

# **Division Managers' Private Information and Capital Investment: Exploiting External Social Connections as an Information Source**

## **Abstract**

We examine the relationship between division-level information and capital investment in conglomerates, exploiting the external social connections of division managers (DMs) as an information source. We find that DMs who are socially connected with the CEOs of industry peers undertake more investment than those without such connections. The documented effect is stronger when (i) the DM's information source is more useful, proxied by connected external firms having superior performance, high growth, large market shares, or experienced CEOs; (ii) the industry environment is more uncertain and less transparent; and (iii) the DM is more influential within the conglomerate. Along with increased investment, connected divisions display greater responsiveness to investment opportunities and subsequently realize higher profitability. Overall, division-level information helps improve capital investment decisions despite exacerbated information asymmetries.

**Key words:** Conglomerate firm, Division manager, Social connection, Capital investment, Investment efficiency

**JEL codes:** G30, G34, M40

## 1. Introduction

Our study examines the relationship between division-level information and capital investment in conglomerate firms. Division managers (DMs) are among the most important players in corporate investment, being deeply involved from the initiation and evaluation of investment proposals through project implementation. A question of interest is how private information at the division level affects capital allocation within the conglomerate. On the one hand, the headquarters relies on DMs to identify opportunities and develop investment plans, which necessarily requires DMs to be knowledgeable and well informed. On the other hand, DMs are prone to taking advantage of information for personal gain, often at the expense of investors and other stakeholders; in this regard, private information exacerbates agency problems and creates inefficiencies (Hope and Thomas 2008; Duchin and Sosyura 2013). While there is much theoretical research on how DMs' private information affects capital allocation, empirical work remains limited. This study aims to provide fresh evidence on the impact of divisional information on capital investment decisions.

Direct measurement of divisional information is challenging. We resort to an indirect measure by exploiting DMs' external social connections as an information source. Following prior research (e.g., Cohen, Frazzini, and Malloy 2008, 2010; Duchin and Sosyura 2013), we focus on social connections stemming from DMs' prior educational or professional experiences, which are unrelated to the current circumstances in which decisions are being made.<sup>1</sup> Extensive research in sociology, economics, and other fields establishes that social connections facilitate information flow. Further, reflecting the importance of information as a resource, studies find that financial

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<sup>1</sup> Human beings as social animals rely on one another to survive and succeed, and networks are formed among people with common traits and interests. Robison, Schmid, and Siles (2002) explain that people with common backgrounds are sympathetic towards one another and give preferential treatment to those in their circle.

analysts and mutual fund managers deliver superior performance when they are socially connected with their client firms' managers (Cohen et al. 2008, 2010), while connections to bank lending officers help businesses lower borrowing costs (Engelberg, Gao, and Parsons 2012).

We set the scope of DMs' connections to those they have with the CEOs of peer firms operating in a similar business environment. Company CEOs are at the forefront of the business world and a key force driving industry development and innovations. Connections to these business leaders help DMs stay abreast of the changing business landscape and emerging trends, which can yield considerable benefits (Larcker, So, and Wang 2013; Faleye, Kovacs, and Venkateswaran 2014; El-Khatib, Fogel, and Jandik 2015). In recognizing the informational role of social connections, we maintain that DMs can benefit from the expert views and perspectives of connected CEOs even without the latter revealing proprietary information such as their own firms' trade secrets.<sup>2</sup>

Motivated by theoretical and field studies, we posit that DMs with external social connections—who possess unique information advantages—undertake more capital investment than do nonconnected DMs for the following reasons. First, information reduces uncertainty and increases the accuracy of business forecasting, which lowers the hurdle rate for project selection. Second, being better informed, connected DMs generate more business ideas and hence invest more. Supporting this view, Graham, Harvey, and Puri (2015) report from field research that conglomerates often delegate capital investment decisions to divisions which are endowed with local information. Third, self-interested DMs may selectively report information to the

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<sup>2</sup> Developing investment ideas is a complex process which involves gathering information on all aspects of a business. There are various ways in which DMs can learn from the CEOs of peer firms and industry leaders, and some comments, perspectives, or information of a general nature can be inspirational to a particular listener. People attend business forums and speeches to get inspired and stay current, without necessarily receiving information of a proprietary nature. Our study does not assume that CEOs actually divulge their own investment plans to connected DMs.

headquarters by, for example, emphasizing the favorable factors of an investment proposal while suppressing the unfavorable factors. DMs who possess more information advantages vis-à-vis the headquarters have greater reporting discretion. However, a well-known theoretical result is that despite having incentives to misrepresent information, divisions proposing more favorable projects also get more capital allocation; this holds under a variety of control mechanisms such as winner picking (Stein 1997), capital rationing (Harris and Raviv 1996; Zhang 1997), and optimal contracting (Bernado, Cai, and Luo 2004).

We construct measures of social connections from three types of past experience: education, employment, and involvement with nonprofit organizations (e.g., Cohen et al. 2008, 2010; Engelberg et al. 2012; Duchin and Sosyura 2013). We assemble a sample of corporate divisions from conglomerates among S&P 1500 firms, with necessary data retrieved from the Compustat segment files, ExecuComp, and BoardEx databases. Our sample comprises 6,869 division-years from 478 unique conglomerates over the period 2000–2018, in which 57.4% have a DM with external social connections in accordance with our definition.

Our results show that after controlling for division and conglomerate characteristics that are known to affect capital investment, as well as conglomerate and year fixed effects, divisions run by DMs with external connections (hereafter connected divisions, connected DMs) undertake more capital investment than divisions run by DMs with no such external connections (hereafter nonconnected divisions, nonconnected DMs). On average, connected divisions make additional investment that equals 0.9% of division assets, which amounts to 19.1% of the average capital investment of nonconnected divisions.

To mitigate the concern that the documented effect is caused by the inherent characteristics of the DM (such as their ability), the division, or the conglomerate, we also perform tests using a

changes regression designed around exogenous CEO turnovers of peer firms in the division's industry while the DM remains in office. In this case, changes in the DM's social connections arise from events external to the division or the conglomerate. Reinforcing our main tests, we find that divisional capital investment increases (decreases) where there are additions to (terminations of) the DM's social connections caused by external CEO turnovers. This test helps alleviate the endogeneity concerns.

Next we explore the heterogeneous effects of DMs' social connections on divisional capital investment across divisions. The first dimension we consider is the usefulness of the information sourced via DMs' social connections. We posit that external CEOs are able to impart more valuable information either when their firms occupy a more prominent position in the industry or when they have accumulated more professional experience. In these situations, the CEO would better understand the industry environment and prospects and therefore be able to share more useful insights. Using profitability, market power, and firm growth to proxy for a firm's industry position, and a CEO's tenure to proxy for experience, we find results consistent with our expectations.

The second dimension we explore is industry uncertainty (proxied by earnings volatility and growth at the industry level) and information opacity (proxied by analyst coverage and prevalence of management earnings guidance in the industry). Bayes' theorem suggests that in an environment with high uncertainty, information is more valuable and so has a greater impact on decisions. Also, when the business environment is more opaque and hence the headquarters has less knowledge of divisional operations, a conglomerate is more likely to decentralize investment decisions. Supporting our predictions, we find that DMs' external connections have a greater effect on divisional capital investment when the division's industry environment is more uncertain or less transparent.

The third dimension we explore is the DM's influence within the conglomerate. Following Duchin and Sosyura (2013), we differentiate DMs based on (i) their official positions in the conglomerate in terms of whether they serve on the board or hold a "senior" or "executive" position in the conglomerate, and (ii) whether they have social ties with the headquarters CEO. Our results confirm that DMs' external connections have a greater impact on the level of divisional investment when DMs are able to exert more influence through either their official capacity or informal internal ties.

Having demonstrated that DMs' social connections affect the level of divisional capital investment, we then examine the consequences for investment efficiency. On the one hand, firms can solicit and harness DMs' information to improve resource allocation. On the other hand, more private information for DMs vis-à-vis the headquarters may exacerbate agency problems, leading to undesirable behavior such as empire building (e.g., Rajan, Servaes, and Zingales 2000; Scharfstein and Stein 2000; Wulf 2009; Duchin and Sosyura 2013; Glaser, Lopez-De-Silanes, and Sautner 2013; Gao, Wong, Xia, and Yu 2021). Our analysis indicates that connected divisions' investment is more responsive to investment opportunities than that of nonconnected divisions and that connected divisions subsequently achieve higher profitability. Overall, our evidence is consistent with the view that information from DMs' external connections facilitates capital allocation and improves investment efficiency. It does not support the alternative view that investment efficiency is hampered due to connected DMs possessing greater bargaining power or having more employment opportunities.

We conduct robustness tests to show that our conclusions hold after controlling for external social connections between CEOs of different firms in the same industry. Interestingly, we find no positive impact on divisional investment that is related to cross-firm social connections at the CEO

level. It is perhaps noteworthy that in such a situation, the connected parties have equal professional ranks, unlike the connections that we focus on in this study (between one firm's DM and another firm's CEO).

Our paper extends the literature on how information asymmetry within conglomerates affects capital allocation. Prior research demonstrates that keeping headquarters managers informed of their divisions' operations helps to mitigate agency conflicts. Studies have used several settings to gauge the informedness of the headquarters, such as changes in segment reporting standards (Hope and Thomas 2008), availability of formal and informal communication channels in the organization (Duchin and Sosyura 2013), and varying information environments surrounding divisional operations (Shroff et al. 2014). The prediction from these settings is relatively unambiguous: that is, holding a division's information constant, more information at the headquarters level (i.e., less information asymmetry) helps reduce agency conflicts and improve investment efficiency. In contrast, our study focuses on the role of information at the division level. Such information enables DMs to discover more opportunities, but at the same time exacerbates the information disadvantage of the headquarters. Our evidence suggests that the benefit of DMs having access to information outweighs the cost, ultimately enhancing divisions' investment efficiency. One practical implication of our findings is that firms should incentivize local managers to actively seek information and get them directly involved in divisional investment decisions.

