673**	
	(2.466)		(0.329)	
$\widehat{Question\_Length}$		-0.155***		
		(0.050)		
$\widehat{Log\ (ForeignFrequency)}$				-2.552***
				(0.818)
Log (Leverage)	-0.571***	0.182***	-0.061***	0.114*
	(0.155)	(0.048)	(0.021)	(0.064)
Top1_Shareholdings	-0.003	-0.011***	0.001	-0.008***
	(0.008)	(0.002)	(0.001)	(0.002)
Board_Independence	0.024*	0.005	-0.003*	-0.007
	(0.014)	(0.004)	(0.002)	(0.004)
State-Owned_Enterprise	0.012	-0.031	-0.004	-0.044
	(0.151)	(0.036)	(0.020)	(0.036)
Firm_Age	0.209	-0.039	-0.007	-0.088**
	(0.199)	(0.044)	(0.026)	(0.043)
CEO_Duality	0.053	-0.005	0.016	0.028
	(0.137)	(0.033)	(0.018)	(0.035)
Firm_Size	1.650***	0.214**	0.320***	0.774***
	(0.119)	(0.091)	(0.016)	(0.268)
Tobin's_Q	0.633***	0.127***	0.135***	0.373***
	(0.062)	(0.036)	(0.008)	(0.113)
N	11805	12660	11879	12660
Adjusted R-squared	0.395	0.500	0.411	0.500
FirmFE	YES	YES	YES	YES
YearFE	YES	YES	YES	YES

Table 6: Intensity and Frequency: Complements or Substitutes?

This table reports the effects of the frequency of FIIs' site visits on tunnelling for firms with short and long question length, partitioned based on the median value of question length (*Question_Length*). Firm-level and year-level fixed effects are included in all models. Standard errors are clustered by firm and the corresponding t-values are reported in parentheses. Significance at 1%, 5%, and 10% levels are indicated by ***, **, and *, respectively.

	Longer *Question_Length*	Shorter *Question_Length*
	(1) Tunnelling_OTHREC	(2) Tunnelling OTHREC
Log (ForeignFrequency)	-0.057**	-0.002
	(0.024)	(0.038)
Log (Leverage)	0.125**	0.328***
	(0.054)	(0.061)
Top1_shareholdings	-0.010***	-0.009***
	(0.003)	(0.003)
Board_Independence	0.006	-0.006
	(0.005)	(0.006)
State-Owned Enterprise	0.014	-0.038
	(0.043)	(0.059)
Firm_Age	0.085	-0.059
	(0.051)	(0.077)
CEO_Duality	-0.016	0.073
	(0.068)	(0.077)
Firm_Size	-0.044	0.054
	(0.048)	(0.054)
Tobin's_Q	0.060**	0.024
	(0.021)	(0.025)
Foreign_Shareholdings	-0.015*	-0.015
	(0.008)	(0.011)
N	5663	5585
Adjusted R-squared	0.512	0.529
FirmFE	YES	YES
YearFE	YES	YES
Comparison coefficients of *Question_Length* on different groups: $\chi^2 = 9.4864$, *p*-value = 0.0020		

where $ForeignAfterVisit_{i,t}$ is a dummy variable that equals to 1 if the firm i in year t is **after** the first visit by FIIs. The coefficient on the $ForeignAfterVisit$ is the difference-in-difference (DID) estimator β, which attempts to capture the causal effect of site visits by FIIs on tunnelling. $Controls_{i,t}$ consists of a vector of firm-level control variables used in the baseline regression. We also include firm-fixed effects and year-fixed effects.

Panel A of Table 7 reports the effectiveness of our matching procedure. We find that prior to the match, compared with the non-visited firms, the visited firms tend to be larger, younger, more profitable, and with larger foreign shareholdings. These differences, however, disappear in attributes after the match. Our results suggest that our PSM procedure reduces differences between our treatment and control group. Panel B of Table 7 reports the DID estimation results. In column (1) of Panel A, the coefficient of $ForeignAfterVisit$ is -0.337 and statistically significant at the 10% level. Although the significance level of this coefficient is lower than that in baseline regression, the results are still consistent with the baseline regression results. We thus conclude that the effect of site visits by FIIs on tunnelling still exists after alleviating the impact of endogeneity.

Parallel trend assumption states that in the absence of site visits, there should be a similar pre-event trend between the treatment and the control. To ensure that the parallel trend assumption holds in our DID estimation, in columns (2) and (3) of Table 7 Panel B, we re-run our regressions by including two pre-event dummies $ForeignAfterVisit\_1$ and $ForeignAfterVisit\_2$ respectively, following the method of Yi et al. (2023). $ForeignAfterVisit\_1$ and $ForeignAfterVisit\_2$ are dummy variables equal to 1 for 2-, or 1-year before the listed firm is first visited by foreign institutional investors. The results in columns (2) and (3) of Panel B show that $ForeignAfterVisit\_1$ and $ForeignAfterVisit\_2$ are all insignificant in parallel trend tests. The insignificance of the pre-treatment trend suggests that the significant increase in differences only happens after the event occurs.

