The Balance Between Board Monitoring and Advising: The Role of Social Capital

Zhe Li
Swansea University

Bo Wang *
Canterbury Christ Church University

First version: December 2020
This version: April 2021

Abstract

We study the role of social capital, captured by the cooperative norms and social networks, in the trade-off between board monitoring and advisory function. We find that firms located in high-social-capital communities appoint more advisory directors. The effect is more prominent when firms are followed by more financial analysts, operate in competitive product markets and have complex operations. In addition, firms that reside in high-social-capital counties are more likely to set up separate advisory committees. In contrast, monitoring directors of firms located in high-social-capital communities are more likely to miss board meetings, suggesting reduced effort in board monitoring. Overall, our results are consistent with the interpretation that social capital serves as a societal monitoring mechanism and substitutes board monitoring. Hence, board of firms located in high-social-capital communities focuses more on advisory.

Keywords: Advisory, Board committee, Board of directors, Board structure, Monitoring, Firm location, Social capital

JEL Classification: G30 G34 Z13

*Corresponding author: Bo Wang, Accounting, Economics & Finance Section, Canterbury Christ Church University, Canterbury CT1 1QU, UK, tel.: +44 (0) 1227 923036, email: bo.wang@canterbury.ac.uk. Zhe Li, Accounting and Finance Department, School of Management, Swansea University, Swansea SA1 8EN, UK, emali: Zhe.Li@swansea.ac.uk

The Balance Between Board Monitoring and Advising:

The Role of Social Capital

Abstract

We study the role of social capital, captured by the cooperative norms and social networks, in the trade-off between board monitoring and advisory function. We find that firms located in high-social-capital communities appoint more advisory directors. The effect is more prominent when firms are followed by more financial analysts, operate in competitive product markets and have complex operations. In addition, firms that reside in high-social-capital counties are more likely to set up separate advisory committees. In contrast, monitoring directors of firms located in high-social-capital communities are more likely to miss board meetings, suggesting reduced effort in board monitoring. Overall, our results are consistent with the interpretation that social capital serves as a societal monitoring mechanism and substitutes board monitoring. Hence, board of firms located in high-social-capital communities focuses more on advisory.

Keywords: Advisory, Board committee, Board of directors, Board structure, Monitoring, Firm location, Social capital

JEL Classification: G30 G34 Z13

1 Introduction

In the wake of major governance failures and ethical breakdowns at large firms such as Enron and Worldcom in the early 2000s, corporate governance reforms (i.e. the Sarbanes-Oxley Act) have scrutinized the monitoring function of the board of directors. Major US stock exchanges (i.e. NYSE and Nasdaq) have begun to require more independent directors to reinforce board monitoring.[1] However, the board of directors, as an integral element, performs both a monitoring function and an advising duty (Adams & Ferreira, 2007).[2] While the monitoring function requires directors to oversight the management to prevent harmful behaviours, the advisory function involves setting strategies and providing counsel to the management. The enhanced focus on monitoring has come at substantial costs of advisory because the two responsibilities compete for directors' limited time and energy (Faleye, Hoitash & Hoitash, 2011, 2013, Hillman & Dalziel, 2003). In addition, intensive monitoring and incompetent advisory from directors weaken the CEO's perception of board support and result in managerial myopia and poor performance (Faleye et al., 2011). Much of prior academic literature on the optimal board structure focuses solely either on the monitoring function or the advisor function. Yet, research on the trade-off between the monitoring and advising function has been especially absent. Brickley & Zimmerman (2010) reckon the trade-off a myth and difficult to reconcile. In this paper, we aim to fill this void in the literature by finding a mechanism to help the board more effectively trade off the monitoring and advisory function. Specifically, we examine whether social capital substitutes board monitoring and helps balance the board monitoring and advising duties.

Social capital, as captured by the strength of cooperative norms and social networks, has

[1]The New York Stock Exchange (NYSE) Listed Company Manual Section 303A.03 requires complete independence of audit, compensation, nominating, and governance committees. Nasdaq requires complete independence of these major committees or independent directors to oversight the executive compensation and requires a majority of independent directors to select or recommend director nominees if such committees do not exist.

[2]See also Adams, Hermalin & Weisbach (2010), Armstrong, Guay & Weber (2010), Fama & Jensen (1983), Harris & Raviv (2006) and Stevenson & Radin (2009)

been seen as a crucial factor that produces positive economic outcomes via encouraging honesty and cooperation and discouraging unethical or opportunistic behaviours of individuals (Coleman, 1988).[3] As managers are individuals susceptible to social influences, social capital should discipline managers' behaviours and matters in corporate settings (Guiso, Sapienza & Zingales, 2011). Indeed, a burgeoning literature in corporate finance has shown that community social capital reduces accounting fraud (Jha, 2019), audit fees (Jha & Chen, 2014), and bank loan spreads (Hasan, Hoi, Wu & Zhang, 2017b), impedes aggressive tax avoidance (Hasan, Hoi, Wu & Zhang, 2017a), encourages innovation (Hasan, Hoi, Wu & Zhang, 2020), and promotes corporate social responsibility (CSR) (Hoi, Wu & Zhang, 2018).

In particular, social capital also serves as a societal monitoring mechanism to mitigate agency problems. Managers' self-interested behaviours violate the trust vested by shareholders, and hence, are contradictory to the prescribed values of cooperative norms. Given that social capital enhances the punishment for behaviours that deviate from the social norm (Coleman, 1988, Spagnolo, 1999), managers in communities with a higher level of social capital would restrain themselves from such behaviours and act more in line with shareholders' interests. Consistent with this view, researchers have found that a higher degree of social capital induces more efficient use of cash (Gao, Li & Lu, 2019), ameliorates managerial rent extraction (Hoi, Wu & Zhang, 2019), and reduces a firm's cost of equity (Gupta, Raman & Shang, 2018). Motivated by the abundant literature suggesting that the agency issue is restrained by social capital, we conjecture that the monitoring need is low for firms reside in high-social-capital communities, and the board can focus more on advising the management.

To capture the extent of the board's focus on monitoring and advising, we first explore social capital's influence on board structure concerning the allocation of monitoring and advisory directors. We adopt the innovative approach proposed by Faleye et al. (2013) to define monitoring and advisory directors based on their committee assignments, which perceives

[3]See also Buonanno, Montolio & Vanin (2009), Guiso, Sapienza & Zingales (2004), Knack & Keefer (1997), La Pprta, Lopez-De-Silanes, Shleifer & Vishny (1997) and Putnam (1993)

independent directors who sit on monitoring committees as monitoring director and independent directors who sit on advisory committees as advisory directors. The idea behind this measure is that boards establish committees to perform either advisory or monitoring activities (Klein, 1998), and utilizing specialized committees is more effective in fulfilling the board's responsibilities (Reeb & Upadhyay, 2010).

Using a sample consisting of 11,022 firm-year observations from S&P 1,500 firms over the period of 2005 – 2018, we find that the social capital of the county in which the firm resides is positively associated with the percentage of advisory directors on board. The relationship between social capital and the fraction of monitoring directors is negative but statistically insignificant. However, our cross-sectional analysis reveals that when the firm is subject to high analyst coverage, highly competitive industries, or greater operational complexity, a higher degree of social capital significantly reduces the percentage of monitoring directors, and the positive link between social capital and the proportion of advisory directors becomes more pronounced. These findings suggest that social capital serves as a substitute for board monitoring. As social capital restrains managerial opportunistic and self-interest activities, shareholders can assemble an advisor-intensive board to focus on advising the management.

We perform a battery of additional tests to ensure that our finding is not spurious. First, our results remain unaffected when we address omitted variable concerns by controlling for the region-, division-, state-, and county-fixed effects, indicating the unobserved time-invariant variables at various geographical levels do not explain our findings. We also use a long-window change-to-change analysis to address the challenges posited by time-invariant unobserved firm-level variables and find consistent results. Second, our results still hold across alternative sampling methods and social capital measures. Third, we address the potential reverse causality concerns by adopting an instrumental variable (IV) approach that uses racial heterogeneity in a county as the instrument for social capital. We find a positive and significant relationship between the instrumented social capital and the proportion of advi-

sory directors. Further, we use the propensity score matching (PSM) technique to alleviate the possibility that the observable confounding effects may drive our results. Our matched sample analysis reveals significant variations in board structure for the treatment and control firms: firms located in high-social-capital counties have a significantly higher proportion of advisory directors than matched firms in low-social-capital counties. Finally, we adopt the difference-in-differences (DiD) method to explore the influence of over-time variations of social capital on the over-time changes in board structure to mitigate the concern that the cross-sectional variations in social capital outweigh the time variations in social capital. Following Hoi et al. (2019), we track down firms' headquarter location over our sample period and find that firms experiencing social-capital-increasing headquarter relocation significantly increase the fraction of advisory directors.

In addition to examining the influence of social capital on board structure, we provide additional evidence on the board's advisory focus by looking into board committee set-ups and directors' board meeting attendance. Our results show that firms located in a high-social-capital region are not only more likely to set up separate advisory committees but also establish more advisory committees. Employing director meeting attendance to proxy directors' commitment in board activities, we find that the social capital of the county where the firm resides significantly increase the probability and the fraction of monitoring directors absent at board meetings. In stark contrast to the attendance issue of monitoring directors, other independent directors are less likely to have attendance problems when their firms are located in high-social-capital counties. These results are consistent with the assertion that social capital and board monitoring are substitutes. High social capital results in a more advisory-focused board and renders monitoring directors exert less effort to monitor the management.