Our study also extends the literature on the economic role of social ties in several ways. First, we find that external social connections have a positive effect on the scale and profitability of divisional capital investment—the primary source of value creation. This complements existing research that has demonstrated the benefits of (external) social ties for mutual fund managers, financial analysts, auditors, business managers seeking bank loans, and executives who receive

compensation contracts from the board. Second, our study also complements Duchin and Sosyura (2013), who find that DMs' internal social connections with the headquarters CEO increase divisional capital investment. Conceptually, whereas such internal connections facilitate communication and hence reduce information asymmetry between local managers and the headquarters CEO, DMs' external social connections increase such information asymmetry. Empirically, we show that the effect of DMs' external connections on divisional investment is distinct from that arising from their internal connections with the CEO—which may either facilitate information flow or engender favoritism (Duchin and Sosyura 2013). Yet, the presence of internal connections does enhance the informational role of external connections, suggesting some degree of complementarity between DMs' external and internal connections. Third, our evidence suggests that not all social ties are equally important. While DMs' connections to external CEOs help to improve capital investment decisions, similar effects do not arise from the headquarters CEO's connections with peer CEOs. This raises the distinct possibility that information exchange between connected individuals is dependent on their (relative) status. We leave the issue for future investigation.

The remainder of the paper is organized as follows: Section 2 reviews related research and develops our hypotheses. Section 3 describes our sample and research design. Sections 4 and 5 present our main empirical results, with additional tests in Sections 6 and 7. Section 8 concludes.

## **2. Related Literature and Hypothesis Development**

### ***2.1 Capital investment decisions in multi-division firms***

Capital investment decisions are central to corporate value creation (Modigliani and Miller 1958; Miller and Modigliani 1961). In a multi-division firm, allocation of capital resources is hindered by information asymmetry that exists between the headquarters and divisions. Due to

agency conflicts, first-best allocation as prescribed by the net present value rule is precluded, and inefficiencies invariably arise in the form of under- or overinvestment (Harris and Raviv 1996). Early research explains how internal capital markets function differently from external markets, and internal practices display unique features such as winner picking and power struggles that distort resource allocation (Stein 1997; Rajan et al. 2000).

In theoretical models of multi-segment firms, DMs possess local information but may not reveal it truthfully to the headquarters. This gives rise to mechanisms designed to limit DMs' self-serving behavior. Zhang (1997) shows how capital rationing, in the form of a predetermined fixed budget, can be used along with performance-based compensation to reduce DMs' private rents. Bernardo, Cai, and Luo (2004) demonstrate that the importance of performance pay, relative to a fixed salary, depends on divisions' reported project quality. Wulf (2009) investigates the sensitivity of divisional investment to investment opportunities when the headquarters allocates capital based on both private signals from divisions and public information. These studies show that DMs' information is deemed valuable for capital budgeting decisions, and that more capital is allocated to divisions proposing more promising projects.

Complementing theoretical research, Graham et al. (2015) survey senior executives to understand corporate decision-making when information is decentralized. They find that capital investment decisions are often delegated to DMs, more so than other corporate activities such as financing and mergers and acquisitions, because investment decisions are heavily dependent on local knowledge and expertise. Decision delegation is more likely in situations where the headquarters devotes less attention to or has less information about divisions and thus has to rely more on local knowledge. Delegation can be a preferred arrangement relative to internal communication and reporting, as information is often "soft" and difficult to verify (Petersen 2004).

Graham et al.'s (2015) finding suggests that soft information that DMs receive from informal channels such as social connections can be of crucial importance for decentralized capital investment decisions.

On the other hand, empirical evidence points to the pitfalls of granting too much capital-investment-decision freedom to DMs, who are prone to taking advantage of private information for personal gain, which exacerbates investment inefficiency. For example, Hope and Thomas (2008) find that when the headquarters CEO has limited access to information about divisions' operations, DMs are more likely to engage in empire building (excessive investment), which leads to deteriorating performance. Conversely, Duchin and Sosyura (2013) show that when internal communication is smoother, proxied by the headquarters' distance to divisions or the social ties between DMs and the headquarters CEO, the firm invests more efficiently and its value increases. Relatedly, Shroff et al. (2014) find that the transparency of the external information environment surrounding foreign subsidiaries helps mitigate agency problems within multinational firms. In focusing on the headquarters' knowledge of divisional operations, these studies do not directly speak to how private information at the division level affects capital investment, which entails costs as well as benefits.

## ***2.2 DMs' social connections and capital investment: The main hypothesis***

Social connections stem from individuals' shared backgrounds and experiences, reflecting similarities in interests, values, and other traits. Connections increase opportunities for interaction and information exchange, while similarities in backgrounds and aspirations foster mutual understanding, sympathy, and trust (Robison et al. 2002; Cross, Cross, and Parker 2004). Research from multiple disciplines supports the view that social connections and networks facilitate information flow and resource sharing (Cohen et al. 2008, 2010; Gu, Li, Yang, and Li 2019).

Closer to our study, a large literature shows that social connections of corporate managers entail consequences in areas of executive compensation, financial policy, internal governance, audit outcomes, and corporate financing and acquisitions.<sup>3</sup> Social connections also engender mutual learning and sharing of ideas among connected parties, which helps to improve firm performance (Haunschild and Beckman 1998; Larcker et al. 2013; Fracassi 2017).

In this study, we focus on social connections that DMs have established in the past with the CEOs of industry peer firms as the source of DMs' local information. Building on prior research,<sup>4</sup> we posit that connected DMs have a unique advantage in accessing information over nonconnected DMs. CEOs who lead business organizations are at the forefront of the business world. Collectively, their visions and strategic decisions shape industry directions. Their insights and know-how are highly valuable for business development and growth. Thus, being connected to these industry leaders helps DMs stay abreast of the latest trends and get inspired by new opportunities. Our study, however, does not presume that CEOs reveal proprietary information when they interact with socially connected people. Capital investment decisions require an all-rounded view of business outlooks that takes into account numerous aspects of business operations. Information and opinions of a non-firm-specific nature (say, regarding general technological or market changes) which might not seem particularly inspiring in general can be important when put in a specific context. It is also noteworthy that in complex and uncertain situations, it is not just fresh information that is useful, but also opinions or views reiterated by different people that can serve to confirm one's judgement and hence be valuable.

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<sup>3</sup> See Hochberg, Ljungqvist, and Lu (2007); Hwang and Kim (2009); Cai and Sevilir (2012); Engelberg, Gao, and Parsons (2012); Fracassi and Tate (2012); Shue (2013); Ishii and Xuan (2014); Schmidt (2015); Guan, Su, Wu, and Yang (2016) and Fracassi (2017).

<sup>4</sup> Supporting our argument, studies have shown that firms operating in similar business environments have correlated performance, suggesting that one firm's activities convey information about other firms (Baginski 1987; Kim, Lacin, and Park 2008; Durnev and Mangen 2009).

On the premise that connected DMs are more informed about business opportunities, we hypothesize that they undertake more capital investment than nonconnected DMs. There are several reasons for this hypothesized relationship, which are categorized into two types below. The first type emphasizes the role of information in improving decision-making. In general, information reduces uncertainty and enables managers to develop more accurate business forecasts. This lowers the threshold rate of return in project selection. Further, connected DMs would better understand where and how to grow businesses, thus expanding the investment opportunity set. Evidence from field surveys shows that capital investment decisions are often delegated to divisions which possess in-depth knowledge of the local environment (Graham et al. 2015). Insofar as connected DMs are better informed, we expect more delegation of decision power and hence more freedom for them to invest.

While the above information-related reasons are expected to improve efficiency, the second type focuses on agency problems associated with information asymmetry within the conglomerate,<sup>5</sup> which would reduce efficiency. When the headquarters relies on internal reporting for resource allocation, DMs are likely to report information opportunistically. For example, they might emphasize the favorable factors of a project while they downplay the unfavorable ones. DMs with more information advantages gain a greater edge in their strategic play vis-à-vis the headquarters. However, despite the biased reporting incentives of DMs, theoretical studies predict that the headquarters allocates more capital to divisions with more profitable investment proposals (e.g., Stein 1997; Harris and Raviv 1996; Zhang 1997; Bernado et al. 2004; Inderst and Laux 2005).

There are other well-known agency problems beyond those studied in existing theoretical models. For example, where compensation contracts are incomplete or ineffective and internal

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<sup>5</sup> Chen, Martin, Roychowdhury, Wang, and Billett (2018) explore the effect of internal information asymmetry on external communication.

control is loose, DMs may undertake excessive investment (i.e., empire building) to gain more power, prestige, and monetary benefit. Such inefficient behavior would be exacerbated when DMs have more information advantages vis-à-vis the headquarters (e.g., Hope and Thomas 2008; Shroff et al. 2014), as would be the case for connected DMs.

Connected DMs might also receive more resources because they have more external employment opportunities (Liu 2014) and so have a higher reservation utility. Finally, it is conceivable that the headquarters might allocate more capital to connected DMs to build rapport or give them preferential treatment. These situations are likely to entail inefficiency as well. The preceding discussion leads to our first hypothesis.

**Hypothesis 1.** *Ceteris paribus, connected divisions undertake more capital investment than nonconnected divisions.*

In what follows, we push our arguments further and explore situations in which social connections play a more prominent role. While our study mainly examines divisions' investment levels, in a later section we also consider investment efficiency, which helps shed light on the reasons for increased investment.