Furthermore, we allow the effect of site visits to vary over time by examining a six-year window surrounding the first site visits. Figure 4 shows no significant difference between treatment and control firms in tunnelling before the site visits. However, post-visit, firms with site visits exhibit a significant decrease in their propensity for tunnelling. This reduction is short-term, as the downward trend begins to dissipate in the third year after the site visit. According to the short-term effect of site visits by FIIs, FIIs may prefer to visit frequently to monitor the investee firms. This result also

Table 7: PSM-DID analysis

This table reports results in our PSM-DID specification. Panel A compares firm characteristics between the visited group and the non-visited group before matching and after matching. Panel B reports difference-in-difference (DID) estimations and tests for parallel trend assumption. In column (1), we use the sample after propensity score matching to examine the relationship between FIIs' site visits and tunnelling. To verify the parallel trend assumption, columns (2) and (3) use *ForeignAfterVisit_1* and *ForeignAfterVisit_2*, two dummy variables that equal to 1 for 2-, or 1-year before FIIs first visit the listed firm. All regressions include firm and year fixed effects. Standard errors are clustered by firm and the corresponding t-values are reported in parentheses. Variable definitions are provided in the Appendix B. All continuous variables are winsorized at the 5th and 95th percentiles. Significance at 1%, 5%, and 10% levels are indicated by ***, **, and *, respectively.

Panel A: Mean comparison before and after the PSM

| | Non-Visited Firm (Control) | | Visited Firm (Treatment) | | |
| | (1) | (2) | (3) | (4) | (5) |
	N	Mean	N	Mean	Difference (4)-(2)
Pre-match					
Log (Leverage)	2016	-1.03	15356	-1.047	0.002
BoardIndependence	2899	37.687	18442	37.61	-0.049
FirmAge	2016	11.222	15356	9.069	-1.422***
Top1_shareholdings	2899	33.466	18445	31.635	-2.102***
FirmSize	2910	21.377	18455	22.248	0.637***
Tobin's Q	2775	2.099	17867	2.211	-0.041*
ForeignShareholdings	1344	0.748	14347	1.536	0.688***
Post-match					
Log (Leverage)	842	-1.061	810	-1.09	-0.028
BoardIndependence	842	37.821	810	37.822	0.002
FirmAge	842	10.026	810	9.973	-0.053
Top1_shareholdings	842	34.116	810	33.994	-0.121
FirmSize	842	21.7	810	21.692	-0.007
Tobin's Q	842	2.094	810	2.083	-0.011
ForeignShareholdings	842	0.749	810	0.699	-0.05

Panel B: DID estimation

| | Post-matched sample | Parallel trend test | |
	(1) Tunnelling_OTHREC	(2) Tunnelling_OTHREC	(3) Tunnelling_OTHREC
ForeignAfterVisit	-0.337*		
	(0.191)		
ForeignAfterVisit_1		-0.340	
		(0.266)	
ForeignAfterVisit_2			0.219
			(0.289)
N	11536	11536	11536
Adjusted R-squared	0.728	0.728	0.728
Controls	YES	YES	YES
FirmFE	YES	YES	YES
YearFE	YES	YES	YES