We contribute to the literature in several ways. First, our study reinforces the ever-growing awareness that social capital matters in corporate settings. Previous research has documented

that social capital restrains unethical and opportunistic behaviours of managers, which then affects firm policies (i.e. innovation, tax avoidance, and CSR activities) and the third party's perspective on the firm (i.e. audit fee, cost of capital). Gao et al. (2019), Gupta et al. (2018), and Hoi et al. (2019) have confirmed that social capital performs as a societal monitoring mechanism to attenuate the agency issue. Yet, the discussion on how social capital may influence the board of directors has been scarce, and only Oyotode-Adebile & Ujah (2020) document that social capital affects board diversity. Our study extends this line of research by demonstrating that social capital influences the board structure with respect to the allocation of monitoring and advisory directors and directors' commitment to their responsibilities.

Further, we provide novel evidence to the debate on the trade-off between board advisory and monitoring functions. With a large number of studies showing that the two primary functions of the board compete for directors' time and energy, and the board's emphasis on one function often comes at the expense of the other (Faleye et al., 2011, 2013, Hillman & Dalziel, 2003, Masulis, Wang & Xie, 2012), our discovery suggests that the board can balance their monitoring and advisory duties when social capital is taken into account. Our finding echoes Ferreira, Ferreira & Raposo (2011), who show that stock price informativeness substitutes board monitoring. That is, firms with high price informativeness have less demanding board structures. However, Ferreira et al. (2011) adopt the insider-outsider approach to classify monitoring and advisory directors, which may oversimplify the duties of board of directors (Baldenius, Melumad & Meng, 2014). The approach we adopted focuses on board committees' functionality and captures directors' main responsibility more precisely. Thus, our study offers new perspectives on the balance between the board's monitoring and advisory function and helps shareholders allocate the scarcest resources, that is directors' human capital, more effectively.

Finally, our study contributes to the general literature on the dynamics of board structure and its determinants. Our findings conforms with the notion that the optimal structure

depends on the firm's characteristics and its contracting environment (Baldenius et al., 2014, Boone, Casares Field, Karpoff & Raheja, 2007, Coles, Daniel & Naveen, 2008, Linck, Netter & Yang, 2008). Prior studies mainly search for determinants of board structure within the firm; however, we show that board structure is also subject to the influence of external factors from the wider community as the societal norms can alter the firm's needs on monitoring and advising.

The remainder of this study is organized as follows. Section 2 covers related literature, hypothesis development, and our empirical strategy. Section 3 presents data, variable constructions and preliminary statistics of our sample. Section 4 analyzes the effect of social capital on board structure. Section 5 provides additional evidence on the committee set-up and director meeting attendance, and the last section concludes the paper.

2 Literature, Hypothesis, and Empirical Strategy

2.1 The Monitoring and Advisor Functions of Board of Directors

The academic literature has widely recognized the monitoring and advising functions of the board (Adams, 2010, Adams & Ferreira, 2007, Fama & Jensen, 1983, Hillman & Dalziel, 2003, Raheja, 2005). The NYSE Commission on Corporate Governance also outlines that directors in the boardroom are expected to serve as strategic advisors and monitors. The monitoring function oversights the management to guard against harmful conduct and the advisory role guides the management team to undertake appropriate strategies, provide complementary skills, and approve major expenditures (Adams, 2010).

For decades, board structure is at the centre of the policy debate on board effectiveness. Originated from Jensen (1993), the legacy studies argue that inside directors are closely tied to managers and, therefore, are poor monitors. As such, the optimal board should include more independent directors to monitor the CEO (Jensen, 1993, Rosenstein & Wyatt, 1990,

Weisbach, 1988). More recent studies challenge this 'one size fits all' notion and argue that the effective board structure should be determined by the firm's characteristics and contracting environment. Shareholders trade-off the board monitoring and advisory responsibilities according to the scope of operation, information costs and CEO entrenchment (Boone et al., 2007, Coles et al., 2008, Linck et al., 2008). Specifically, Boone et al. (2007), Coles et al. (2008), and Lehn, Patro & Zhao (2009) note that the benefits of a board's advisory function increase with operational complexity. Maug (1997) shows that it is not optimal to have independent directors perform the monitoring role when information asymmetry is high. Hermalin & Weisbach (1988) and Raheja (2005) find inconclusive interpretations on the association between CEO's power and board independence but agree that the relative strength of CEO and board of directors is a crucial determinant of effective board structure.

However, the aforementioned studies adopt the inside-outside approach to map for board advisory and monitoring functions. It follows that outside directors mainly contribute to the monitoring since they are independent of the influence of management, while inside directors primarily serve the advisory role because they have more firm-specific knowledge and can alleviate the information asymmetry problem between the management and board (Duchin, Matsusaka & Ozbas, 2010, Lehn et al., 2009, Linck et al., 2008). Thus, a large number of empirical studies argue shareholders attempt to trade off the strength of board monitoring and advising by adjusting the proportion of inside and outside directors.

The recent development in corporate governance practices challenges the traditional view of inside and outside directors. This approach oversimplifies the issue as the SOX act inevitably increased the presence of independent directors and changed the traditional perspective on the role of inside and outside directors (Becht, Franks, Mayer & Rossi, 2008, Linck, Netter & Yang, 2009). In addition, classifying monitoring and advisory directors only based on director independence ignores the followings: First, even though outside directors generally possess less information than corporate insiders, they can acquire firm-specific information

through board meetings and the interaction with management or other directors (Brickley & Zimmerman, 2010, Hillman & Dalziel, 2003).[4] Second, prior studies have acknowledged that independent director is a valuable source of expertise (Dalton, Daily, Johnson & Ellstrand, 1999, Hermalin & Weisbach, 1988, Yermack, 1996), suggesting outside directors can not only monitor managers but also provide an independent source of advice on strategic issues (Bhagat & Black, 1999, Chen, Chen, Kang & Peng, 2020). Thus, Baldenius et al. (2014) argue that the approach which is based on whether the director is an inside or an outside director to classify advising and monitoring functions is far from clear.

Identifying monitoring and advisory directors indeed remains a challenge. In practice, board members may engage in both monitoring and advising activities. However, survey data from Adams (2010) show directors who perceive a monitoring role contribute less to the advisory function. Klein (1998) demonstrates that boards set up committees that are either of advisory nature or monitoring nature to address firms' specific needs. Reeb & Upadhyay (2010) argue that using specialized advisory committees is more effective in achieving the board's advisory function as managers are more willing to share relevant information to directors who are not intimately involved in monitoring (Adams, 2010).[5] Faleye et al. (2013) advocate the board to appoint a separate set of independent directors that are minimally engaged in monitoring function to facilitate information exchange and sustain effective advising. Hence, based on the monitoring and advisory committee classification from Faleye et al. (2011) and Reeb & Upadhyay (2010), Faleye et al. (2013) proposed an innovative approach to identify the monitoring and advisory director based on the director's committee assignment. This approach classifies independent directors who serve on monitoring committees as mon-

[4]In addition, Kim, Mauldin & Patro (2014) find that board monitoring and advisory performance improves with independent directors' tenure, suggesting independent directors acquire more firm-specific knowledge over time.

[5]See also Adams & Ferreira (2007) and Holmström (2004) who argue that intensive monitoring harms the trust between the management and the directors. Hence, managers become reluctant to share information with directors bearing monitoring responsibility as directors could use the shared information to discipline them. On the contrary, a management-friendly board receives more information and is better at advising the management.

itoring directors and independent directors who serve on advisory committees as advisory directors. We employ this innovative approach in this study and seek to explore whether social capital plays a part in the allocation of advisory and monitoring directors.

2.2 Social Capital Definition

Social capital is a broad concept, and the discussion on social capital is not new. While prior studies have identified various operating definitions of social capital (Adler & Kwon, 2002, Rupasingha, Goetz & Freshwater, 2006, Scrivens & Smith, 2013), social norms and social networks are the core of these definitions. Consistent with the 'norm' approach, Putnam (1993) sees social capital as a tendency of people within a group to collaborate in order to achieve socially productive outcomes, and emphasizes the norms of reciprocity and trustworthiness that arise from connections between individuals.[6] Fukuyama (2001) argues that social capital is the existence of the same set of informal values or norms shared among members of a group that allows for cooperation. Thus, individuals who reside in high-social-capital communities have incentives to behave trustworthily, and thus tend to adhere to a high standard of social behaviour and are less likely to undertake opportunistic activities.