### ***2.3 Cross-sectional variation in the impact of social connections***

Bayes' theorem suggests that an information signal has a greater decision impact when the signal is more informative (precise) and when the decision-maker faces larger prior uncertainty. Accordingly, our subsequent hypotheses speak to how the effect of DMs' social connections depends on the usefulness of the information source and the uncertainty of the industry environment. In addition, we expect the DM's status and influence in the conglomerate to matter.

#### ***2.3.1 Usefulness of the information source***

The usefulness of the information that DMs obtain depends on the status of the connected external firms. Firms that are powerful and successful in an industry naturally have more influence

on industry practices and trends, and their CEOs typically have a better understanding of the industry dynamic. We thus expect that DMs who are connected to these CEOs receive more useful information. Likewise, CEOs' experience should matter. Those having served in the post for a longer time are expected to have deeper insights and be able to provide more useful advice. Therefore, we posit that connections to more experienced CEOs would render DMs a greater informational advantage.

**Hypothesis 2.** *The effect of DMs' social connections on capital investment is stronger (i) when connected external firms are more influential in the industry, and (ii) when connected external CEOs are more experienced.*

### *2.3.2 The industry information environment for divisional operations*

The industry environment surrounding a division's operations is another important factor. In a volatile business environment, DMs face greater challenges in identifying and evaluating investment opportunities. In such situations, having access to information would be more valuable; consequently, we predict that DMs' social connections have a stronger effect on divisional investment.

Relatedly, when divisions are surrounded by an opaque information environment, the headquarters faces more difficulties in monitoring and controlling divisional activities (Hope and Thomas 2008; Shroff et al. 2014). This is when more decision power is delegated to local managers (Graham et al. 2015). Under these circumstances, we expect that social connections have a greater effect.

**Hypothesis 3.** *The effect of DMs' social connections on capital investment is stronger for divisions (i) operating in a volatile industry, and (ii) surrounded by an opaque information environment.*

### 2.3.3 *The DM's influence within the conglomerate*

The extent to which DMs' information is incorporated into divisional capital investment decisions depends on DMs' ability to communicate their information and exert influence. We expect that DMs holding a senior position in the conglomerate carry more weight and have more influence in the decision process, and consequently are more likely to sway resource allocation. In addition, we conjecture that a DM's internal social ties with the headquarters CEO should make a difference. As Duchin and Sosyura (2013) show, informal relations between the CEO and DMs help facilitate information flow, which gives DMs more opportunities to influence capital allocation decisions.

**Hypothesis 4.** *The effect of DMs' social connections on capital investment is stronger (i) when the DM holds a senior position in the conglomerate, and (ii) when the DM has social ties with the headquarters CEO.*

## 3. The Sample and Research Design

### 3.1 *The Sample*

Our sample comprises the divisions of S&P 1500 firms for the period 2000–2018. We use the Compustat segment dataset to identify select these firms' divisions and manually match the names of the segments (divisions) of a conglomerate with the job titles of individuals who serve as DMs of the conglomerate (such as “divisional president,” “manager,” “executive vice president,” “senior vice president,” etc.) that are extracted from the ExecuComp and BoardEx datasets. Our sample starts from the year 2000 because BoardEx has limited coverage prior to that. Following Duchin and Sosyura (2013), we exclude firms in financial services (SIC codes 6000–6999) and utility industries (SIC codes 4900–4949), as well as divisions operating in these industries, because their capital investments are constrained by special regulations. We also exclude firms whose

segment financial data are unavailable in the Compustat segment files and divisions with missing financial data for regression analyses.

We obtain individual DMs' backgrounds in education, professional experience, and other activities from BoardEx. We then identify a DM's social connections with peer firms' CEOs in the division's two-digit SIC industry based on whether they previously attended the same colleges, worked at the same companies, served on the same boards, or served in the same nonprofit organizations (Cohen et al. 2008, 2010; Hwang and Kim 2009; Engelberg et al. 2012; Fracassi and Tate 2012; Duchin and Sosyura 2013; Schmidt 2015). Our final sample consists of 6,869 division-years from 478 unique conglomerates, in which 3,940 (57.4%) have a DM connected to at least one peer firm's CEO. Table 1 describes the sample selection process.<sup>6</sup>

### 3.2 Research design

We use the following regression model to test the effect of DMs' social connections on divisional capital investment:

$$\begin{aligned}
 SEG\_CAPX_{i,j,t} = & \alpha + \beta DM\_TIE_{i,j,t} + \gamma_1 SEG\_SIZE_{i,j,t-1} + \gamma_2 SEG\_ROA_{i,j,t-1} + \\
 & \gamma_3 FIRM\_SIZE_{j,t-1} + \gamma_4 FIRM\_CASH_{j,t-1} + \gamma_5 FIRM\_ROA_{j,t-1} + \\
 & \gamma_6 FIRM\_LEV_{j,t-1} + \gamma_7 FIRM\_SG_{j,t-1} + Firm\_indicator_j + \\
 & Year\_indicator_t + \varepsilon_{i,j,t},
 \end{aligned} \tag{1}$$

where  $SEG\_CAPX_{i,j,t}$  is the capital investment for division  $i$  of conglomerate  $j$  in year  $t$ , scaled by the division's total assets at the beginning of the year.  $DM\_TIE$  is a dummy variable equal to 1 if a DM is socially connected with one or more CEOs of peer firms in the two-digit SIC industry of the division, and 0 otherwise.<sup>7</sup>

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<sup>6</sup> A caveat of Compustat segment data is that they cover only divisions that have revenues, operating profits, or identifiable assets of at least 10% of the consolidated amount of the reporting firm (SFAS No. 131), which limits the interpretation of findings.

<sup>7</sup> Using the dummy variable  $DM\_TIE$  facilitates the interpretation of results as its coefficient directly captures the differential investment between connected and nonconnected divisions. We obtain the same qualitative effect by alternatively using the percentage of peer firm CEOs to whom a DM is socially connected (not tabulated). Our results are also robust to using either three- or four-digit SIC codes to define a division's industry peer firms (not tabulated).

Following prior studies (e.g., Shin and Stulz 1998, Rajan et al. 2000; Duchin and Sosyura 2013; Cho 2015), we control for the characteristics of the division, including division size (*SEG\_SIZE*) and profitability (*SEG\_ROA*), and those of the conglomerate, including conglomerate size (*FIRM\_SIZE*), cash flow (*FIRM\_CASH*), profitability (*FIRM\_ROA*), financial leverage (*FIRM\_LEV*), and growth (*FIRM\_SG*). We include conglomerate and year fixed effects to control for time-invariant firm-level factors, as well as year-specific factors. Standard errors of the coefficient estimates are clustered at the division level. The Appendix provides detailed definitions of the variables.

### ***3.3 Descriptive statistics of variables***

Panel A of Table 2 reports the summary statistics of the main variables for our analyses. For the overall sample, the mean (median) of *SEG\_CAPX* is 5.0% (3.4%). The average capital investment of connected divisions is 5.2% of division assets, which is significantly higher than that of nonconnected divisions (4.7%). Connected divisions are significantly larger (*SEG\_SIZE*) and more profitable (*SEG\_ROA*) than nonconnected divisions. The conglomerates of connected divisions tend to be larger, hold more cash, and report lower sales growth than do the conglomerates of nonconnected divisions.

Panel B of Table 2 reports the pairwise correlations between the variables. Divisional capital investment (*SEG\_CAPX*) is positively correlated with the indicator for DMs' social connections (*DM\_TIE*) (correlation = 0.045,  $p < 0.01$ ), and division profitability (*SEG\_ROA*) (0.132,  $p < 0.01$ ). It is also significantly positively and significantly correlated with the conglomerate's cash flow (*FIRM\_CASH*), profitability (*FIRM\_ROA*), and growth (*FIRM\_SG*), while negatively correlated with conglomerate size (*FIRM\_SIZE*) and financial leverage (*FIRM\_LEV*).

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Lastly, we also conduct robustness tests using various alternative measures of DMs' social connections, which are discussed in Section 7.1.

## 4. Testing the Effect of Social Connections on Capital Investment (Hypothesis 1)

### 4.1 Main results

Table 3 reports the results on the extent to which DMs' external social connections affect the level of divisional capital investment. Consistent with Hypothesis 1, the coefficient on *DM\_TIE* is significantly positive (0.009,  $t = 4.42$ ), after controlling for the aforementioned characteristics of the division and the conglomerate, as well as conglomerate and year fixed effects. This indicates that, ceteris paribus, connected divisions' investment (scaled by total division assets) is 0.9 percentage point higher than that of nonconnected divisions, which amounts to 19.1 percent (0.9% / 0.047) of the mean capital investment of nonconnected divisions.

The control variables also display significant effects in the expected directions. The coefficients on *SEG\_ROA* and *FIRM\_ROA* are significantly positive, suggesting that divisional capital investment increases with the profitability of both the division and the conglomerate. Divisional investment also increases with the conglomerate's cash holdings and sales growth, as evidenced by the positive coefficients on *FIRM\_CASH* and *FIRM\_SG*. On the other hand, divisional investment is negatively associated with the conglomerate's financial leverage (*FIRM\_LEV*).

### 4.2 Evidence from exogenous CEO turnovers of peer firms

To mitigate the concern that our results are spuriously caused by omitted variables such as DMs' ability or some factors pertaining to the division or the conglomerate, we exploit CEO turnovers in the division's industry peer firms while the DM remains in office. Such turnovers alter a DM's social connectedness for reasons unrelated to the DM, the division, or the conglomerate, and therefore can be viewed as exogenous to the divisional capital investment decision being examined.