aligns with our findings in Hypothesis 3b that FIIs with large shareholdings take more frequent visits to curb tunnelling.
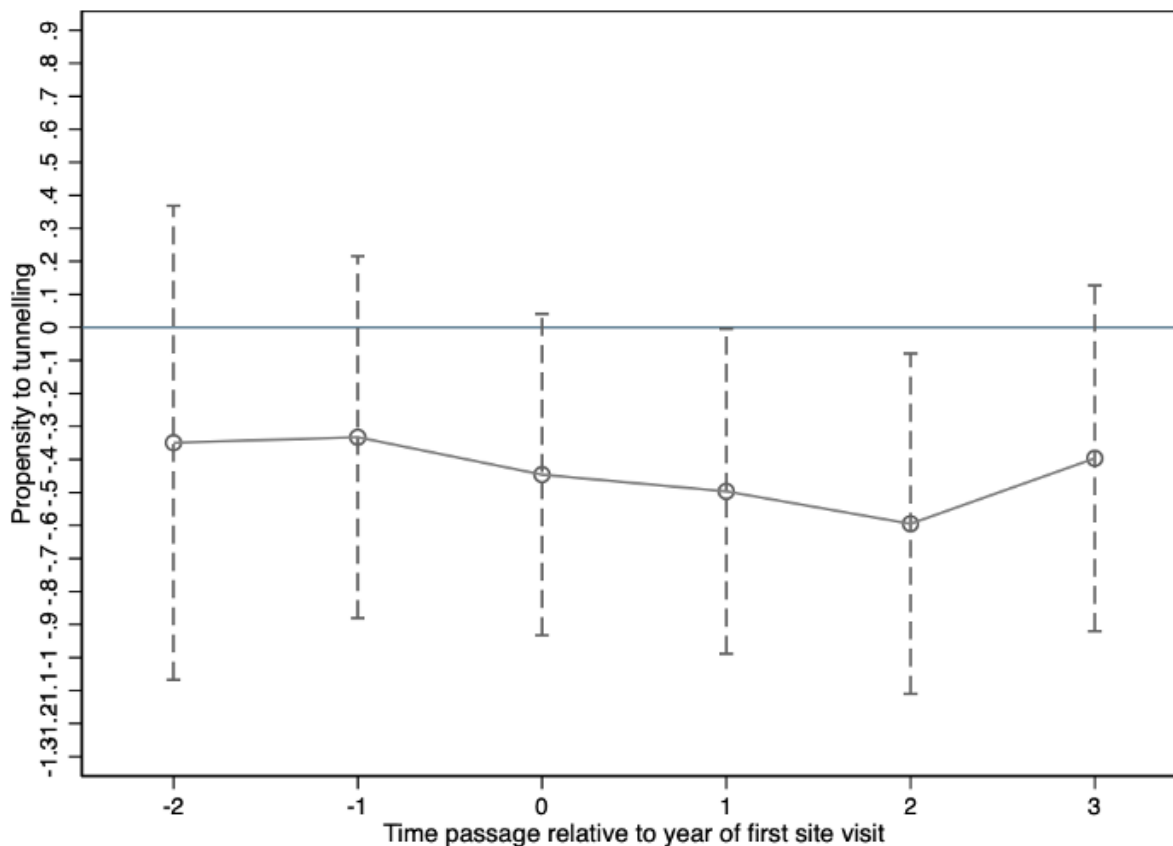

Figure 4: Parallel trend assumption

This figure shows the difference in tunnelling between firms visited by FIIs and firms without FIIs' site visits based on a post-match sample. The y-axis represents the difference in propensity to tunnelling. The x-axis represents year relative to first visit by FIIs.

6 Additional Test

To further examine the impact of FIIs' site visits, we consider that firms may respond differently when FIIs visit in groups or alone. When FIIs visit in groups, the presence of multiple investors may exert greater pressure on management, prompting more transparency and potentially leading to more immediate actions or disclosures by the firm. Additionally, group visits may foster collaborative questioning, resulting in a broader assessment of the firm's performance. On the other hand, when FIIs visit alone, the interaction tends to be more focused and personalized, enabling

more in-depth and targeted inquiries. In the context of one-on-one interaction, FIIs with expertise in monitoring may employ direct lines of questioning without the potential dilution of focus that might occur in a group setting, which could lead to more effective disciplining effects on corporate management.

Specifically, FIIs' visit in groups represents the FII visiting a firm with other institutional investors together in one site visit activity, while FIIs' visit alone means the FII visiting a firm on his own or with other FIIs. We investigate this issue by creating variables for FIIs visit in groups and alone. Columns (1) and (2) of Table 8 re-display the impact of FIIs visits across the whole sample, which is our baseline results. In columns (3) and (4) of Table 8, we regress the proxy of tunnelling on the sum and frequency of FIIs visit in groups respectively. In columns (5) and (6) of Table 8, we examine the relationship between the sum and frequency of FIIs visit alone and tunnelling. By comparing with the baseline results in columns (1) and (2), the results of FIIs visit in groups or alone are both less pronounced. However, the coefficients of FIIs visit in groups have larger magnitudes and stricter significance levels than those of FIIs visit alone. This result indicates FIIs visit in groups play a more efficient role in reducing tunnelling problems than FIIs visit alone. Mainland investors may explain special cases to FIIs who are not familiar with the local market, so the participation of mainland investors reduces FIIs' disadvantages of information asymmetry. In addition, visiting in groups creates a heterogeneous team of visitors, where investors with different expertise can analyse issues from different aspects and benefit from each other's strengths.

7 Conclusion

Previous studies have deeply examined how visiting investors benefit from corporate site visits by acquiring private and firm-specific information (e.g., Cheng et al., 2016 and Han et al., 2018). As a two-way interaction, recent studies find that institutional investors' site visits also exert an influence on visited firms in terms of stock price or corporate behaviour (Cao et al., 2022; Chen et al., 2022; Cheng et al., 2019; Jiang and Yuan, 2018). Therefore, this study extends this line of research by examining the disciplining role of foreign institutional investors' site visits in curbing tunnelling by controlling shareholders.