In the 'network' approach, social capital is modelled as a set of networks from which efficient information sharing and better communication are derived (Coleman, 1988, Lin, 1999, Payne, Moore, Griffis & Autry, 2011). Given that individuals need to maintain a moral self-concept (Mazar, Amir & Ariely, 2008), dense social networks also intensify the costs and the punishment of unethical and opportunistic behaviours (Coleman, 1994, Spagnolo, 1999). These costs include external social sanctions (i.e. social ostracism and stigmatization)(Coleman, 1988, Posner, 2000, Uhlaner, 1989), and internal psychological costs resulting from increased negative moral sentiments (i.e. anxiety, guilt, and shame)(Elster, 1989, Hig-

[6]Putnam (1993) defines the concept of reciprocity as an ongoing exchange relationship that is unobligated or imbalanced at a given time, but it involves mutual expectations that a benefit granted should be repaid in the future.

gins, 1987). As a result, regular and repetitive social encounters in dense social networks cultivate a high standard code of ethics that deters opportunistic behaviours and fosters a tendency to honour obligations and build mutual trust (Coleman, 1988, Fischer & Pollock, 2004, Fukuyama, 2001, Putnam, 2000, Uzzi, 1996).

However, the distinction between the social norm and social network approach is not clear as the effect of the norms and that of the network are interconnected and difficult to disentangle. The repeated interactions within a dense network promote greater trust among its members over time and foster a norm of cooperation and honesty (Coleman, 1994, Fukuyama, 2001, Portes, 1998). The norm of trust and cooperation can, in turn, facilitate a dense social network. Therefore, Knack & Keefer (1997), Woolcock (1998), Woolcock & others (2001), and Guiso et al. (2004) makes no distinction between 'norm' and 'network' and defines social capital as the environmental element that captures the confluence effects of social norms and dense networks within a geographical community.

2.3 The Effect of Social Capital in Prior Studies

Social capital gained popularity after Coleman (1988) laid its theoretical foundation. Since then, a growing body of literature in different disciplines, including economics, political science, and management, has treated social capital as parallel with other types of capital, such as financial, physical, and human capital (Payne et al., 2011, Putnam, 2000, Woolcock, 2010). Prior research provides clear evidence showing that a high level of social capital encourages honest dealing and restrains individuals' self-interested behaviours. For instance, Putnam (1993) contend that trust and cooperation are strong in high-social-capital communities. Lederman, Loayza & Menéndez (2002) and Buonanno et al. (2009) document that social capital reduces crime. Guiso et al. (2004) find that transaction costs in financial markets are lower when social capital is high.

Recent research finds that social capital matters in corporate settings because corporate

decisions are made by executives who are exposed to social norms surrounding corporate headquarters (Hilary & Hui, 2009). Indeed, Jha & Chen (2014) show that firms headquartered in U.S. counties with high social capital pay lower audit fees because auditors believe social capital can reduce auditing misconduct and litigation risk. Hasan et al. (2017a) find that companies located in high-social-capital counties pay more taxes, suggesting that social capital helps foster a local environment that prevents aggressive corporate tax avoidance. Hasan et al. (2017b) note that firms headquartered in high-social-capital counties undertake fewer corporate activities that aggravate the conflicts of interest between shareholders and debtholders, which reduces debt spread. Hoi et al. (2018) document that social capital facilitates socially responsible activities that benefit a wider range of stakeholders.

Prior research also agrees that social capital mitigates the agency issue. Gupta et al. (2018) document that social capital is negatively linked to the cost of equity, suggesting equity investors see social capital as a societal monitoring mechanism to ameliorate agency conflicts and thus require a lower rate of return. Gao et al. (2019) find evidence suggesting that social capital constrains unethical and self-serving behaviour and induces managers to use corporate resources more efficiently. With a focus on executive compensation, Hoi et al. (2019) conclude that high-social-capital restrain managerial rent extraction. These studies commonly indicate that high social norms and dense networks in communities discipline corporate managers and mitigate agency conflicts.

2.4 Hypothesis Development

As discussed earlier, the monitoring and advising functions of the board compete for directors' time. As a result, the increased focus of one function often comes at the expense of the other (Armstrong et al., 2010, Faleye et al., 2011, Kim et al., 2014). In the aftermath of significant corporate governance failures, the SOX act and listing requirements of the major stock exchanges have mandated the complete independence of the audit, compensation, governance

and nominating committees. These mandates change the traditional perspective that outside directors perform the monitoring function, and inside directors conduct the advisory function (Becht et al., 2008, Linck et al., 2009). Faleye et al. (2013) argue that the structural change in board composition caused by SOX requires shareholders to deploy a separate set of independent directors to focus on the advising function. Thus, instead of adjusting the number of inside and outside director, shareholders assign directors into specialized committees to perform monitoring or advisory duties.

Social capital restrains individual opportunistic and self-serving behaviours and has been influencing corporate behaviours (Hasan et al., 2017a,b, Hoi et al., 2018, Jha & Chen, 2014), and can effectively mitigate the agency issue (Gao et al., 2019, Gupta et al., 2018, Hoi et al., 2019). As such, firms located in high-social-capital communities would demand less board monitoring. Under such a circumstance, shareholders can assemble a board that focuses more on the advising function to avoid intensive monitoring which depletes the limited resources and undermines the trust necessary for the management to share crucial strategic information with the board, thereby sustaining efficient advising (Adams, 2010, Adams & Ferreira, 2007, Faleye et al., 2011, Holmström, 2004). The above discussions lead to our central hypothesis:

H1: Firms headquartered in communities with high social capital have relatively more advisory directors, ceteris paribus.

2.5 Research Design

To address our hypothesis, we estimate the following specification to test how social capital of the community in which the firm resides affects its board structure regarding the proportion of monitoring and advisory directors:

$$\begin{aligned} Monitor\ or\ Advisor\ Ratio_{i,t+1} = \ & \alpha + \beta_1 Social\ Capital_{ij,t} + \beta_2 Firm\ Attributes_{i,t} \\ & + \beta_3 CEO\ Attributes_{i,t} + \beta_4 County\ Attributes_{j,t} + \lambda_k + \lambda_t + \epsilon_{i,t+1} \end{aligned} \tag{1}$$

where $Monitor\ or\ Advisor\ Ratio_{i,t+1}$ is the ratio of monitoring or advising directors to the total number of independent directors for firm i at time *t+1*. $Social\ Capital_{ij,t}$ is the estimated social capital index of the county j where the firm i is headquartered at time *t*. $Firm\ Attributes_{i,t}$ refers to relevant firm-specific variables that are known to affect board structure, including *Firm Size*, *Number of Segments*, *Firm Age*, *Leverage*, *Market-to-Book Equity*, *R&D*, *Stock Return Volatility*, and *Independent Board Size*. $CEO\ Attributes_{i,t}$ includes factors that affect CEO power, influence, and ability (i.e. *CEO Tenure*, *CEO Ownership*, *CEO Duality*, *Female CEO*, *Ivy League CEO*, and *Recession Graduate*). We follow previous studies to include *Per Capita Income*, *Population Growth*, *Population Density*, *Religiosity*, *Education*, and *County Median Age* in $County\ Attributes_{j,t}$ for county j at time *t*. Detailed variable construction can be found in Table A.1 from the Appendices. The standard errors are clustered at the county level to control for potential correlations in unobserved variables that affect different firms within the same county.[7] λ_k and λ_t are industry and year dummies, respectively. Industry is defined by the first two-digit of Standard Industrial Classification (SIC) codes. Our main hypothesis predicts β_1 to be positive when the dependent variable is *Advisor Ratio* and negative when the dependent variable is *Monitor Ratio*.

3 Data and Variables

3.1 Data Source

Our sample consists of Standard & Poor's (S&P) 1,500 firms for the period 2005 – 2018, excluding firms from financial (SIC 6000 – 6999) and utility sectors (SIC 4900 – 4999).[8] We

[7]Because firms are nested in the countries, clustering at the county level automatically controls for clustering at the firm level (Bertrand, Duflo & Mullainathan, 2004, Cameron & Miller, 2011, Dinç, 2005)

[8]We intend to start the sample after the SOX Act of 2002 as it imposes significant changes in board structure. However, the most recent available social capital data prior to the SOX was estimated in 1997, a relatively long interval compared with social capital data estimated after 2005. Hence, we start with 2005 because this is the first year with available social capital data after the SOX Act.

manually track firm headquarters during the sample period using the exact address information stated in firm 10-K filings from the Securities and Exchange Commission (SEC) Electronic Data Gathering, Analysis, and Retrieval (EDGAR) database. We use the ZIP code and street name of each firm headquarter to identity the county and retrieve the Federal Information Processing Standards (FIPS) codes. We are able to identify 2,514 unique firms with traceable headquarter location data. The social capital index for each U.S. county is constructed using data from the Northeast Regional Center for Rural Development (NRCRD). We collect the county-level economic output and demographic profile from the Bureau of Economic Analysis (BEA) and the United States Census Bureau. We obtain information on firm fundamental variables from Compustat, executive compensation data from ExecuComp, and stock market price data from CRSP. Directors' committee assignment and meeting attendance information are retrieved from BoardEx and Institutional Shareholder Services (ISS). Our final sample consists of 1,479 unique firms and 11,022 firm-year observations.