We first identify 3,104 division-year observations in which DMs' industry peers experience CEO turnovers in the year.<sup>8</sup> These turnovers result in either the creation of a DM's new connections or termination of existing ones: for 312 (294) division-years the DM experiences a net increase (a net decrease) in social connections, while for 2,498 division-years the DM experiences no net change in connections. We code the dummy variable *DM\_TIE\_INC* (*DM\_TIE\_DEC*) as 1 if a DM experiences a net increase (decrease) in connections due to peer firms' CEO turnovers in a year, and 0 if a DM experiences no net change in connections in a year despite CEO turnovers in peer firms. We convert the regression model in Equation (1) into a change specification whereby we use *DM\_TIE\_INC* and *DM\_TIE\_DEC* (instead of *DM\_TIE*) as the main variables to explain the change in divisional capital investment (*ΔSEG\_CAPX*).

The results are presented in Table 4. The coefficient on *DM\_TIE\_INC* is significantly positive, while that on *DM\_TIE\_DEC* is significantly negative. This confirms our expectation that when there is a net increase (a net decrease) in DMs' social connectedness due to exogenous turnovers of peer firms' CEOs, the division correspondingly undergoes an increase (a decrease) in capital investment. These findings suggest that the documented effect of DMs' social connections is unlikely to be driven by the inherent characteristics of the DM, the division, or the conglomerate firm.<sup>9</sup>

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<sup>8</sup> We excluded those division-years for which changes in a DM's connections were caused by add-in or drop-out of the division's peer firms in the sample.

<sup>9</sup> Relatedly, untabulated tests show that our main results are robust to controlling for DMs' ability proxied by whether a DM is a board member, a senior manager, or a top-paid executive, or attended a prestigious college. Interestingly, we find none of these ability measures are significantly associated with divisional capital investment (beyond the other variables in the model).

## 5. Exploring the Cross-sectional Effects of Social Connections

In this section, we explore variations in the role of DMs' social connections along the following dimensions: (i) the usefulness of the information source, (ii) the uncertainty of the division's industry environment, and (iii) the DM's ability to exert influence in the conglomerate.

### 5.1 Results on Hypothesis 2: Usefulness of the information source

Hypothesis 2 predicts that the effect of DMs' social connections on divisional capital investments is stronger when DMs receive more useful information, which should be the case when connected peer firms are more influential in the industry or their CEOs are more experienced. We use a peer firm's profitability, growth, and market share in the industry to proxy for its influence, and the CEO's tenure in the post to measure experience.

Specifically, we classify a peer firm as having high influence if its profitability, sales growth, market share, or CEO's tenure in the position ranks in the top quartile in the industry, and 0 otherwise. Then, we code a dummy variable *DM\_TIE\_HIGH* that equals 1 if a DM is connected to one or more high-influence peer firms, and 0 otherwise. We then add this dummy variable to the main specification in Equation (1). The coefficient on *DM\_TIE\_HIGH* captures the incremental effect of DMs connected to high-influence peer firms in the industry versus DMs having external connections in general. Hypothesis 2 predicts a positive coefficient on *DM\_TIE\_HIGH*.

Table 5 reports the regression results. In column (1), we use profitability performance as measured by return on assets (ROA) to gauge peer firms' influence. The coefficients on *DM\_TIE\_HIGH* and *DM\_TIE* are both positive and significant (coefficient = 0.004,  $t = 2.34$ , and 0.006,  $t = 3.12$ , respectively). Thus, consistent with Hypothesis 2, while DMs' social connections result in more capital investment in general, the effect is particularly strong when the DM is

connected to firms with superior profitability in the industry.

The results from columns (2) and (3) convey a similar message, where we gauge a peer firm's influence based on its sales growth and market share in the industry. The coefficients on *DM\_TIE\_HIGH* and *DM\_TIE* are both significantly positive.

Finally, in column (4), we measure peer firms' influence in terms of CEOs' experience. Again, we obtain positive and statistically significant coefficients on both *DM\_TIE\_HIGH* and *DM\_TIE*, indicating that DMs' connections to more experienced peer CEOs are particularly useful. Overall, our findings lend support to Hypothesis 2, suggesting that DMs' private information has a stronger impact on divisional capital investment when their source of information is more useful.

### ***5.2 Results on Hypothesis 3: Role of the industry information environment***

Hypothesis 3 contends that the effect of DMs' social connections on divisional capital investment is stronger when the general environment of the division's industry is more uncertain or more opaque. We use two proxies for industry uncertainty: earnings volatility and sales growth. To determine industry-level earnings volatility for a division, we calculate the earnings volatility over the past five years for each of the peer firms in the two-digit SIC industry of the division. Then, for each year, we classify industries into high- and low-volatility groups based on the annual median value of earnings volatility in an industry. We use the same procedure to classify industries into groups of high and low sales growth.

Panel A of Table 6 reports the regression results for the subsamples with high- and low-industry earnings volatility (columns 1 and 2). While the coefficient on *DM\_TIE* is positive and significant for both subsamples, its magnitude is larger for the subsample with high earnings volatility (coefficient = 0.010,  $t = 3.71$ ) than that with low earnings volatility (0.005,  $t = 1.93$ ), with the difference being significant at the 0.10 level. The results for the sales growth partitions

(columns 3 and 4) convey a similar message: the coefficient on  $DM\_TIE$  is larger for the subsample with high sales growth (coefficient = 0.011,  $t = 3.56$ ) than that with low sales growth (0.05,  $t = 2.33$ ), with the difference being significant at the 0.05 level. Overall, the results in Panel A suggest that while DMs' social connections enhance divisional capital investment in general, the effect is more pronounced when the business environment in which the division operates is more uncertain.

We similarly examine the role of industry information opacity, proxied by (i) the average number of analysts following firms in the division's industry, and (ii) the percentage of peer firms in the industry that issue management guidance. We then split the sample based on the annual median values of these two variables. The results reported in Panel B of Table 6 show that while the coefficient on  $DM\_TIE$  is positive and significant across both partitions, the magnitude of the coefficient is significantly larger for industries with a low versus a high analyst following at the 0.10 level, and for industries with a low versus a high proportion of firms issuing management guidance at the 0.01 level.

Overall, the results in Table 6 are consistent with Hypothesis 3, suggesting that information received from external social connections has a greater impact on divisional capital investment in industries featured with higher business uncertainty or lower information transparency.

### ***5.3 Results on Hypothesis 4: The DM's ability to exert influence***

DMs are delegated with the authority to make capital investments or provide input in the decision process. The extent to which their information is incorporated into decisions depends on their ability to exert influence within the conglomerate. Duchin and Sosyura (2013) consider both formal and informal ways through which DMs may exert influence. Following their study, we define three dummy variables, which respectively take a value of 1 if a DM is a board member, his/her position in the conglomerate is "senior" or "executive," or s/he is among the five highest-

paid executives in the conglomerate, and 0 otherwise. We then construct a composite measure, *SENIOR*, that aggregates these three dummy variables. To test Hypothesis 4, we classify DMs as holding (not holding) a senior position if *SENIOR* is equal to 2 or above (below 2).

The results are reported in columns (1) and (2) of Table 7. While the coefficient on *DM\_TIE* remains positive and significant both for DMs holding senior positions and for those not holding senior positions, the magnitude is larger for the former (coefficient = 0.016,  $t = 3.67$ ) than for the latter group (0.008,  $t = 3.71$ ), with the difference being statistically significant at the 0.10 level. These results suggest that when DMs have greater influence in the conglomerate because of their formal positions, they are able to make greater use of the information from external connections to influence capital allocation in the conglomerate.

Next we consider DMs' internal social connections as an informal channel through which they exert influence. Analogous to the definition of external connections, we identify DMs' social connections with the headquarters CEO based on their prior education, work experience, and engagement in nonprofit organizations. We code a dummy variable *DM\_TIE\_CEO* that equals 1 if a DM is socially connected with the headquarters CEO, and 0 otherwise. We then examine the differential effect of DMs' external connections on divisional capital investment for the subgroups with and without such internal connections. The results presented in columns (3) and (4) in Table 7 show that while the coefficient on *DM\_TIE* is significantly positive for both subsamples, the magnitude of the coefficient is larger for DMs with internal connections (coefficient = 0.015,  $t = 2.51$ ) than for those without (0.006,  $t = 2.83$ ), with the difference being significant at the 0.05 level. These results suggest complementarity in the roles that a DM's external and internal connections have in influencing divisional capital investment.

Overall, our results are consistent with Hypothesis 4, which predicts that the effect of external social connections is greater when DMs have more influence in the conglomerate, either through holding a more senior position that enables them to participate in the decision process or through having informal social ties with the headquarters CEO.

## **6. Consequences of DMs' Social Connections for Investment Efficiency**

Having demonstrated the effect of social connections on the level of divisional capital investment, we now examine divisions' investment sensitivity and subsequent profitability. The analyses here help to shed light on the mechanism through which DMs' social connections affect divisional capital investment.

### ***6.1 Investment sensitivity***

If the above results are attributable to the information role of social connections that leads to improved capital allocation, we would expect that DMs' external social connections are associated with enhanced investment efficiency. Alternatively, if increased divisional investment is the result of DMs' exploiting private information for personal gain (e.g., empire building), or of the headquarters CEO allocating more capital to connected DMs to build rapport or as a form of favoritism (Duchin and Sosyura 2013), we would expect that DMs' external social connections lead to a decline in investment efficiency.