Taking advantage of the unique Chinese corporate site visit data, we find that FIIs' site visits are

Table 8: FIIs' visits in groups or alone

This table reports the regression results for the impact of FIIs' visits in groups or alone on tunnelling. The explanatory variables in columns (1) and (2) are the same as the baseline regression. In columns (3) and (4), we use the *Log (ForeignSum_Group)* and *Log (ForeignFreq_Group)* to measure the total sum and frequency of FIIs' site visits respectively, when FIIs visit the firm in groups. In columns (5) and (6), we include the *Log (ForeignSum_Alone)* and *Log (ForeignFreq_Alone* to measure the total sum and frequency of FIIs' site visits respectively, when FIIs visit the firm alone. All regressions include firm and year fixed effects. Standard errors are clustered by firm and the corresponding t-values are reported in parentheses. Significance at 1%, 5%, and 10% levels are indicated by ***, **, and *, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Tunnelling_OTHREC		Tunnelling_OTHREC		Tunnelling_OTHREC	
Log (ForeignSum)	-0.035***					
	(0.013)					
Log (ForeignFrequency)		-0.051***				
		(0.018)				
Log (ForeignSum_Group)			-0.028**			
			(0.012)			
Log (ForeignFreq_Group)				-0.045**		
				(0.018)		
Log (ForeignSum_Alone)					-0.042*	
					(0.023)	
Log (ForeignFreq_Alone)						-0.056
						(0.035)
N	11879	11879	11879	11879	11879	11879
Adjusted R-squared	0.499	0.499	0.499	0.499	0.499	0.499
Controls	YES	YES	YES	YES	YES	YES
FirmFE	YES	YES	YES	YES	YES	YES
YearFE	YES	YES	YES	YES	YES	YES

significantly negatively related to tunnelling problems. This effect becomes more pronounced when FIIs hold substantial shareholdings, as these investors are likely to conduct both more frequent and intensive visits. Additionally, our findings suggest that frequent and intensive visits complement each other in mitigating tunnelling issues. FIIs engaging in more frequent visits tend to undertake more intensive ones, thereby amplifying their impact on preventing expropriation. We further demonstrate that site visits by FIIs are more effective monitors than site visits by HMT, Sino-foreign, and mainland institutional investors. To alleviate the endogeneity problems, we apply a PSM approach and a multi-period Diff-in-Diff (DID) method to verify the causality between FIIs' site visits and tunnelling. The overall evidence highlights that site visits by FIIs play an external monitoring role, can curb managers' and control shareholders' tunnelling through inter-corporate loans and mitigate weak corporate governance.

This paper contributes to the literature on corporate governance in two ways. First, it directly links foreign institutional investors' site visit activities to tunnelling problems and enriches the literature on tunnelling, which has mainly focused on the channels and measures of tunnelling. Second, this paper extends the literature about corporate site visits by providing evidence that site visits are effective channels for monitoring firms, particularly site visits by foreign institutional investors.

References

Aggarwal, R., Erel, I., Ferreira, M., & Matos, P. (2011). Does governance travel around the world? Evidence from institutional investors$. *Journal of Financial Economics*, 28.

Al Mamun, M., Balachandran, B., & Duong, H. N. (2020). Powerful CEOs and stock price crash risk [Publisher: Elsevier]. *Journal of Corporate Finance*, *62*, 101582. Retrieved September 27, 2023, from https://www.sciencedirect.com/science/article/pii/S0929119920300262

An, Z., Chen, C., Li, D., & Yin, C. (2021). Foreign institutional ownership and the speed of leverage adjustment: International evidence [Publisher: Elsevier]. *Journal of Corporate Finance*, *68*, 101966.

Bae, K.-H., Kang, J.-K., & Kim, J.-M. (2002). Tunneling or Value Added? Evidence from Mergers by Korean Business Groups [_eprint: https://onlinelibrary.wiley.com/doi/pdf/10.1111/1540-6261.00510]. *The Journal of Finance*, *57*(6), 2695–2740. https://doi.org/10.1111/1540-6261.00510

Baek, J.-S., Kang, J.-K., & Lee, I. (2006). Business Groups and Tunneling: Evidence from Private Securities Offerings by Korean Chaebols. *The Journal of Finance*, *61*(5), 2415–2449. https://doi.org/10.1111/j.1540-6261.2006.01062.x

Beck, T., Levine, R., & Levkov, A. (2010). Big Bad Banks? The Winners and Losers from Bank Deregulation in the United States. *The Journal of Finance*, *65*(5), 1637–1667. https://doi.org/10.1111/j.1540-6261.2010.01589.x

Bena, J., Ferreira, M. A., Matos, P., & Pires, P. (2017). Are foreign investors locusts? The long-term effects of foreign institutional ownership [Publisher: Elsevier]. *Journal of Financial Economics*, *126*(1), 122–146.

Berkman, H., Cole, R. A., & Fu, L. J. (2009). Expropriation through loan guarantees to related parties: Evidence from China [Publisher: Elsevier]. *Journal of Banking & Finance*, *33*(1), 141–156.