3.2 Measuring Social Capital

Based on Coleman (1988), Woolcocket al. (2001), Guiso et al. (2004) and Guiso et al. (2011), we recognize social capital as the cooperative norms and social networks in a community. We construct the social capital index measure following the procedure mapped in Rupasingha et al. (2006). This procedure requires information on the vote cast for the presidential election ($Pvote$), census mail response ($Pespn$), the aggregate number of 10 types of social organizations ($Assn$), and the number of not-for-profit organizations ($Nccs$) in each county provided by NRCRD. As with Rupasingha et al. (2006), the first principal component from a principal component analysis (PCA) on $Pvote$, $Pespn$, $Assn$ and $Nccs$ is used as a proxy for social capital index. The NRCRD only provides data in 2005, 2009, and 2014 during our sample period. We follow Hasan et al. (2017b) and Hoi et al. (2019) to backfill the data for the missing years using the estimated social capital index with available data from the most

recent preceding period.[9]

3.3 Measuring Board Structure and Attendance Record

Following the definition in Faleye et al. (2011), Faleye et al. (2013), Klein (1998), and Reeb & Upadhyay (2010)), we classify monitoring and advisory directors based on their committee assignment. Specifically, we define audit, compensation, nominating and governance committees as monitoring committees, while finance, investment, strategy, acquisitions, science and technology, and executive committees as advising committees.[10] An independent director is classified as a monitoring director if s/he serves on at least one of the monitoring committees. To identify directors devoted to advising duties and minimally involved in monitoring duties, we classify independent directors that sit on at least one of the advising committees but do not serve any monitoring committee as advisory directors. *Monitor Ratio* (*Advisor Ratio*) is computed as the number of monitoring (advisory) directors to the total number of independent directors. *Advisory Committee* is a dummy variable that equals one if the firm sets up at least one separate advisory committee, and zero otherwise. We then sum the number of advisory committees within a firm in a given year and record it in *Number of Advisory Committee*.

Firms generally do not disclose full meeting attendance records at the director level. However, the SEC requires firms to report when a director attend less than 75% of the board meetings during the year. A director is defined as having an attendance problem if s/he missed more than 25% of the board meetings at a firm in a given year. *Monitor Attendance Problem* (*Non-Monitor Attendance Problem*) is an indicator variable set to one if at least

[9]Specifically, we backfill the social capital data from 2006 to 2008 with the estimated social capital index from 2005. The social capital index from 2010 to 2013 is backfilled with the estimation in 2009, and the social capital index from 2015 to 2018 is backfilled with the estimation in 2014.

[10]For 'overlapping' committees that have both monitoring and advising functions, we classify these committees as monitoring committees. For example, some firms have Audit and Finance committee, Governance and Finance committee etc. These committees are monitoring committees by our classification.

one monitoring (non-monitoring) director has an attendance problem in a given year, and zero otherwise. We then sum the number of monitoring (non-monitoring) directors that have attendance problems, scaled by the total number of monitoring (non-monitoring) directors, to construct *Monitor Attendance Problem Ratio* (*Non-Monitor Attendance Problem Ratio*) at the firm level.

3.4 Measuring Other Variables

Prior literature, including Baldenius et al. (2014), Boone et al. (2007), Coles et al. (2008), Linck et al. (2008), and Raheja (2005), has identified that operation complexity, information costs and CEO entrenchment are key determinants of board structure.[11]

Admittedly, as firms grow, they increase in size, borrow more, and diversify into multiple business segments and require more advisory (Coles et al., 2008, Linck et al., 2008). We, therefore, consider the book value of total assets (*Firm Size*), the number of years the firm is recorded in Compustat (*Firm Age*), the sum of long-term debt and current liabilities to the book value of total assets (*Leverage*), and the number of business segments (*Number Segments*) from Compustat Business Segments as proxies for operational complexity. Maug (1997) notes that the monitoring cost is positively associated with the information cost. The proportion of monitoring directors is thus expected to decrease with information costs. We proxy information costs using market-to-book equity ratio (*Market-to-Book*), R&D expense (*R&D*), and stock return volatility (*Return Volatility*) because higher growth opportunity, more R&D investments and higher uncertainty all drive severe information asymmetry, thereby increasing the cost for board monitoring. In addition, the shareholders may structure a monitoring-intense board to discipline entrenched managers. Hence, we include the length

[11]Despite that many of these studies adopt the inside and outside director classification for monitoring and advisory directors, they provide the guidance necessary for us to infer the board's trade-off between monitoring and advisory. In the end, our goal is to control for relevant variables to make sure our results are not driven by omitted variables that influence board structure.

of CEO employment (*CEO Tenure*), the percentage of shares held by the CEO (*CEO Ownership*), and the CEO/Chairperson duality (*CEO Duality*) to control for CEO entrenchment.

Next, to isolate the effect of county social capital from other county attributes such as the economic development and resident demographic profile, we, thus, control for a range of county-level factors following prior studies (Gao et al., 2019, Gupta et al., 2018, Hasan et al., 2017a,b, 2020, Hoi et al., 2018, 2019). Specifically, we account for the annual income per capita (*Per Capita Income*), the growth rate of county population (*Population Growth*), the number of populations per square mile (*Population Density*), the percentage of people who are at least 25 years old or above with a bachelor degree or higher (*Education*), the percentage of residents who adhere to organized religions (*Religiosity*), and the median age of county population (*County Median Age*).

In our analysis on director's meeting attendance, we follow Adams & Ferreira (2009) and Masulis & Mobbs (2014) to control for director's age (*Average Director Age*), retirement status (*Retired Director Ratio*), gender (*Female Director Ratio*), tenure (*Average Director Tenure*), number of outside directorships (*Average Outside Board Seats*), and country of residence (*US Director Ratio*). As the meeting attendance can also be influenced by firm performance and the free-riding issue, we include firm operating performance (*ROA*), and the number of directors on board (*Board Size*) as additional controls.

3.5 Summary Statistics

Table 1 presents the descriptive statistics of our variables. We show that approximately 86.88% of independent directors (*Monitor Ratio*) are considered as monitoring directors and serve on monitoring committees. On average, 8.28% of the independent directors sit on the advisory committees (*Advisor Ratio*) and primarily perform advising responsibilities.[12]

[12]The summary statistic shows the monitoring director and advisory director account for around 95% of total independent directors. The remaining (less than 5%) independent directors sit in non-monitoring and non-advisory committees; these committees include Safety Health and Environment, Human Resources,

Approximately 42% of the firm-year observations have at least one advisory committee, and the mean value of the number of advisory committees is 0.53. However, the median value of zero for both *Advisory Committee* and *Number of Advisory Committee* indicates that most firms do not set up advisory committees. This finding reconciles Faleye et al. (2013), who show that most firms do not have independent directors that solely serve on advisory committees. Moreover, only 4% (1%) of the observations have at least one monitoring (non-monitoring) director who attended less than 75% of board meetings. A similar proportion of directors with attendance problems is also documented in Adams & Ferreira (2009) and Masulis & Mobbs (2014).

[Insert Table 1 Around Here]

Social Capital has a mean value of -0.55, similar to that (-0.54) reported in Hasan et al. (2017b). Figure 1 depicts the average social capital index for 2005, 2009 and 2014 of each county. A darker shade reflects a higher level of social capital. The figure is consistent with the official annual figures provided by NRCRD as the social capital is higher in upper Midwest and Northwest counties but lower in Southwest and Southeast counties. On average, the natural logarithm of per capita income is 10.90, and the county population growth rate is 1% per annum, the population density is 7.25, the fraction of residents claimed to be religious is 0.57, and 34.68% of the population have a bachelor's degree or higher. The county median age is 36.87. These statistics are globally consistent with previous studies such as Hasan et al. (2017b) and Hoi et al. (2019). The statistics for other firm-level and CEO-level variables are comparable to previous studies; for example, the average firm size is 7.60 in natural logarithm, and CEO age averaged at 56.

Reserves, Special, Independent Director, and other firm-specific committees. Independent directors in these committees may perform a combination of monitoring or advising duties but lack focus, as suggested by the survey data (Adams, 2010). Nevertheless, our current measure advocated by Faleye et al. (2011), Faleye et al. (2013), Klein (1998), and Reeb & Upadhyay (2010) captures the majority of directors that have a focused role in either monitoring or advisory.

[Insert Figure 1 Around Here]

4 Analysis of Board Structure

4.1 The Effect of Social Capital on Monitoring and Advisory Director Assignment

Figure 2 visually displays the main findings of this paper. We sort firms into quartiles according to the social capital of the county in which the firm resides and presents the average fraction of the monitoring and advisory director for each quartile. Panel A shows the ratio of monitoring director decreases from 88.63% at the bottom social capital quartile (Q1) to 84.98% at the highest social capital quartile (Q4), and the difference (3.65%) is statistically significant at the 1% level. In stark contrast, the ratio of advisory directors in Panel B increases from 6.70% in Q1 to 10.22% in Q4, and the 3.52% increase is also statistically significant at the 1% level. This figure implies that higher social capital leads to fewer monitoring directors but more advisory directors on the board.