Prior studies interpret a high degree of investment sensitivity (responsiveness) to growth opportunities as indicative of investment efficiency and thus as desirable (Wurgler 2000; Bekaert, Harvey, Lundblad, and Siegel 2007; Bushman, Piotroski, and Smith 2011; Badertscher, Shroff, and White 2013). Following the literature (e.g., Billett and Mauer 2003; Ozbas and Scharfstein 2010; Duchin and Sosyura 2013), we examine the sensitivity of a division's investment to growth opportunities. Due to the lack of financial data for calculating division-specific growth

opportunities, we use a division's industry-level growth measure,  $IND\_SG$ , which is calculated as the average sales growth among all peer firms in the division's two-digit SIC industry (Duchin and Sosyura 2013). We expand the baseline model in Equation (1) by including  $IND\_SG$  and  $DM\_TIE \times IND\_SG$ . As our regression controls for conglomerate fixed effects, the coefficient on  $DM\_TIE \times IND\_SG$  captures the differential responsiveness to growth opportunities between connected and nonconnected divisions in a conglomerate.

Table 8 presents the regression results. The coefficient on  $DM\_TIE \times IND\_SG$  is positive and significant at the 0.10 level (coefficient = 0.017,  $t = 1.92$ ), consistent with the view that DMs' external social connections serve an informational role that improves investment efficiency.

## **6.2 Future divisional performance**

Next we examine the future performance of connected divisions relative to nonconnected divisions. If DMs' external connections help improve capital allocation and make investment decisions more responsive to growth opportunities (as shown above), we expect these divisions to achieve superior future performance. In Table 9, we observe a positive and significant coefficient on  $DM\_TIE$  in explaining divisional (industry-adjusted) profitability in subsequent years  $t+1$  and  $t+2$ , denoted as  $DM\_adjROA_{t+1}$  and  $DM\_adjROA_{t+2}$ , respectively. These results echo the above finding of greater investment responsiveness and confirm that social connections enable divisions to improve business performance.

Taken together, our results support the view that firms are able to harness the information from DMs' external social connections to improve resource allocation. The results, however, are inconsistent with the alternative explanations whereby connected divisions are allocated more capital because the headquarters CEO wishes to build rapport with them or is doing them a favor

(Duchin and Sosyura 2013), or because connected DMs have more employment opportunities (Liu 2014) and offering resources is a way to retain them.

## 7. Additional Analyses and Robustness Checks

In this section, we perform additional robustness checks by looking into the specific aspects of DMs' backgrounds that give rise to social connections and considering DMs' connections beyond the CEOs of peer firms. We also address the concern that the documented effect of DMs' external connections might be induced by other layers of social connections that exist across firms.

### 7.1 *Alternative measures and specifications*

Our measure of social connections (*DM\_TIE*) combines three types of common backgrounds: education, employment, and affiliation with nonprofit organizations. To see whether each of the three types has a distinctive effect, we disaggregate *DM\_TIE* into three dummy variables to separately indicate educational ties (*DM\_TIE\_EDU*), employment ties (*DM\_TIE\_EMP*), or nonprofit organization ties (*DM\_TIE\_NFP*). The results in columns (1) to (3) of Panel A of Table 10 show that the coefficients on all three dummy variables are positive and significant in explaining divisional capital investment.

DMs might have connections with other top executives of industry peers beyond these firms' CEOs. Those connections can be similarly valuable because other executives likely also possess relevant knowledge and expertise in their industry. Defined analogously to *DM\_TIE*, we code *DM\_TIE\_OTHER* as a dummy variable that equals 1 for the existence of DMs' connections with other top executives, and 0 otherwise. We then run regressions using Equation (1) after replacing *DM\_TIE* with *DM\_TIE\_OTHER*. In column (1) we focus on DMs' connections with the CFOs of peer firms, while in column (2) we consider a comprehensive measure of connections that includes CEOs, CFOs, COOs, chairmen, and presidents of peer firms (the "C-suites"). Panel B of Table 10

shows that the coefficient on *DM\_TIE\_OTHER* is significantly positive for both versions of *DM\_TIE\_OTHER*, indicating that our inferences are generalizable.

### **7.2 Do headquarters CEO's social connections confound our results?**

It is plausible that the conglomerate CEO obtains information from external connections that is useful for investment decisions. To rule out the possibility that our results actually reflect connections at the CEO level, we augment the regression model in Equation (1) by including the dummy variable *CEO\_TIE\_SegIND*, which equals 1 if the headquarters CEO is socially connected with the CEOs of peer firms in the division's industry, and 0 otherwise. In some situations, however, the division operates in a different industry from the conglomerate's primary industry. Accordingly, we construct the second indicator variable, *CEO\_TIE\_FirmIND*, which equals 1 if the headquarters CEO is socially connected with peer CEOs in the conglomerate's primary industry, and 0 otherwise.

Column (1) of Table 11 shows that the coefficient on *DM\_TIE* remains positive and significant (0.009,  $t = 4.41$ ) after controlling for *CEO\_TIE\_SegIND*. In column (2), the coefficient on *DM\_TIE* is also positive and significant (0.009,  $t = 4.44$ ) with *CEO\_TIE\_FirmIND* as a control variable in the regression. Indeed, the magnitudes of the coefficient on *DM\_TIE* in both columns remain almost unchanged from that in Table 3. In the meantime, neither the coefficient on *CEO\_TIE\_SegIND* nor that on *CEO\_TIE\_FirmIND* is statistically significant. Thus, the effect of DMs' external social connections is not confounded by headquarters CEO's external social connections.

To summarize, DMs' social connections with external CEOs appear to have a unique informational role in influencing capital investment, as no similar effect is detected for connections between the CEOs of different firms. This suggests that information flow along social connections

might depend on the relative professional ranks of connected parties—the information provider versus the receiver.<sup>10</sup>

## 8. Conclusions

We examine how capital investment decisions in conglomerates are influenced by the private information that DMs obtain from their external social connections. It is well established that social connections facilitate information flow and resource exchange, which yields tangible benefits in financial market investment, business financing, and other situations. We hypothesize that DMs who are connected with the CEOs of industry peers through shared educational or professional backgrounds gain a distinct information advantage over nonconnected managers and consequently attract more resources from the headquarters. Consistent with this hypothesis, after controlling for division and conglomerate characteristics, we find that connected divisions undertake more capital investment. This relation is found both in the level analyses using a panel data approach and the change analyses using a restricted sample where DMs' social connectedness is exogenously increased or decreased due to CEO turnovers in industry peer firms. The documented effect is not attributable to DMs' ability or experience, and similar effects extend to DMs' connections to the CFOs and other top executives of industry peer firms.

Cross-sectional analyses reveal that the effect of DMs' social connections on divisional capital investment is more prominent when the information source to which the DM is connected is more useful, when the industry environment of the division is more uncertain or less transparent, and when the DM can exert greater influence in the conglomerate. Along with an increased

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<sup>10</sup> Further analysis (untabulated) indicates that the insignificant effect of *CEO\_TIE* in explaining divisional investment is not likely due to the headquarters CEO not paying sufficient attention to individual divisions. After differentiating a firm's divisions based on their sales contribution to the whole firm, we find that the effect of *CEO\_TIE* on divisional investment remains insignificant regardless of the proportional importance of the divisions concerned.

investment level, connected divisions display investment behavior that is more responsive to growth opportunities, and subsequently achieve higher profitability. Our findings suggest that the benefit that divisional information brings through external connections exceeds the cost arising from the exacerbated information asymmetry. Our evidence does not support the view that increased capital allocation to connected divisions results from the headquarters CEO wishing to build rapport with the DMs or otherwise providing them with preferential treatment. This study highlights the importance of incentivizing DMs to seek business information and making them actively participate in the capital allocation process.

Our paper is among the first to show that external social connections benefit capital investment decisions, which are a primary source of value creation in an economy. At the same time, we discover that not all external connections are equally beneficial. While connections between DMs and external CEOs seem to facilitate capital investment, we do not find similar benefits accrued to connections between CEOs across firms. Future research might further explore how the identities of connected parties matter in facilitating information flow.

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## Appendix

### Variable definitions.

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<i>Dependent variables</i>	
$SEG\_CAPX_{ijt}$	= The capital expenditure for division $i$ of conglomerate $j$ in year $t$ , scaled by the total assets of the division at the beginning of the year.
<i>Key independent variables</i>	
$DM\_TIE_{ijt}$	= An indicator variable that equals one if a DM has social ties with any CEOs of peer firms in the same two-digit SIC industry as the division. The presence of social ties is identified as the DM and a peer CEO having attended the same college, previously worked in the same company as employees or board members, or served in the same nonprofit organizations.
$DM\_TIE\_INC_{ijt}(DM\_TIE\_DEC_{ijt})$	= An indicator variable that equals one if CEO turnovers in peer firms in the division's two-digit SIC industry result in a net increase (decrease) of the total number of the DM's social ties with peer CEOs, and 0 otherwise.
<i>Variables for cross-sectional analyses</i>	
$DM\_TIE\_HIGH_{ijt}$	= An indicator variable that equals one if a DM is socially connected to any of the high-influence peer CEOs, and 0 otherwise. High-influence CEOs refer to those whose firms are ranked in the top quartile in the two-digit SIC industry of the division in terms of ROA, sales growth, market shares, or length of CEO tenure.
<i>Variables for efficiency tests</i>	
$IND\_SG_{ijt}$	= The average industry sales growth across all firms (excluding the conglomerate of the division) in the division's two-digit SIC industry.
$DM\_adjROA_{ijt+1(t+2)}$	= A division's industry-adjusted $ROA$ in year $t+1$ ( $t+2$ ), calculated as the division's $ROA$ minus the average $ROA$ across all other conglomerates' divisions in the same two-digit SIC industry.
<i>Variables for additional tests</i>	
$DM\_TIE\_EDU_{ijt}$	= An indicator variable that equals one if a DM has social ties via educational institutions with any CEOs of peer firms in the division's two-digit SIC industry, and 0 otherwise.
$DM\_TIE\_EMP_{ijt}$	= An indicator variable that equals one if a DM has social ties via prior employment with any CEOs of peer firms in the division's two-digit SIC industry, and 0 otherwise.