Brav, A., Jiang, W. E. I., Partnoy, F., & Thomas, R. (2008). Hedge Fund Activism, Corporate Governance, and Firm Performance. *The Journal of finance (New York)*, *63*(4), 1729–1775. https://doi.org/10.1111/j.1540-6261.2008.01373.x

Brown, L. D., Call, A. C., Clement, M. B., & Sharp, N. Y. (2015). Inside the "Black Box" of Sell-Side Financial Analysts. *Journal of Accounting Research*, *53*(1), 1–47. https://doi.org/10.1111/1475-679X.12067

Cao, J., Wang, H., & Zhou, S. (2022). Soft activism and corporate dividend policy: Evidence from institutional investors site visits. *Journal of Corporate Finance*, *75*, 102221. https://doi.org/10.1016/j.jcorpfin.2022.102221

Cao, L., Du, Y., & Hansen, J. Ø. (2017). Foreign institutional investors and dividend policy: Evidence from China [Publisher: Elsevier]. *International Business Review*, *26*(5), 816–827. Retrieved October 10, 2023, from https://www.sciencedirect.com/science/article/pii/S0969593117300847

Chen, J., Goergen, M., Leung, W. S., & Song, W. (2019). CEO and director compensation, CEO turnover and institutional investors: Is there cronyism in the UK? [Publisher: Elsevier]. *Journal of Banking & Finance*, *103*, 18–35.

Chen, X., Cheng, C. S. A., Xie, J., & Yang, H. (2022). Private communication and management forecasts: Evidence from corporate site visits. *Corporate Governance: An International Review*, *30*(4), 482–497. https://doi.org/10.1111/corg.12419

Chen, Z., Du, J., Li, D., & Ouyang, R. (2013). Does foreign institutional ownership increase return volatility? Evidence from China. *Journal of Banking & Finance*, *37*(2), 660–669. https://doi.org/10.1016/j.jbankfin.2012.10.006

Cheng, Q., Du, F., Wang, B. Y., & Wang, X. (2019). Do Corporate Site Visits Impact Stock Prices? *Contemporary Accounting Research*, *36*(1), 359–388. https://doi.org/10.1111/1911-3846.12417

Cheng, Q., Du, F., Wang, X., & Wang, Y. (2016). Seeing is believing: Analysts' corporate site visits. *Review of Accounting Studies*, *21*(4), 1245–1286. https://doi.org/10.1007/s11142-016-9368-9

Cheng, X., Kong, D., Zheng, X., & Tang, Q. (2022). Do foreign investors crowd out sell-side analysts? Evidence from China. *Financial Review*, *57*(4), 815–834. https://doi.org/10.1111/fire.12307

Cheung, Y.-L., Rau, P. R., & Stouraitis, A. (2006). Tunneling, propping, and expropriation: Evidence from connected party transactions in Hong Kong [Publisher: Elsevier]. *Journal of Financial economics*, *82*(2), 343–386.

Chizema, A., Jiang, W., Kuo, J.-M., & Song, X. (2020). Mutual funds, tunneling and firm performance: Evidence from China [Publisher: Springer]. *Review of Quantitative Finance and Accounting*, *55*, 355–387.

Cornett, M. M., Marcus, A. J., Saunders, A., & Tehranian, H. (2007). The impact of institutional ownership on corporate operating performance [Publisher: Elsevier]. *Journal of Banking & Finance*, *31*(6), 1771–1794.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The law and economics of self-dealing [Publisher: Elsevier]. *Journal of financial economics*, *88*(3), 430–465.

Dyck, A., & Zingales, L. (2004). Private Benefits of Control: An International Comparison [_eprint: https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1540-6261.2004.00642.x]. *The Journal of Finance*, *59*(2), 537–600. https://doi.org/10.1111/j.1540-6261.2004.00642.x

Edmans, A., & Holderness, C. G. (2017). Blockholders: A survey of theory and evidence [Publisher: Elsevier]. *The handbook of the economics of corporate governance*, *1*, 541–636.

Faccio, M., Lang, L. H. P., & Young, L. (2001). Dividends and expropriation [Publisher: American Economic Association]. *American economic review*, *91*(1), 54–78. Retrieved March 29, 2024, from https://www.aeaweb.org/articles?id=10.1257/aer.91.1.54

Fernald, J., & Rogers, J. H. (2002). Puzzles in the Chinese stock market [Publisher: MIT Press 238 Main St., Suite 500, Cambridge, MA 02142-1046, USA journals …]. *Review of Economics and Statistics*, *84*(3), 416–432. Retrieved March 20, 2024, from https://direct.mit.edu/rest/article-abstract/84/3/416/57330

Ferreira, D., Ferreira, M. A., & Raposo, C. C. (2011). Board structure and price informativeness [Publisher: Elsevier]. *Journal of Financial economics*, *99*(3), 523–545.