[Insert Figure 2 Around Here]

Table 2 presents the multivariate regression analysis on the effect of social capital on the fraction of monitoring and advisory directors. We estimate Eq.(1) where the dependent variable is *Monitor Ratio* in columns (1) through (3) and *Advisor Ratio* in columns (4) through (6). Following Boone et al. (2007), Coles et al. (2008), and Linck et al. (2008), columns (1) and (4) only control for firm complexity (*Firm Size*, *Number of Segment*, *Firm Age*, *Leverage*), costs of monitoring and advising (*Market-to-Book*, *R&D*, *Return Volatility*), and CEO entrenchment (*CEO Tenure*,*CEO Ownership*, *CEO Duality*). In column (1), we find that the coefficient on *Social Capital* is negative (-0.633) but insignificant. Column (4) presents a positive (1.155) and highly significant coefficient on *Social Capital*. This finding shows that firms

headquartered in high-social-capital counties assign more independent directors to advisory committees to perform advisory duties. Economically, the *Advisory Ratio* of firms that reside in counties with social capital in the 75th percentile is 1.24 per cent point higher than that of firms that reside in counties with social capital in the 25th percentile. For an average firm in our sample with the advisory outside director ratio of 8.28 per cent, this result suggests an interquartile increase in social capital index leads to a 14.94% increase in advisory directors. Thus, the above evidence supports our central hypothesis.

[Insert Table 2 Around Here]

Columns (2) and (5) of Table 2 additionally control for CEO-level variables (*Female CEO*, *CEO Age*, *Ivy League CEO*, *Recession Graduate*), *Independent Board Size*, and county-level variables (*Per Capita Income*, *Population Growth*, *Population Density*, *Religiosity*, *Education*, *County Median Age*). We continue to find a positive but insignificant estimate on *Social Capital* in column (2) for *Monitor Ratio* but positive and significant in column (5) for *Advisory Ratio*. Coles et al. (2008) argue that using factor analysis increases the power of regression analysis and circumnavigates problems resulting from multicollinearity. Thus, in columns (3) and (6), we use principal component analysis to extract principal factors of *Complexity*, *Information Costs*, *CEO Entrenchment* and *County Information* to replace the corresponding variables. These results reaffirm our previous findings.

The effect of social capital is independent of firm-, CEO-, and county-level characteristics. Consistent with Boone et al. (2007), Coles et al. (2008), and Linck et al. (2008), larger and mature firms, which have more complex operations and higher advising needs, tend to appoint fewer monitoring directors and more advisory directors. In columns (3) and (6), the principle factor of firm complexity is negatively linked to *Monitor Ratio* but positively related to *Advisor Ratio*. The coefficients on proxies for information costs are negative for *Monitor Ratio* and positive for *Advisor Ratio* but insignificant. Higher information costs reduce the benefit of

board monitoring but also make the information extraction for independent advisory directors more difficult. Thus, information cost does not significantly affect the board composition regarding the proportion of monitoring and advisory directors.

There is conflicting evidence documented in prior literature on how CEO power may influence board structure. We find *CEO Ownership* is positively related to *Monitor Ratio* while negatively linked to *Advisor Ratio*, consistent with Raheja (2005) and Linck et al. (2008) that monitoring increases with the CEO's influence. However, we show *CEO Duality* is negatively associated with *Monitor Ratio* but positively related to *Advisor Ratio*. This finding is supported by Hermalin & Weisbach (1988), who argue that independent board monitoring decreases in CEO's perceived ability and bargaining power because competent decision-makers should have more control to make decisions. Linck et al. (2008) argue that the probability of having CEO duality is positively linked to the CEO's perceived ability. Hence, our findings on CEO duality may be dominated by this line of reasoning.

In addition, the number of independent directors is negatively related to the fraction of the monitoring director but positively related to the fraction of the advisory director, suggesting shareholders assign more directors to advisory committees when the firm has a larger pool of independent director. The county-level variables that account for the county's quality of the labour market, economic development, and religious adhesion do not matter in the allocation of monitoring and advisory directors.

In sum, findings from Table 2 show that when the firm resides in a high-social-capital county, they tend to appoint more independent directors to committees that focus on advising duties. However, the shareholders do not necessarily reduce the fraction of monitoring directors. One possible explanation is that the SOX act imposed strict requirements on the independence of monitoring committees, the room for shareholders to reduce the number of independent monitoring directors is limited, even when the monitoring need is low. These results are consistent with the expectation of our main hypothesis that the board tends to

be more advisory-oriented when social capital serves as a societal monitoring mechanism to discipline managers.

4.2 Cross-Sectional Variations

In this sub-section, we present additional analysis that strengthens the above interpretation by investigating the heterogeneous variations in the relation between social capital and board composition. We first examine whether external governance mechanisms affect the scope of the influence of social capital on the board structure.[13] External monitoring effectively mitigates the agency issue by imposing constraints to reduce managerial opportunistic discretions (Denis, Denis & Sarin, 1997, Hanson & Song, 2006, Hartzell & Starks, 2003, Jensen, 1991, 1993, Ma, Novoselov, Zhou & Zhou, 2019). Prior studies, including Chen, Sun, Tang & Wu (2011), Irani & Oesch (2013), Jensen & Meckling (1976), and Healy & Palepu (2001) proclaim that analysts provide discipline independently of traditional governance and serve as monitors to substitute corporate governance. With substantial industry knowledge and training in finance, analysts track corporate financial statement, probe into business strategies, and directly interact with management regarding issues from a wide range of aspects (Adhikari, 2016, Yu, 2008). Managers, therefore, perceive analysts as one of the most important groups affecting the market value of their firm (Graham, Harvey & Rajgopal, 2005). We, therefore, use the number of analysts following a firm as a proxy for the strength of external governance the firm is subjected to.

[Insert Table 3 Around Here]

Columns (1) and (2) of Table 3 display the results of regressions that include the interaction

[13]Compared with internal governance mechanisms, external governance provides a clearer setting because a firm's internal governance mechanisms are likely to be endogenously determined and affected by the firm's exposure to external controls (Giroud & Mueller, 2010, 2011, Kalodimos, 2017, Tian & Twite, 2011). This is particularly a concern in our setting as we study the board composition, which is closely related to internal governance.

between *Social Capital* and the *High Coverage dummy*, this dummy takes the value of one if a firm's analyst coverage is in the highest tertile of all sample firms, and zero otherwise. We find that although the coefficient on *Social Capital* remains negative and insignificant in column (1), the coefficient on the interaction term is negative (-1.038) and statistically significant at the 1% level. This result suggests that when external governance is strong, the board significantly reduces the proportion of monitoring directors. In column (2) where the dependent variable is *Advisor Ratio*. Notably, the coefficient on *Social Capital* and that on *Social Capital* × *High Coverage* are significantly positive, suggesting that the positive relationship between social capital and the board's advisory focus is more prominent for firms subject to intense external monitoring. These findings show that external corporate governance plays a crucial role in shaping the board structure. More importantly, shareholders can assemble a board that focuses more on advisory function and reduces monitoring when the firm is subject to the scrutiny of external corporate mechanisms and social capital.

The literature to date has established that managerial incentive is linked to product market competition (Baggs & De Bettignies, 2007, Hart, 1983, Shleifer & Vishny, 1997). Managers are less likely to expropriate private benefits in a highly competitive market as it may lead to inferior performance and termination. Hence, the agency issue may be less severe for firms that operate in highly competitive industries (Nickell, Nicolitsas & Dryden, 1997). Randøy & Jenssen (2004) argue that board monitoring is less demanding and even redundant when a competitive product market monitors the firm. If social capital can discipline the management, board monitoring becomes less crucial and may not be the shareholders' priority. Instead, the shareholders can assemble an advisory-oriented board to help the firm achieve competitive edges in the competitive market.

We measure the product market competition using the industry Herfindahl-Hirschman Index (HHI), and define competitive industries as those with HHI at the bottom tertile of our sample industries. *High Competition* dummy is coded to one for firms primarily operating in

a competitive industry, and zero otherwise. In column (3), the estimate on the interaction term between *Social Capital* and *High Competition* is significantly negative, implying that firms headquartered in high-social-capital counties and operating in a competitive environment have lower *Monitor Ratio*. More importantly for our purposes, we observe significantly positive coefficients on *Social Capital* and the interaction term in column (4), indicating that the increased focus on board advisory function driven by social capital is stronger for firms operating in highly competitive industries.

Last, Klein (1998) suggests that complex firms have a greater need for advisory from directors' valuable expertise. Columns (5) and (6) test whether the substitute effect of social capital is more substantial for firms with complex operations. We define complex firms as those with the principle factor of complexity that lies in the top tertile, and create a dummy variable *High Complexity* which is assigned a value of one for complex firms and zero otherwise. In column (5), we find a negative and statistically significant coefficient on the interaction between social capital and the complex indicator. The coefficients on the social capital index and the interaction term are both positive and highly significant in column (6), consistent with the notion that social capital serves as a substitute for board monitoring when the firm is more complex, and the board can allocate the limited human resources to the advisory function to respond to the greater needs for advisory. Findings from Table 3, together, suggest that high social capital substitutes board monitoring in restraining managers' opportunistic behaviours and additional board monitoring becomes less relevant, especially when the firm is subject to intense external monitoring, operates in a highly competitive product market, and has complex operations.

4.3 The Effect of Omitted Unobservable Variables

Our analysis so far has controlled for the firm-, board-, CEO-, and county-level characters and the year and industry effects. However, unobserved characteristics could still bias our

findings. We address the omitted unobservable variable concern in this section by controlling for region, division, state, county fixed effects and time-invariant unobserved firm variables. Table 4 repeats the analysis on board composition after controlling for these variables.