$DM\_TIE\_NFP_{ijt}$	= An indicator variable that equals one if a DM has social ties via his/her services in nonprofit organizations with any CEOs of peer firms in the division's two-digit SIC industry, and 0 otherwise.
$DM\_TIE\_OTHER_{ijt}$	= An indicator variable that equals one if a DM has social ties with any CFOs (or with at least one of the C-Suit members including the CEOs, CFOs, COOs, board chairmen, and presidents) of peer firms in the division's two-digit SIC industry, and 0 otherwise.
$CEO\_TIE\_SegIND_{ijt}$	= An indicator variable that equals one if headquarters CEO is socially connected to any CEOs of peer firms in the division's two-digit SIC industry, and 0 otherwise.
$CEO\_TIE\_FirmIND_{ijt}$	= An indicator that equals one if the headquarters CEO is socially connected to any CEOs of peer firms in the conglomerate's two-digit SIC industry, and 0 otherwise.

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*Control variables for division i of conglomerate j at year t-1*

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$SEG\_SIZE_{ijt-1}$	= Nature logarithm of total division assets ( <i>IAS</i> ) at the beginning of the fiscal year.
$SEG\_ROA_{ijt-1}$	= The divisional operating income ( <i>OPS</i> ) scaled by total divisional assets ( <i>IAS</i> ) at the beginning of the fiscal year.
$FIRM\_SIZE_{jt-1}$	= Natural logarithm of conglomerate's total assets ( <i>AT</i> ) at the beginning of the fiscal year.
$FIRM\_CASH_{jt-1}$	= The conglomerate's cash and marketable securities ( <i>CHE</i> ) scaled by the conglomerate's total assets ( <i>AT</i> ) at the beginning of the fiscal year.
$FIRM\_ROA_{jt-1}$	= The conglomerate's return on assets, measured as the ratio of earnings before interest and taxes ( <i>EBIT</i> ) to total assets ( <i>AT</i> ) at the beginning of the fiscal year.
$FIRM\_LEV_{jt-1}$	= The conglomerate's leverage, measured as the ratio of the book value of total debts to the book value of total assets at the beginning of the fiscal year.
$FIRM\_SG_{jt-1}$	= The conglomerate's sales growth, measured as sales changes divided by last year's sales.

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**Table 1****Sample selection.**

This table reports the sample selection procedure for our sample of divisional managers from 2000-2018.

Data screening steps	Number of conglomerate -division- years	Number of unique conglomerate -divisions	Number of unique conglomerates
Executives serving as divisional managers in Execucomp and BoardEx databases for S&P1500 firms during 2000-2018, after matching the division names in their job titles with the names of the business segments extracted from Compustat Segment database.	20,226	7,159	1,526
<i>Exclude:</i>			
a) Divisions or conglomerates operating in the financial firms and utility industries (SIC codes 6000-6999 and 4900-4949).	(4,734)	(1,576)	(350)
b) Divisions with missing values for the division and conglomerate variables required in the regression analyses.	(6,361)	(2,184)	(458)
c) Conglomerates with less than two reporting divisions in the Compustat Segment database.	(2,262)	(673)	(240)
Final sample	6,869	2,726	478
Divisions with socially-connected DMs	3,940	1,736	419
Divisions <i>without</i> socially-connected DMs	2,929	1,248	400

**Table 2****Descriptive statistics and Pearson correlation coefficients.**

This table presents the descriptive statistics in Panel A and the Pearson correlation coefficients in Panel B. The sample includes 6,869 firm-divisions from 2000 to 2018. All variable definitions are in the Appendix. All continuous variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively, for testing the mean (median) difference between two subsamples ( $DM\_TIE=0$  and  $DM\_TIE=1$ ) in Panel A and for the correlations in Panel B.

**Panel A: Descriptive statistics**

Variable name	Full Sample (N=6,869)		$DM\_TIE = 0$ (N=2,929)		$DM\_TIE = 1$ (N=3,940)	
	Mean	Median	Mean	Median	Mean	Median
$SEG\_CAPX_{ijt}$	0.050	0.034	0.047	0.031	0.052***	0.036***
$SEG\_SIZE_{ijt-1}$	6.655	6.681	6.248	6.238	6.958***	6.995***
$SEG\_ROA_{ijt-1}$	0.154	0.132	0.144	0.129	0.161***	0.133***
$FIRM\_SIZE_{jt-1}$	8.255	8.146	7.881	7.815	8.533***	8.450***
$FIRM\_CASH_{jt-1}$	0.090	0.068	0.088	0.067	0.092*	0.069*
$FIRM\_ROA_{jt-1}$	0.098	0.094	0.098	0.093	0.099	0.096*
$FIRM\_LEV_{jt-1}$	0.259	0.244	0.259	0.253	0.258	0.239
$FIRM\_SG_{jt-1}$	0.070	0.055	0.076	0.057	0.066**	0.054**

**Panel B: Pearson correlation**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) $SEG\_CAPX_{ijt}$								
(2) $DM\_TIE_{ijt}$	0.045***							
(3) $SEG\_SIZE_{ijt-1}$	-0.100***	0.231***						
(4) $SEG\_ROA_{ijt-1}$	0.132***	0.043***	-0.038***					
(5) $FIRM\_SIZE_{jt-1}$	-0.054***	0.221***	0.842***	0.041***				
(6) $FIRM\_CASH_{jt-1}$	0.093***	0.021*	-0.130***	0.139***	-0.085***			
(7) $FIRM\_ROA_{jt-1}$	0.056***	0.010	0.052***	0.401***	0.017	0.072***		
(8) $FIRM\_LEV_{jt-1}$	-0.039***	-0.003	0.130***	-0.061***	0.135***	-0.276***	-0.075***	
(9) $FIRM\_SG_{jt-1}$	0.073***	-0.027**	-0.021*	0.060***	-0.032***	-0.082***	0.166***	-0.033***

**Table 3****The effect of DMs' social connections on divisional capital investment.**

This table reports the results for the regression of divisional capital investment on the indicator for DMs' social connections. All variable definitions are in the Appendix. The sample consists of 6,869 division-years over the period of 2000-2018. All continuous variables are winsorized at the top and bottom 1% percentiles. T-statistics in parentheses are based on the standard errors clustered at the conglomerate-division level. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively.

Dependent variable =	<i>SEG_CAPX<sub>ijt</sub></i>
<i>DM_TIE<sub>ijt</sub></i>	<b>0.009***</b> <b>(4.421)</b>
<i>SEG_SIZE<sub>ijt-1</sub></i>	-0.005*** (-3.123)
<i>SEG_ROA<sub>ijt-1</sub></i>	0.033*** (4.350)
<i>FIRM_SIZE<sub>jt-1</sub></i>	-0.003 (-1.187)
<i>FIRM_CASH<sub>jt-1</sub></i>	0.059*** (4.319)
<i>FIRM_ROA<sub>jt-1</sub></i>	0.105*** (4.821)
<i>FIRM_LEV<sub>jt-1</sub></i>	-0.021*** (-2.781)
<i>FIRM_SG<sub>jt-1</sub></i>	0.011*** (2.841)
Conglomerate FE	Yes
Year FE	Yes
Adj R <sup>2</sup>	0.364
N	6,869

**Table 4****Change analysis based on CEO turnovers of peer firms**

This table reports the regressions of changes in divisional capital investment ( $\Delta SEG\_CAPX$ ) on the indicators for net increases ( $DM\_TIE\_INC$ ) and net decreases ( $DM\_TIE\_DEC$ ) in DMs' external connectedness due to CEO turnovers in peer firms in the division's two-digit SIC industry, while the DM remains in office. The sample consists of 3,104 division-years for which peer firms have experienced peer firms' CEO turnovers during 2000-2018. All variable definitions are in the Appendix. All continuous variables are winsorized at the top and bottom 1% percentiles. T-statistics in parentheses are based on the standard errors clustered at the conglomerate-division level. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively.

Dependent variable =	$\Delta SEG\_CAPX_{ijt}$
$DM\_TIE\_INC_{ijt}$	<b>0.003*</b> (1.662)
$DM\_TIE\_DEC_{ijt}$	<b>-0.004**</b> (-2.130)
$\Delta SEG\_SIZE_{ijt-1}$	-0.037*** (-7.704)
$\Delta SEG\_ROA_{ijt-1}$	0.009 (0.800)
$\Delta FIRM\_SIZE_{jt-1}$	-0.005 (-0.732)
$\Delta FIRM\_CASH_{jt-1}$	0.062*** (2.668)
$\Delta FIRM\_ROA_{jt-1}$	0.118*** (3.165)
$\Delta FIRM\_LEV_{jt-1}$	-0.038** (-2.474)
$\Delta FIRM\_SG_{jt-1}$	0.001 (0.285)
Conglomerate FE	Yes
Year FE	Yes
Adj R <sup>2</sup>	0.158
N	3,104

**Table 5****The effect of DMs' social connections on divisional capital investment: the usefulness of the information source.**

This table reports the results on the effect DM's social connections on divisional investments, conditional on the usefulness of the information source as determined by the influence of connected peer firms and their CEOs.  $DM\_TIE\_HIGH_{ijt}$  is a dummy variable that equals 1 if DMs are socially connected to any of high influence peer firms, and 0 otherwise. High influence firms refer to those that are ranked in the top quartile among all same-industry firms in terms of (1) ROA, (2) sale growth, (2) market share, and (4) the duration of CEO tenure. The sample consists of 6,869 division-year observations from 2000 to 2018. Detailed definitions of all other variables are in the Appendix. All continuous variables are winsorized at the top and bottom 1% percentiles. T-statistics in parentheses are based on the standard errors clustered at the conglomerate-division level. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively.