Ferreira, M. A., & Matos, P. (2008). The colors of investors' money: The role of institutional investors around the world$. *Journal of Financial Economics*, 35.

Ge, W., Li, Z., Liu, Q., & McVay, S. (2021). Internal Control over Financial Reporting and Resource Extraction: Evidence from China*. *Contemporary Accounting Research*, *38*(2), 1274–1309. https://doi.org/10.1111/1911-3846.12653

Gillan, S., & Starks, L. T. (2003). Corporate governance, corporate ownership, and the role of institutional investors: A global perspective. *Weinberg Center for Corporate Governance Working Paper*, (2003-01).

Han, B., Kong, D., & Liu, S. (2018). Do Analysts Gain an Informational Advantage by Visiting Listed Companies? *Contemporary Accounting Research*, *35*(4), 1843–1867. https://doi.org/10.1111/1911-3846.12363

Hattari, R., & Rajan, R. S. (2011). How different are FDI and FPI Flows?: Distance and capital market integration [Publisher: JSTOR]. *Journal of Economic Integration*, 499–525. Retrieved November 14, 2023, from https://www.jstor.org/stable/41348798

Hoitash, U., Hoitash, R., & Bedard, J. C. (2009). Corporate governance and internal control over financial reporting: A comparison of regulatory regimes. *The accounting review*, *84*(3), 839–867. Retrieved March 18, 2024, from https://publications.aaahq.org/accounting-review/article-abstract/84/3/839/3020

Huang, W. (2016). Tunneling through related-party loan guarantees: Evidence from a quasi-experiment in China. *Review of Quantitative Finance and Accounting*, *47*(3), 857–884. https://doi.org/10.1007/s11156-015-0523-3

Huang, W., & Zhu, T. (2015). Foreign institutional investors and corporate governance in emerging markets: Evidence of a split-share structure reform in China [Publisher: Elsevier]. *Journal of Corporate Finance*, *32*, 312–326.

Huyghebaert, N., & Wang, L. (2012). Expropriation of Minority Investors in Chinese Listed Firms: The Role of Internal and External Corporate Governance Mechanisms. *Corporate Governance: An International Review*, *20*(3), 308–332. https://doi.org/10.1111/j.1467-8683.2012.00909.x

Jian, M., & Wong, T. J. (2010). Propping through related party transactions [Publisher: Springer]. *Review of Accounting Studies*, *15*, 70–105.

Jiang, G., Lee, C. M., & Yue, H. (2010). Tunneling through intercorporate loans: The China experience [Publisher: Elsevier]. *Journal of financial economics*, *98*(1), 1–20.

Jiang, G., Rao, P., & Yue, H. (2015). Tunneling through non-operational fund occupancy: An investigation based on officially identified activities [Publisher: Elsevier]. *Journal of Corporate*

Finance, *32*, 295–311. Retrieved November 14, 2023, from https://www.sciencedirect.com/science/article/pii/S0929119914001278

Jiang, X., & Yuan, Q. (2018). Institutional investors' corporate site visits and corporate innovation [Publisher: Elsevier]. *Journal of Corporate Finance*, *48*, 148–168. Retrieved November 6, 2023, from https://www.sciencedirect.com/science/article/pii/S0929119917301578

Jin, Y., Yan, M., Xi, Y., & Liu, C. (2016). Stock price synchronicity and stock price crash risk: Based on the mediating effect of herding behavior of QFII [Publisher: Emerald Group Publishing Limited]. *China Finance Review International*, *6*(3), 230–244. https://doi.org/10.1108/CFRI-05-2015-0047

Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *American Economic Review*, *90*(2), 22–27. https://doi.org/10.1257/aer.90.2.22

Johnstone, K., Li, C., & Rupley, K. H. (2011). Changes in Corporate Governance Associated with the Revelation of Internal Control Material Weaknesses and Their Subsequent Remediation*: Internal Control Material Weaknesses. *Contemporary Accounting Research*, *28*(1), 331–383. https://doi.org/10.1111/j.1911-3846.2010.01037.x

Kacperczyk, M., Sundaresan, S., & Wang, T. (2021). Do Foreign Institutional Investors Improve Price Efficiency? (W. Jiang, Ed.). *The Review of Financial Studies*, *34*(3), 1317–1367. https://doi.org/10.1093/rfs/hhaa076

Kim, J.-B., Wang, Z., & Zhang, L. (2016). CEO Overconfidence and Stock Price Crash Risk. *Contemporary Accounting Research*, *33*(4), 1720–1749. https://doi.org/10.1111/1911-3846.12217

Li, Y., Liu, J., Wang, H., & Wang, P. (2021). Stock market liberalization, foreign institutional investors, and informational efficiency of stock prices: Evidence from an emerging market [Publisher: Wiley Online Library]. *International Journal of Finance & Economics*, *26*(4), 5451–5471.