[Insert Table 4 Around Here]

According to the U.S. Department of Commerce Economics and Statistics Administration classification, the geographical areas in the U.S are sorted into four regions and nine divisions.[14] Columns (1) and (2) of Panel A of Table 4 account for the region fixed effect, and column (3) and (4) control for the division fixed effects. The board structure is also likely to be affected by state attributes, such as state law or regulation. We control for state effects in column (1) and (2) of Panel B. County fixed effects posit a significant concern to our study as the social capital index is measured at the county level. Hence, we control for county fixed effect in columns (3) and (4) of Panel B. After accounting for these geographical fixed effect, we continue to find a negative but insignificant relationship between *Social Capital* and *Monitor Ratio*, whereas a positive and significant relationship between *Social Capital* and *Advisor Ratio*. These results suggest that our key findings are not plagued by unobserved, time-invariant geographical factors.

Despite that prior studies have identified that board structure changes with the firm's characteristics and contracting environment, board structure remains relatively stable compare to other firm policies. In addition, the social capital of each county is also relatively stable. Due to the slow-moving nature of our key variables, a standard firm fixed-effect model is inappropriate and not applicable (Griffin, Li & Xu, 2021).[15] We, therefore, adopt two

[14]The four regions are Northeast, Midwest, South, and West. The nine divisions are New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific.

[15]Roberts & Whited (2013) and Zhou (2001) point out that firm fixed-effect model exacerbates measurement error problems and results in biased estimates with slow-moving variables. Previous studies on social capital, including Gupta et al. (2018), Hasan et al. (2017b), and Hoi et al. (2019), do not use firm fixed-effect model.

alternative methods to address the concerns of omitted firm-level variables. First, we follow (Hoi et al., 2019) to proxy firm-fixed effects with the *E-Index*. As *E-Index* is relatively stable, it should capture a large portion of time-invariant firm-level factors that influence the board's monitoring and advising functions. We, therefore, additionally control for *E-Index* and re-estimate Eq. (1). The results presented in columns (1) and (2) of Panel C conform with our previous findings.

Further, we follow Griffin et al. (2021) to adopt a long-window change-on-change analysis to maximize temporal variation in our variables. Similar to the standard firm fixed-effect model, the change-to-change analysis removes time-invariant unobserved firm-level variables.[16] As the social capital is estimated at 2005, 2009 and 2014, we compute the 5-year rolling window difference for all variables. Specifically, the dependent variable is measured as the change from year t to $t+5$, while all independent variables are measured as the change from year $t-6$ to $t-1$. Columns (3) and (4) of Panel C report the results and show that the temporal changes in social capital are negatively related to *Monitor Ratio* but positively and significantly linked to *Advisor Ratio*. Overall, Table 4 confirms that our main findings are not afflicted by unobserved time-invariant region, division, state, county and firm factors.[17]

4.4 Instrumental Variable Approach

Next, we address the potential concern that social capital and board composite are endogenously determined. In the context of our study, the endogeneity may come in two forms. First, reverse causality. It could be the case that firms with poor governance mechanisms and ineffective board structure self-select into a given county. Thus, opportunistic behaviours and low employee morale translate into low levels of social capital in the county. Second, both

[16] See also Bena, Ferreira, Matos & Pires (2017), Bloom, Draca & Van Reenen (2016), and David, Dorn & Hanson (2013) that employ the long-window change-to-change analysis to address the slow-moving nature of key variables.

[17] In unreported tables, we used random effect panel regression models and obtained similar results.

social capital and the board structure may be simultaneously determined. For instance, the political environment, workplace culture, and generosity of the county can simultaneously affect social capital and board structure.

We adopt an IV approach to mitigate the above concerns. Glaeser, Laibson, Scheinkman & Soutter (2000) and Knack & Keefer (1997) show that people are less likely to trust each other when they belong to different races. Alesina & La Ferrara (2000) model that more homogeneous communities witness higher levels of social interactions, which enhance social capital. Indeed Alesina & La Ferrara (2000) and Putnam (2007) provide evidence that social capital is lower in communities that are more racially and ethnically fragmented. These findings suggest that the racial heterogeneity of a county can affect the level of social capital of the county. However, it is unlikely that racial diversity is correlated with the appointment of directors because directors are assigned to monitoring or advisory function based on their expertise (Bhagat & Black, 1999, Faleye et al., 2011, Klein, 1998, Schwartz-Ziv & Weisbach, 2013), not because of their race or ethnicity.

In light of the above discussions, we follow Hasan et al. (2017b) and Gupta et al. (2018) to adopt the measure of racial heterogeneity as an instrument for social capital. We calculate the Racial Herfindahl Index across the ethnic categories reported in U.S. Census Bureau that is adopted by Hasan et al. (2017b), namely Non-Hispanic White, Non-Hispanic Black or African American, Asian, and Hispanic. *Race Diversity* is measured as one minus the Racial Herfindahl Index. Therefore, a higher value of *Race Diversity* represents a higher level of racial fragmentation. Column (1) of Table 5 reports the first-stage result of the IV approach. As expected, we find a negative association between *Race Diversity* and *Social Capital*. The Cragg-Donald Wald F statistic is above the threshold suggested by Staiger & Stock (1997) and Stock (1997), validating the effectiveness of our instrument.

[Insert Table 5 Around Here]

Columns (2) and (3) of Table 5 present the second-stage results on monitoring and advisory director ratio, respectively. The result in column (2) is consistent with our baseline analysis in the way that the social capital does not significantly affect the fraction of monitoring directors. Notably, the coefficient on the endogenous *Social Capital IV* in column (3) is positive (1.373) and statistically significant at the 1% level when the dependent variable is the ratio of advisory directors. This result, to some extent, accentuates the endogeneity concerns of our study and confirms that high social capital results in a more advisory-focused board.

4.5 Propensity Score Matching

Firms that reside in high-social-capital counties may be fundamentally different from firms that reside in low-social-capital counties. We, therefore, control for the observable differences in firm attributes by employing the PSM technique, where we compare the advisory and monitoring director ratio of a treatment group against a control group. We follow Hoi et al. (2019) to sort counties with social capital index in the top quartile as high-social-capital counties, while those in the bottom quartile as low-social-capital counties. A propensity score for residing in a high-social-capital county is calculated from a logistic model with the same set of independent variables in Eq. (1). The treatment group includes firms located in high-social-capital counties, while the control group consists of comparable firms with a similar propensity within 1% caliper but reside in low-social-capital counties.

Panel A of Table 6 presents the average treatment effect on the treated (ATT). It reveals significant differences in *Monitor Ratio* and *Advisor Ratio* for the treatment and control firms. Notably, the advisory ratio is 9.78% for treatment firms (headquartered in high social capital counties) but 7.56% for the controls (similar firms that reside in low social capital counties). The difference (2.22%) is statistically significant with a t-statistic of 4.31. Regression results based on the matched samples presented in Panel B are consistent with our main findings. That is, firms that reside in high-social-capital counties have a significantly higher *Advisor*

Ratio.

[Insert Table 6 Around Here]

4.6 Difference-in-Differences with Headquarter Relocations

Firms seldomly change their headquarter locations (Hoi et al., 2019). Even when they do so, most firms relocate their headquarters within the same city, and few firms move their headquarters to a different county. The lack of mobility raises the concern that our results only capture the cross-sectional variations in social capital. We attenuate this concern by performing a DiD analysis on firms that relocate headquarters to a different county, which allows us to explore the effect of time-varying changes in social capital on the time-varying board structure.

Similar to Hoi et al. (2019), we require the firm to have at least three years of data each before and after the relocation. We identify 135 firms that relocated to another county meet our requirement, of which 68 firms move to counties with higher social capital, and 67 firms relocate to counties with lower social capital. These relocations yield 394 firm-year observations for the pre-relocation period and 897 firm-year observations for the post-relocation period. We generate *Increase Relocation*, a dummy variable assigned a value of one for firms relocated to counties with higher social capital, and create a *Post Relocation* dummy indicates the years after relocation. We regress *Monitor Ratio* (*Advisor Ratio*) on *Increase Relocation*, *Increase Relocation* $\times$ *Post Relocation*, and the same set of control variables used in Eq. (1) in our DiD setting, and present the results in Table 7. The negative but insignificant DiD estimator in column (1) suggests that the relocation does not affect the percentage of monitoring directors. However, the positive and statistically significant coefficient on the interaction term in column (2) indicates that firms that relocate to counties with a higher level of social capital appoint more independent directors to advisory committees when compared

to firms that relocate to counties with lower social capital. These results confirm that the time-varying changes in social capital can explain the differences in board composition.

[Insert Table 7 Around Here]

4.7 Alternative Sampling and Alternative Measures

We construct the social capital index using census data in 2005, 2009 and 2014 from NRCRD and backfill the missing year data with the most recent social capital index available from preceding years. Although this method is widely adopted in prior literature on social capital such as Hasan et al. (2017a), Hasan et al. (2017b), and Hoi et al. (2019), concerns arise as there is a lack of variation in backfilled social capital data. Here, we repeat our main analysis using an alternative sampling method and measures of social capital to alleviate this concern.