Dependent variable =	$SEG\_CAPX_{ijt}$			
	(1) ROA	(2) Sale Growth	(3) Market share	(4) CEO Tenure
High-influence firms =				
<b><math>DM\_TIE\_HIGH_{ijt}</math></b>	<b>0.004**</b> <b>(2.335)</b>	<b>0.004**</b> <b>(2.498)</b>	<b>0.004**</b> <b>(2.004)</b>	<b>0.005***</b> <b>(2.879)</b>
$DM\_TIE_{ijt}$	0.006*** (3.124)	0.007*** (3.402)	0.006** (2.334)	0.005** (2.242)
$SEG\_SIZE_{ijt-1}$	-0.005*** (-3.139)	-0.005*** (-3.128)	-0.005*** (-3.178)	-0.005*** (-3.136)
$SEG\_ROA_{ijt-1}$	0.033*** (4.345)	0.033*** (4.347)	0.033*** (4.360)	0.033*** (4.362)
$FIRM\_SIZE_{jt-1}$	-0.003 (-1.218)	-0.003 (-1.129)	-0.003 (-1.194)	-0.003 (-1.195)
$FIRM\_CASH_{jt-1}$	0.059*** (4.282)	0.059*** (4.281)	0.060*** (4.339)	0.059*** (4.307)
$FIRM\_ROA_{jt-1}$	0.104*** (4.755)	0.106*** (4.857)	0.105*** (4.833)	0.105*** (4.822)
$FIRM\_LEV_{jt-1}$	-0.021*** (-2.821)	-0.021*** (-2.787)	-0.021*** (-2.786)	-0.020*** (-2.726)
$FIRM\_SG_{jt-1}$	0.011*** (2.840)	0.011*** (2.812)	0.011*** (2.809)	0.011*** (2.855)
Conglomerate FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj R <sup>2</sup>	0.365	0.365	0.365	0.365
N	6,869	6,869	6,869	6,869

**Table 6****The effect of DMs' social connections on divisional capital investment: Industrial uncertainty and information transparency.**

This table reports the results on the effect of DMs' external social connectedness on divisional capital investment, conditional on the business and information environment of a division's (two-digit SIC) industry. In Panel A the sample is partitioned on a division's industry earnings volatility (columns 1 and 2) and sales growth (columns 3 and 4). In Panel B the sample is partitioned on the average number of analysts following firms in a division's industry (column 1 and 2) and the proportion of firms in a division's industry that issue management earnings forecasts (columns 3 and 4). Detailed definitions for all variables are in the Appendix. The sample includes 6,869 division-years over the period of 2000-2018. All continuous variables are winsorized at the top and bottom 1% percentiles. T-statistics in parentheses are based on the standard errors clustered at the conglomerate-division level. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively.

**Panel A: Industrial Uncertainty**

Dependent variable =	<i>SEG_CAPX<sub>ijt</sub></i>			
	High industry earnings vol.	Low industry earnings vol.	High industry sales growth	Low industry sales growth
Sample partitions =	(1)	(2)	(3)	(4)
<i>DM_TIE<sub>ijt</sub></i>	<b>0.010***</b> (3.705)	<b>0.005*</b> (1.933)	<b>0.011***</b> (3.557)	<b>0.005**</b> (2.329)
<i>SEG_SIZE<sub>ijt-1</sub></i>	-0.007*** (-2.843)	-0.004** (-2.105)	-0.005** (-2.076)	-0.005*** (-3.107)
<i>SEG_ROA<sub>ijt-1</sub></i>	0.038*** (3.099)	0.030*** (2.974)	0.026** (2.339)	0.044*** (4.611)
<i>FIRM_SIZE<sub>jt-1</sub></i>	0.001 (0.269)	-0.006 (-1.554)	0.001 (0.286)	-0.009** (-2.191)
<i>FIRM_CASH<sub>jt-1</sub></i>	0.041** (2.045)	0.080*** (3.830)	0.025 (1.290)	0.077*** (3.428)
<i>FIRM_ROA<sub>jt-1</sub></i>	0.109*** (3.529)	0.128*** (3.834)	0.105*** (3.258)	0.093*** (2.925)
<i>FIRM_LEV<sub>jt-1</sub></i>	-0.004 (-0.343)	-0.038*** (-3.395)	-0.016 (-1.360)	-0.019 (-1.640)
<i>FIRM_SG<sub>jt-1</sub></i>	0.005 (0.743)	0.016** (2.576)	0.013** (2.323)	0.011* (1.915)
Conglomerate FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj R <sup>2</sup>	0.405	0.366	0.395	0.363
N	3,422	3,447	3,427	3,442
Chow test statistic (p-value) for the difference b/w the coefficients on <i>DM_TIE</i>		3.21 (0.07)		3.93 (0.05)

**Panel B: Information transparency**

Dependent variable =	<i>SEG_CAPX<sub>ijt</sub></i>			
Sample partitions =	High analyst following	Low analyst following	High prevalence M. guidance	Low prevalence M. guidance
	(1)	(2)	(3)	(4)
<i>DM_TIE<sub>ijt</sub></i>	<b>0.005**</b> <b>(2.014)</b>	<b>0.010***</b> <b>(3.663)</b>	<b>0.002</b> <b>(0.839)</b>	<b>0.013***</b> <b>(5.312)</b>
<i>SEG_SIZE<sub>ijt-1</sub></i>	-0.001 (-0.837)	-0.007*** (-3.305)	-0.001 (-0.678)	-0.008*** (-3.987)
<i>SEG_ROA<sub>ijt-1</sub></i>	0.028*** (3.354)	0.034*** (2.998)	0.035*** (4.017)	0.037*** (3.503)
<i>FIRM_SIZE<sub>jt-1</sub></i>	-0.007* (-1.926)	-0.002 (-0.538)	-0.013*** (-3.243)	0.003 (0.678)
<i>FIRM_CASH<sub>jt-1</sub></i>	0.051** (2.348)	0.075*** (3.985)	0.031 (1.502)	0.082*** (3.934)
<i>FIRM_ROA<sub>jt-1</sub></i>	0.076*** (2.623)	0.126*** (4.325)	0.058** (2.150)	0.135*** (4.309)
<i>FIRM_LEV<sub>jt-1</sub></i>	-0.021** (-1.997)	-0.026** (-2.425)	-0.019* (-1.758)	-0.026** (-2.130)
<i>FIRM_SG<sub>jt-1</sub></i>	0.011** (2.303)	0.009 (1.566)	0.011** (2.397)	0.013* (1.846)
Conglomerate FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj R <sup>2</sup>	0.409	0.392	0.383	0.422
N	3,423	3,446	3,364	3,505
Chow test statistic (p-value) for the difference b/w the coefficients on <i>DM_TIE</i>		2.93 (0.09)		11.72 (0.00)

**Table 7****The effect of DMs' social connections on divisional capital investment: DMs' influence in the conglomerate.**

This table reports the results on the effect of DMs' social connections on divisional capital investment, conditional on DMs' influence in the conglomerate. A DM is deemed as having high influence in the conglomerate if s/he holds a senior position or having social connections with the headquarters CEO. A DM is categorized as holding a senior position if at least two of the following conditions hold: the DM (1) is a board member; (2) holds a senior position (with the job title including key words like "senior" or "executive"); (3) is listed in the annual report as a top-five paid executive. Definitions of all variables are in the Appendix. The sample includes 6,869 division-years over the period of 2000-2018. All continuous variables are winsorized at the top and bottom 1% percentiles. T-statistics in parentheses are based on the standard errors clustered at the conglomerate-division level. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively.

Dependent variable = Partitioned variable =	<i>SEG_CAPX<sub>ijt</sub></i>			
	Holding senior positions	Not holding senior positions	With internal connections	Without internal connections
	(1)	(2)	(3)	(4)
<i>DM_TIE<sub>ijt</sub></i>	<b>0.016***</b> (3.671)	<b>0.008***</b> (3.706)	<b>0.015***</b> (3.511)	<b>0.006***</b> (2.834)
<i>SEG_SIZE<sub>ijt-1</sub></i>	-0.012*** (-3.411)	-0.005*** (-2.794)	-0.010*** (-2.908)	-0.003* (-1.777)
<i>SEG_ROA<sub>ijt-1</sub></i>	0.021 (1.339)	0.037*** (4.494)	0.021 (1.388)	0.040*** (4.606)
<i>FIRM_SIZE<sub>jt-1</sub></i>	0.009 (1.157)	-0.004 (-1.375)	0.009 (1.380)	-0.008** (-2.482)
<i>FIRM_CASH<sub>jt-1</sub></i>	0.089** (2.220)	0.055*** (3.735)	0.148*** (3.259)	0.033** (2.244)
<i>FIRM_ROA<sub>jt-1</sub></i>	0.139*** (2.600)	0.091*** (3.692)	0.123** (2.198)	0.105*** (4.420)
<i>FIRM_LEV<sub>jt-1</sub></i>	-0.041* (-1.818)	-0.016* (-1.892)	-0.040* (-1.832)	-0.019** (-2.154)
<i>FIRM_SG<sub>jt-1</sub></i>	0.013 (1.190)	0.010** (2.201)	0.014 (1.342)	0.010** (2.360)
Conglomerate FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj R <sup>2</sup>	0.409	0.399	0.404	0.374
N	1,664	5,205	1,589	5,280
Chow test statistic (p-value) for the difference b/w the coefficients on <i>DM_TIE</i>		2.91 (0.09)		4.78 (0.03)

**Table 8****Investment responsiveness to industry growth opportunities.**

This table reports the results on the effect of DMs' social connections on divisional investment responsiveness to industry growth opportunities. Definitions of all variables are in the Appendix. The sample includes 6,869 division-years over the period of 2000-2018. All continuous variables are winsorized at the top and bottom 1% percentiles. T-statistics in parentheses are based on the standard errors clustered at the conglomerate-division level. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively.