Liu, Q., & Lu, Z. ((2007). Corporate governance and earnings management in the Chinese listed companies: A tunneling perspective. *Journal of Corporate Finance*, *13*(5), 881–906. https://doi.org/10.1016/j.jcorpfin.2007.07.003

Liu, Q., & Tian, G. (2012). Controlling shareholder, expropriations and firm's leverage decision: Evidence from Chinese Non-tradable share reform [Publisher: Elsevier]. *Journal of Corpo-*

rate finance, *18*(4), 782–803. Retrieved November 8, 2023, from https://www.sciencedirect.com/science/article/pii/S0929119912000533

Marshall, A., Rao, S., Roy, P. P., & Thapa, C. (2022). Mandatory corporate social responsibility and foreign institutional investor preferences [Publisher: Elsevier]. *Journal of Corporate Finance*, *76*, 102261. Retrieved November 7, 2023, from https://www.sciencedirect.com/science/article/pii/S0929119922001043

Nenova, T. (2003). The value of corporate voting rights and control: A cross-country analysis. *Journal of Financial Economics*, *68*(3), 325–351. https://doi.org/10.1016/S0304-405X(03)00069-2

Shleifer, A., & Vishny, R. W. (1997). A Survey of Corporate Governance. *The Journal of Finance*, *52*(2), 737–783. https://doi.org/10.1111/j.1540-6261.1997.tb04820.x

Yi, Z., Xu, X., Wei, M., & Lin, B. (2023). Foreign institutional ownership externalities and supplier innovation [Publisher: Elsevier]. *Journal of Corporate Finance*, *80*, 102421.

Zhang, X., Yang, X., Strange, R., & Zhang, Q. (2017). Informed trading by foreign institutional investors as a constraint on tunneling: Evidence from China [Publisher: Wiley Online Library]. *Corporate Governance: An International Review*, *25*(4), 222–235.

Zingales, L. (1994). The Value of the Voting Right: A Study of the Milan Stock Exchange Experience. *The Review of Financial Studies*, *7*(1), 125–148. https://doi.org/10.1093/rfs/7.1.125

Appendices

A   Classifications of institutions

Based on the classifications from China National Bureau of Statistics (CNBS), we categorize all institutions into four types in the context of China. The following table shows the classifications of four institutional types and the corresponding definitions.

Institutional types	Classifications from CNBS	Definitions from CNBS
Foreign institutions	Foreign wholly owned institutions	Foreign wholly owned institutions refer to enterprises established in mainland China with full investment by one or more foreign investors by the Law of the People's Republic of China on Foreign-Funded Enterprises and related laws.
HK, Macao, or Taiwan (HMT) institutions	HK, Macao, or Taiwan (HMT) wholly owned institutions	HK, Macao, or Taiwan (HMT) wholly owned institutions refer to institutions established in the mainland with full investment from investors from HMT in accordance with the Law of the People's Republic of China on Foreign-funded Enterprises and other relevant laws and regulations.
Mainland Institutions	Domestic investors owned institutions	Enterprises established in mainland China with full investment by one or more domestic investors.

(The table continued.)

Institutional types	Classifications from CNBS	Definitions from CNBS
Sino-foreign invested institutions	Sino-Foreign Joint Ventures (JVs)	Sino-Foreign Joint Ventures refer to enterprises established by a foreign enterprise or a foreigner and a mainland Chinese enterprise in accordance with the provisions of the Law of the People's Republic of China on Sino-foreign Joint Ventures and related laws, with investment by the proportions stipulated in the contract and the sharing of profits and the sharing of risks.
	Foreign-invested partnerships (FIPs)	Foreign-invested partnerships refer to enterprises established by a foreign enterprise or a foreigner and a mainland Chinese enterprise in accordance with the provisions of the Law of the People's Republic of China on Chinese-Foreign Cooperative Enterprises and relevant laws and established on the basis of investment or provision of conditions in accordance with the terms of the cooperation contract and with the distribution of profits and the sharing of risks.
	Foreign-Invested Commercial Enterprises (FICEs)	Foreign-Invested Commercial Enterprises refer to joint-stock companies that have been approved by the Ministry of Foreign Trade and Economic Cooperation to be established in accordance with the relevant state regulations, and in which the proportion of foreign capital to the company's registered capital is 25% or more.

B Variable Definitions

Here are the variable definitions in this paper, including sets of dependent variables, site visits variables (the independent variable), and control variables.