Panel A 8 repeats the analysis on board composition only for the three years when the social capital index is directly available. Columns (1) and (3) employ the full model, and columns (2) and (4) adopt the model using principal factors. The results show a negative but insignificant coefficient on *Social Capital* in columns (1) and (2) where the dependent variable is *Monitor Ratio*, whereas a significantly positive coefficient on *Social Capital* in columns (3) and (4) where the dependent variable is *Advisor Ratio*. In Panel B of Table 8, we follow Jha & Chen (2014) to use the linear interpolation to fill the missing social capital data in-between years, which is also a common practice in the literature (Alesina & La Ferrara, 2000, Kumar, Page & Spalt, 2011), and find similar results.[18]

[Insert Table 8 Around Here]

We then explore the sensitivity of our results regarding an alternative measure of social capital in Panel C of Table 8. Following Hasan et al. (2017a) and Hasan et al. (2017b), we use

[18]The last social capital index which is directly constructed from census data is the index for 2014. Therefore, the sample period for using the interpolated social capital index is from 2005 to 2014.

the state-level organ donation data from Organ Procurement and Transplantation Network (OPTN) to construct the alternative measure of social capital (*Organ Donation*). Specifically, we define *Organ Donation* as the annual data on the number of total donors of all organ types scaled by the total population in the state. The Pearson correlation coefficient between *Organ Donation* and *Social Capital* is 0.36 and significant at the 1% level, suggesting a good fit of this measure. We find that the coefficient on *Organ Donation* is negative in columns (1) and (2) when the dependent variable is *Monitor Ratio*, but significantly positive in columns (3) and (4) when the dependent variable is *Advisor Ratio*. Overall, our key findings are robust to different sampling methods and an alternative social capital measure.

5 Social Capital and Other Board Activities

Thus far, our analysis has centred on the effect of social capital on board structure with respect to the allocation of monitoring and advisory directors. In this section, we examine whether social capital influences the advisory committee's set-up and the director's board meeting attendance as additional evidence on the board's focus.

5.1 The Effect of Social Capital on the Set-up of Advisory Committee

Committees within the board are empowered to propose actions, set firm policies, and work closely with the management. Many board activities actually take place at committee meetings rather than at board meetings (Kesner, 1988, Klein, 1998, Stellner, Klein & Zwergel, 2015). Since the passage of SOX in 2002, NYSE and NASDAQ have mandated firms to set up audit, compensation, and governance committee. Beyond the three required committees, shareholders have the discretion to set up other committees to allow directors to specialize in particular areas (De Kluyver, 2009, Rosen, 1983). For instance, firms may set up strategy

committees, finance committees and other advisory-focused committees to provide counsel to management.

However, not all board have committees that are specialized in advisory, and many set up committees to perform dual responsibility (i.e. Governance and Finance committee). Directors require the management to share firm-specific information regarding potential constraints and opportunities to provide effective advisory. To encourage the management to share key strategic information and mitigate informational conflicts (Adams & Ferreira, 2007, Faleye et al., 2011, Holmström, 2004), firms that highly value the advisory function of the board may set up separate advisory committees to minimally involved in monitoring and guide the management in terms of strategic decisions. Given that social capital serves as a societal mechanism to discipline managers, we propose that firms in high-social-capital counties are more likely to set up separate advisory committees.

We test the effect of social capital on the likelihood of setting up advisory committees and the number of advisory committees in Table 9. In columns (1) through (3), we employ probit model where the dependent variable is *Advisory Committee*, which is a dummy variable equals one if the firm sets up at least one advisory committee, and zero otherwise. We show that the estimate on *Social Capital* is positive and highly significant across all columns, suggesting that firms in high-social-capital counties are more likely to set up separate advisory committees. Firms with a greater focus on advisory may set up more than one advisory committee to perform more specialized advisory duties. Thus, we explore the influence of social capital on the number of advisory committees in a board in columns (4) through (6) of Table 9. We find a that firms in high-social-capital communities are associated with more advisory committees, evidenced by the significantly positive coefficient on *Social Capital* across all three columns. Taken together, the results displayed in Table 9 conform that high-social-capital lead to a more advisory-focused board.

[Insert Table 9 Around Here]

5.2 The Effect of Social Capital on Director Attendance

The primary way for directors to obtain the information necessary to perform their duties is to attend board meetings (Adams & Ferreira, 2009). As directors have limited time and energy, the attendance record at board meetings is an indicator of directors' commitment to their responsibilities (Masulis & Mobbs, 2014). Since social capital plays a part in mitigating the agency issue (Gao et al., 2019, Gupta et al., 2018, Hoi et al., 2019), the board of directors may be more likely to trust the executive team because managers are less likely to undertake self-interested activities if the firm resides in a high social capital county. Thus, monitoring directors may reduce their monitoring efforts and attend fewer board meetings.

To test the above conjecture, we examine board meeting attendance at the firm level in Table 10.[19] Column (1) presents results from a probit model, where the dependent variable, *Monitor Attendance Problem*, equals one if the firm has at least one monitoring director attend less than 75% of board meetings in a given year. The coefficient on *Social Capital* is positive and statistically significant at the 1% level, implying that the firm headquartered in a high-social-capital county is more likely to have monitoring directors with attendance problems. In Column (2) where the dependent variable is the ratio of monitoring directors with attendance problem to the total number of monitoring directors (*Monitor Attendance Problem Ratio*), the significantly positive coefficient on *Social Capital* suggests that the higher the social capital in the county where the firm is headquartered, the more monitoring directors tend to miss board meetings. These findings indicate that a higher level of social capital, which encourages managers' honest dealing, leads monitoring directors to reduce monitoring effort. Columns (3) and (4) of Table 10 examine the board meeting attendance record of other independent directors.[20] The estimate on *Social Capital* is negative and significant in both

[19]The directorship-level attendance analysis is presented in Table A.3 from the Appendices. Results are consistent in the way that monitoring directors are more likely to have attendance problems.

[20]Director meeting attendance data is obtained from ISS. Unfortunately, ISS does not provide director board assignment other than the audit, compensation, nominating and governance committees, which makes it extremely difficult to identify advisory directors from ISS data accurately. However, our summary statistics

columns (3) and (4), implying that social capital reduces both the likelihood and the number of non-monitoring independent directors with attendance problems.

[Insert Table 10 Around Here]

6 Conclusion

The board of directors has both monitoring and advisory functions. Given that the two functions compete for directors' time and energy, the increased focus on one function often comes at the cost of the other. Corporate board trade offs the monitoring and advisory functions according to firm-specific characteristics and the contracting environment. We uncover the role of social capital in the trade-off between directors performing monitoring duties and those providing strategic advice, and further demonstrate that the analyst coverage, operational complexity, and competitive markets play a part in the scope of the effect of social capital on board composition.

This study empirically shows that social capital is crucial in balancing the board's monitoring and advisory functions. Firms headquartered in communities with high social capital tend to appoint more advisory directors and set up more advisory committees, whereas monitoring directors from firms in high-social-capital communities reduce their monitoring efforts and attend fewer board meetings. We argue that social capital can substitute board monitoring, especially when the firm is subject to intense external monitoring, operates in a highly competitive product market, or has more advisory needs. These findings offer a new perspective to shareholders to effectively allocate the scarce director-related human capital to assemble a board that balances the firm's monitoring and advisory needs.

show that only less than 5% of independent directors are neither monitors nor advisors; thus, grouping these directors with advisory directors may only have a marginal impact on our results.

References

Adams, R. B. (2010). Asking directors about their dual roles. In *Finance and Corporate Governance Conference*.

Adams, R. B. & Ferreira, D. (2007). A theory of friendly boards. *The Journal of Finance*, *62*(1), 217–250.

Adams, R. B. & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, *94*(2), 291 – 309.

Adams, R. B., Hermalin, B. E., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature*, *48*(1), 58–107.

Adhikari, B. K. (2016). Causal effect of analyst following on corporate social responsibility. *Journal of Corporate Finance*, *41*, 201 – 216.

Adler, P. S. & Kwon, S.-W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, *27*(1), 17–40.

Alesina, A. & La Ferrara, E. (2000). Participation in Heterogeneous Communities. *The Quarterly Journal of Economics*, *115*(3), 847–904.

Armstrong, C. S., Guay, W. R., & Weber, J. P. (2010). The role of information and financial reporting in corporate governance and debt contracting. *Journal of Accounting and Economics*, *50*(2), 179 – 234.

Baggs, J. & De Bettignies, J.-E. (2007). Product market competition and agency costs. *The Journal of Industrial Economics*, *55*(2), 289–323.

Baldenius, T., Melumad, N., & Meng, X. (2014). Board composition and CEO power. *Journal of Financial Economics*, *112*(1), 53 – 68.

Becht, M., Franks, J., Mayer, C., & Rossi, S. (2008). Returns to shareholder activism: Evidence from a clinical study of the hermes UK focus fund. *The Review of Financial Studies*, *22*(8), 3093–3129.

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

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? *The Quarterly Journal of Economics*, *119*(1), 249–275.

Bhagat, S. & Black, B. (1999). The uncertain relationship between board composition and firm performance. *The Business Lawyer*, *54*(3), 921–963.

Bloom, N., Draca, M., & Van Reenen, J. (2016). Trade induced technical change? The impact of Chinese imports on innovation, it and productivity. *The Review of Economic Studies*, *83*(1), 87–117.

Boone, A. L., Casares Field, L., Karpoff, J. M., & Raheja, C. G. (2007). The determinants of corporate board size and composition: An empirical analysis. *Journal of Financial Economics*, *85*(1), 66 – 101.