Dependent variable =	<i>SEG_CAPX<sub>ijt</sub></i>
<i>DM_TIE<sub>ijt</sub></i>	0.005** (2.145)
<i>DM_TIE<sub>ijt</sub> × IND_SG<sub>ijt</sub></i>	<b>0.017*</b> <b>(1.920)</b>
<i>IND_SG<sub>ijt</sub></i>	-0.001 (-0.140)
<i>SEG_SIZE<sub>ijt-1</sub></i>	-0.005*** (-3.104)
<i>SEG_ROA<sub>ijt-1</sub></i>	0.033*** (4.389)
<i>FIRM_SIZE<sub>jt-1</sub></i>	-0.003 (-1.244)
<i>FIRM_CASH<sub>jt-1</sub></i>	0.058*** (4.227)
<i>FIRM_ROA<sub>jt-1</sub></i>	0.106*** (4.878)
<i>FIRM_LEV<sub>jt-1</sub></i>	-0.021*** (-2.822)
<i>FIRM_SG<sub>jt-1</sub></i>	0.011*** (2.852)
Conglomerate FE	Yes
Year FE	Yes
Adj R <sup>2</sup>	0.365
N	6,869

**Table 9****Future divisional performance.**

This table reports the results on the effect of DMs' social connections on divisions' future performance,  $DM\_adjROA_{t+1}$  in column (1) and  $DM\_adjROA_{t+2}$  in column (2), respectively. Definitions of all variables are in the Appendix. The sample includes 5,789 division-years over the period of 2000-2018 (and is reduced to 4,870 due to the requirement of having non-missing values for  $DM\_adjROA_{t+2}$  in column 2). All continuous variables are winsorized at the top and bottom 1% percentiles. T-statistics in parentheses are based on the standard errors clustered at the conglomerate-division level. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively.

Dependent variable =	$DM\_adjROA_{ijt+1}$ (1)	$DM\_adjROA_{ijt+2}$ (2)
<i>DM_TIE<sub>ijt</sub></i>	<b>0.052***</b> <b>(6.341)</b>	<b>0.052***</b> <b>(5.205)</b>
<i>SEG_SIZE<sub>ijt-1</sub></i>	-0.004 (-0.709)	0.003 (0.404)
<i>SEG_ROA<sub>ijt-1</sub></i>	0.631*** (19.048)	0.608*** (14.516)
<i>FIRM_SIZE<sub>jt-1</sub></i>	-0.045*** (-3.197)	-0.043** (-2.473)
<i>FIRM_CASH<sub>jt-1</sub></i>	0.021 (0.316)	0.036 (0.473)
<i>FIRM_ROA<sub>jt-1</sub></i>	-0.519*** (-4.928)	-0.689*** (-5.607)
<i>FIRM_LEV<sub>jt-1</sub></i>	0.073* (1.895)	0.122*** (2.923)
<i>FIRM_SG<sub>jt-1</sub></i>	0.012 (0.635)	0.025 (1.154)
Conglomerate FE	Yes	Yes
Year FE	Yes	Yes
Adj R <sup>2</sup>	0.641	0.635
N	5,789	4,870

**Table 10****Alternative measures for DMs' external social connections.**

Panel A reports the respective effects of three types of DMs' external social connections: those arising from (1) past education (*DM\_TIE\_EDU*), (2) past employment (*DM\_TIE\_EMP*), and (3) past involvement with nonprofit organizations (*DM\_TIE\_NFP*). Panel B reports the results when we define DMs' external social connections as (1) those with industry peer firms' CFOs and (2) those with all C-suite executives including CEOs, CFOs, COOs, board chairmen, and presidents of peer firms. The sample includes 6,869 division-years over the period of 2000-2018, and the sample size is reduced to 4,519, 5,990, and 4,061 in columns (1), (2) and (3) of Panel A, respectively, when we focus on a specific type of connections. Definitions of all other variables are in the Appendix. All continuous variables are winsorized at the top and bottom 1% percentiles. T-statistics in parentheses are based on the standard errors clustered at the conglomerate-division level. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively.

**Panel A: DMs' external social connections by type**

Dependent variable =	<i>SEG_CAPX<sub>ijt</sub></i>		
	(1)	(2)	(3)
<i>DM_TIE_EDU<sub>ijt</sub></i>	<b>0.009***</b> (2.952)		
<i>DM_TIE_EMP<sub>ijt</sub></i>		<b>0.010***</b> (5.950)	
<i>DM_TIE_NFP<sub>ijt</sub></i>			<b>0.009***</b> (3.639)
<i>SEG_SIZE<sub>ijt-1</sub></i>	-0.004** (-2.076)	-0.006*** (-3.859)	-0.006*** (-3.374)
<i>SEG_ROA<sub>ijt-1</sub></i>	0.030*** (3.020)	0.030*** (3.979)	0.036*** (3.895)
<i>FIRM_SIZE<sub>jt-1</sub></i>	-0.005 (-1.558)	-0.004 (-1.341)	-0.004 (-1.078)
<i>FIRM_CASH<sub>jt-1</sub></i>	0.059*** (3.245)	0.059*** (4.323)	0.068*** (3.327)
<i>FIRM_ROA<sub>jt-1</sub></i>	0.100*** (3.602)	0.101*** (4.430)	0.124*** (4.290)
<i>FIRM_LEV<sub>jt-1</sub></i>	-0.030*** (-3.295)	-0.018** (-2.260)	-0.026** (-2.522)
<i>FIRM_SG<sub>jt-1</sub></i>	0.010** (2.285)	0.015*** (3.774)	0.008 (1.562)
Conglomerate FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj R <sup>2</sup>	0.355	0.372	0.399
N	4,519	5,990	4,061

**Panel B: DMs' social connections with other top executives of peer firms**

Dependent variable =	<i>SEG CAPX<sub>ijt</sub></i>	
	Other executives= CFOs	Other executives= C-suite executives
	(1)	(2)
<b><i>DM_TIE_OTHER<sub>ijt</sub></i></b>	<b>0.007*** (3.830)</b>	<b>0.009*** (4.052)</b>
<i>SEG_SIZE<sub>ijt-1</sub></i>	-0.004*** (-2.990)	-0.005*** (-3.067)
<i>SEG_ROA<sub>ijt-1</sub></i>	0.033*** (4.367)	0.033*** (4.264)
<i>FIRM_SIZE<sub>jt-1</sub></i>	-0.003 (-1.252)	-0.003 (-1.151)
<i>FIRM_CASH<sub>jt-1</sub></i>	0.060*** (4.337)	0.060*** (4.306)
<i>FIRM_ROA<sub>jt-1</sub></i>	0.105*** (4.823)	0.104*** (4.756)
<i>FIRM_LEV<sub>jt-1</sub></i>	-0.020*** (-2.718)	-0.021*** (-2.847)
<i>FIRM_SG<sub>jt-1</sub></i>	0.011*** (2.683)	0.011*** (2.704)
Conglomerate FE	Yes	Yes
Year FE	Yes	Yes
Adj R <sup>2</sup>	0.362	0.363
N	6,869	6,869

**Table 11****Controlling for conglomerate CEOs' external social connections.**

This table reports the results after controlling for headquarter CEOs' social connections with CEOs of peer firms in the division's industry (*CEO\_TIE\_SegIND*) or in the conglomerate's primary industry (*CEO\_TIE\_FirmIND*). The sample consists of 6,869 division-year observations from 2000 to 2018. Definitions of all other variables are in the Appendix. T-statistics are in parentheses based on the standard errors clustered at the conglomerate-division level. \*, \*\*, and \*\*\* indicate statistical significance at the  $p < 10\%$ ,  $p < 5\%$ , and  $p < 1\%$  levels, respectively.

Dependent variable =	<i>SEG_CAPX<sub>ijt</sub></i>	
	(1)	(2)
<i>DM_TIE<sub>ijt</sub></i>	<b>0.009***</b> (4.412)	<b>0.009***</b> (4.435)
<i>CEO_TIE_SegIND<sub>it</sub></i>	-0.001 (-0.411)	
<i>CEO_TIE_FirmIND<sub>ijt</sub></i>		-0.001 (-0.274)
<i>SEG_SIZE<sub>ijt-1</sub></i>	-0.005*** (-3.098)	-0.005*** (-3.122)
<i>SEG_ROA<sub>ijt-1</sub></i>	0.033*** (4.349)	0.033*** (4.348)
<i>FIRM_SIZE<sub>jt-1</sub></i>	-0.003 (-1.182)	-0.003 (-1.186)
<i>FIRM_CASH<sub>jt-1</sub></i>	0.059*** (4.329)	0.059*** (4.332)
<i>FIRM_ROA<sub>jt-1</sub></i>	0.105*** (4.802)	0.105*** (4.813)
<i>FIRM_LEV<sub>jt-1</sub></i>	-0.021*** (-2.786)	-0.021*** (-2.781)
<i>FIRM_SG<sub>jt-1</sub></i>	0.011*** (2.848)	0.011*** (2.841)
Conglomerate FE	Yes	Yes
Year FE	Yes	Yes
Adj R <sup>2</sup>	0.364	0.364
N	6,869	6,869