Variables	Definitions
Dependent Variables	
Tunnelling_OTHREC (%)	Other receivables divided by total assets multiplied by one hundred in a firm of year t.
Site Visits variables	
Log (ForeignSum)	The natural logarithm of one plus the total number of FIIs in all site visits for each firm in year t.
Log (ForeignFrequency)	The natural logarithm of one plus the total number of site visits involving at least one FII for each firm in year t.
Dummy_Foreign	A dummy variable is set to one if the firm is visited by at least one FII in year t.
Log (SinoForeignSum)	The natural logarithm of one plus the total number of Sino-foreign institutional investors in all site visits for each firm in year t.
Log (SinoForeignFrequency)	The natural logarithm of one plus the total number of site visits involving at least one Sino-foreign institutional investor for each firm in year t.
Dummy_SinoForeign	A dummy variable is set to one if the firm is visited by at least one Sino-foreign institutional investor in year t.
Log (HMTSum)	The natural logarithm of one plus the total number of HMT institutional investors in all site visits for each firm in year t.
Log (HMTFrequency)	The natural logarithm of one plus the total number of site visits involving at least one HMT institutional investor for each firm in year t.
Dummy_HMT	A dummy variable is set to one if the firm is visited by at least one HMT institutional investor in year t.
Log (MainlandSum)	The natural logarithm of one plus the total number of mainland institutional investors in all site visits for each firm in year t.
Log (MainlandFrequency)	The natural logarithm of one plus the total number of site visits involving at least one mainland institutional investor for each firm in year t.
Dummy_Mainland	A dummy variable is set to one if the firm is visited by at least one mainland institutional investor in year t.

Variables	Definitions
Control Variables	
Log (Leverage)	The natural logarithm of leverage ratio, is calculated as the natural logarithm of total debts divided by total assets in year t.
Firm_Size	The logarithm of the total market value at the end of the year t.
Top1_Shareholdings (%)	The proportion of ownership held by the largest shareholder in year t.
Firm_Age	The number of years that a company is listed in year t.
CEO Duality	A dummy variable that equals one if the incumbent CEO and chairman of the board are the same person and zero otherwise in year t.
Board_Independence (%)	The number of independent directors is divided by the total number of directors sitting on the board in year t.
Stated-Owned_Enterprises	A dummy variable of state-owned enterprises (SOEs), which equals one if the state ultimately controls the listed firm, and zero otherwise in year t.
Tobin's_Q	Firm's Tobin's Q at the end of year t. Tobin's Q = (market value of equity at the end of year t + book value of debt) / book value of assets.
Foreign_Shareholdings	The proportion of ownership held by the foreign institutional investors at year-end scaled by one hundred in year t.

C Supplementary Results for Hypothesis 2

This table reports the effects of site visits by FIIs and other institutional investors on tunnelling. As the complementary results of Hypothesis 2, this table shows the results by using two alternative measures of site visits. Panel A reports the results by using frequency variables to measure site visits. Panel B reports the results by using dummy variables to measure site visits. In columns (1) and (2) of Panel A, only the coefficients of *Log (ForeignSum)* are negative and statistically significant. In column (3) of Panel A, both coefficients of *Log (ForeignFrequency)* and *Log (MainlandFrequency)* are insignificant; in contrast, in Table 2 the coefficient of *Log (ForeignFrequency)* is negative and significant. This indicates that the results in column (3) are mainly driven by the site visits by mainland institutional investors. In Panel B, the coefficients of *Log (ForeignSum)* are negative and statistically significant in each column, while the coefficients of site visits by other investors are insignificant. Overall, this table supports the argument in Hypothesis 2 that site visits by FIIs are more effective than those of other investors in terms of curbing tunnelling.

Panel A: Frequency variables as the measure of site visits			
	Foreign & HMT	Foreign & Sino-Foreign	Foreign & Mainland
	(1) Tunnelling_OTHREC	(2) Tunnelling_OTHREC	(3) Tunnelling_OTHREC
Log (ForeignFrequency)	-0.051***	-0.067***	-0.032
	(0.020)	(0.024)	(0.023)
Log (HMTFrequency)	-0.000		
	(0.039)		
Log (SinoForeignFrequency)		0.023	
		(0.023)	
Log (MainlandFrequency)			-0.028
			(0.022)
N	11879	11879	11879
Adjusted R-squared	0.499	0.499	0.499
Controls	YES	YES	YES
FirmFE	YES	YES	YES
YearFE	YES	YES	YES

Panel B: Dummy variables as the measure of site visits			
	Foreign & HMT	Foreign & Sino-Foreign	Foreign & Mainland
	(1) Tunnelling_OTHREC	(2) Tunnelling_OTHREC	(3) Tunnelling_OTHREC
Dummy_Foreign	-0.042*	-0.053**	-0.040**
	(0.024)	(0.026)	(0.024)
Dummy_HMT	-0.012		
	(0.031)		
Dummy_SinoForeign		0.021	
		(0.027)	
Dummy_Mainland			-0.034
			(0.041)
N	11879	11879	11879
Adjusted R-squared	0.499	0.499	0.499
Controls	YES	YES	YES
FirmFE	YES	YES	YES
YearFE	YES	YES	YES