Brickley, J. A. & Zimmerman, J. L. (2010). Corporate governance myths: Comments on Armstrong, Guay, and Weber. *Journal of Accounting and Economics*, *50*(2), 235 – 245.

Buonanno, P., Montolio, D., & Vanin, P. (2009). Does social capital reduce crime? *The Journal of Law and Economics*, *52*(1), 145–170.

Cameron, A. & Miller, D. (2011). Robust inference with clustered data. Handbook of Empirical Economics and Finance.

Chen, S., Sun, Z., Tang, S., & Wu, D. (2011). Government intervention and investment efficiency: Evidence from china. *Journal of Corporate Finance*, *17*(2), 259 – 271.

Chen, S.-S., Chen, Y.-S., Kang, J.-K., & Peng, S.-C. (2020). Board structure, director expertise, and advisory role of outside directors. *Journal of Financial Economics*, *138*(2), 483 – 503.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, *94*, S95–S120.

Coleman, J. S. (1994). *Foundations of social theory*. Harvard university press.

Coles, J. L., Daniel, N. D., & Naveen, L. (2008). Boards: Does one size fit all? *Journal of Financial Economics*, *87*(2), 329 – 356.

Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal*, *42*(6), 674–686.

David, H., Dorn, D., & Hanson, G. H. (2013). The china syndrome: Local labor market effects of import competition in the united states. *American Economic Review*, *103*(6), 2121–68.

De Kluyver, C. A. (2009). *A primer on corporate governance*. Business Expert Press.

Denis, D. J., Denis, D. K., & Sarin, A. (1997). Agency problems, equity ownership, and corporate diversification. *The Journal of Finance*, *52*(1), 135–160.

Dinç, I. S. (2005). Politicians and banks: Political influences on government-owned banks in emerging markets. *Journal of Financial Economics*, *77*(2), 453 – 479.

Duchin, R., Matsusaka, J. G., & Ozbas, O. (2010). When are outside directors effective? *Journal of Financial Economics*, *96*(2), 195 – 214.

Elster, J. (1989). Social norms and economic theory. *Journal of Economic Perspectives*, *3*(4), 99–117.

Faleye, O., Hoitash, R., & Hoitash, U. (2011). The costs of intense board monitoring. *Journal of Financial Economics*, *101*(1), 160 – 181.

Faleye, O., Hoitash, R., & Hoitash, U. (2013). Advisory directors. *Available at SSRN 1866166*.

Fama, E. F. & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics*, *26*(2), 301–325.

Ferreira, D., Ferreira, M. A., & Raposo, C. C. (2011). Board structure and price informativeness. *Journal of Financial Economics*, *99*(3), 523 – 545.

Fischer, H. M. & Pollock, T. G. (2004). Effects of social capital and power on surviving transformational change: The case of initial public offerings. *Academy of Management Journal*, *47*(4), 463–481.

Fukuyama, F. (2001). Social capital, civil society and development. *Third World Quarterly*, *22*(1), 7–20.

Gao, Z., Li, L., & Lu, L. Y. (2019). Social capital and managers' use of corporate resources. *Journal of Business Ethics*, 1–21.

Giroud, X. & Mueller, H. M. (2010). Does corporate governance matter in competitive industries? *Journal of Financial Economics*, *95*(3), 312 – 331.

Giroud, X. & Mueller, H. M. (2011). Corporate governance, product market competition, and equity prices. *The Journal of Finance*, *66*(2), 563–600.

Glaeser, E. L., Laibson, D. I., Scheinkman, J. A., & Soutter, C. L. (2000). Measuring Trust. *The Quarterly Journal of Economics*, *115*(3), 811–846.

Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, *40*(1), 3 – 73.

Griffin, D., Li, K., & Xu, T. (2021). Board gender diversity and corporate innovation: International evidence. *Journal of Financial and Quantitative Analysis*, *56*(1), 123–154.

Guiso, L., Sapienza, P., & Zingales, L. (2004). The role of social capital in financial development. *American Economic Review*, *94*(3), 526–556.

Guiso, L., Sapienza, P., & Zingales, L. (2011). Chapter 10 - civic capital as the missing link. volume 1 of *Handbook of Social Economics* (pp. 417 – 480). North-Holland.

Gupta, A., Raman, K., & Shang, C. (2018). Social capital and the cost of equity. *Journal of Banking Finance*, *87*, 102 – 117.

Hanson, R. C. & Song, M. H. (2006). Corporate governance and asset sales: The effect of internal and external control mechanisms. *Financial Review*, *41*(3), 361–386.

Harris, M. & Raviv, A. (2006). A Theory of Board Control and Size. *The Review of Financial Studies*, *21*(4), 1797–1832.

Hart, O. D. (1983). The market mechanism as an incentive scheme. *The Bell Journal of Economics*, *14*(2), 366–382.

Hartzell, J. C. & Starks, L. T. (2003). Institutional investors and executive compensation. *The Journal of Finance*, *58*(6), 2351–2374.

Hasan, I., Hoi, C. K., Wu, Q., & Zhang, H. (2017a). Does social capital matter in corporate decisions? Evidence from corporate tax avoidance. *Journal of Accounting Research*, *55*(3), 629–668.

Hasan, I., Hoi, C. K., Wu, Q., & Zhang, H. (2017b). Social capital and debt contracting: Evidence from bank loans and public bonds. *Journal of Financial and Quantitative Analysis*, *52*(3), 1017–1047.

Hasan, I., Hoi, C. K., Wu, Q., & Zhang, H. (2020). Is social capital associated with corporate innovation? Evidence from publicly listed firms in the U.S. *Journal of Corporate Finance*, *62*, 101623.

Healy, P. M. & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, *31*(1), 405 – 440.

Hermalin, B. E. & Weisbach, M. S. (1988). The determinants of board composition. *The RAND Journal of Economics*, 589–606.

Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological review*, *94*(3), 319.

Hilary, G. & Hui, K. W. (2009). Does religion matter in corporate decision making in America? *Journal of Financial Economics*, *93*(3), 455 – 473.

Hillman, A. J. & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, *28*(3), 383–396.

Hoi, C. K., Wu, Q., & Zhang, H. (2018). Community social capital and corporate social responsibility. *Journal of Business Ethics*, *152*(3), 647–665.

Hoi, C. K., Wu, Q., & Zhang, H. (2019). Does social capital mitigate agency problems? Evidence from chief executive officer (CEO) compensation. *Journal of Financial Economics*, *133*(2), 498 – 519.

Holmström, B. (2004). Pay without performance and the managerial power hypothesis: A comment. *J. Corp. L.*, *30*, 703.

Irani, R. M. & Oesch, D. (2013). Monitoring and corporate disclosure: Evidence from a natural experiment. *Journal of Financial Economics*, *109*(2), 398 – 418.

Jensen, M. C. (1991). *Corporate control and the politics of finance*. November.

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance*, *48*(3), 831–880.

Jensen, M. C. & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305 – 360.

Jha, A. (2019). Financial reports and social capital. *Journal of Business Ethics*, *155*(2), 567–596.

Jha, A. & Chen, Y. (2014). Audit Fees and Social Capital. *The Accounting Review*, *90*(2), 611–639.

Kalodimos, J. (2017). Internal governance and performance: Evidence from when external discipline is weak. *Journal of Corporate Finance*, *43*, 193 – 216.

Kesner, I. F. (1988). Directors' characteristics and committee membership: An investigation of type, occupation, tenure, and gender. *Academy of Management Journal*, *31*(1), 66–84.

Kim, K., Mauldin, E., & Patro, S. (2014). Outside directors and board advising and monitoring performance. *Journal of Accounting and Economics*, *57*(2), 110 – 131.

Klein, A. (1998). Firm performance and board committee structure. *The Journal of Law and Economics*, *41*(1), 275–304.

Knack, S. & Keefer, P. (1997). Does Social Capital Have an Economic Payoff? A Cross-Country Investigation*. *The Quarterly Journal of Economics*, *112*(4), 1251–1288.

Kumar, A., Page, J. K., & Spalt, O. G. (2011). Religious beliefs, gambling attitudes, and financial market outcomes. *Journal of Financial Economics*, *102*(3), 671 – 708.

La Pprta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. *The Journal of Finance*, *52*(3), 1131–1150.

Lederman, D., Loayza, N., & Menéndez, A. (2002). Violent crime: Does social capital matter? *Economic Development and Cultural Change*, *50*(3), 509–539.

Lehn, K. M., Patro, S., & Zhao, M. (2009). Determinants of the size and composition of us corporate boards: 1935-2000. *Financial Management*, *38*(4), 747–780.

Lin, N. (1999). Social networks and status attainment. *Annual review of sociology*, *25*(1), 467–487.

Linck, J. S., Netter, J. M., & Yang, T. (2008). The determinants of board structure. *Journal of Financial Economics*, *87*(2), 308 – 328.

Linck, J. S., Netter, J. M., & Yang, T. (2009). The effects and unintended consequences of the Sarbanes-Oxley Act on the supply and demand for directors. *The Review of Financial Studies*, *22*(8), 3287–3328.

Ma, Z., Novoselov, K. E., Zhou, K., & Zhou, Y. (2019). Managerial academic experience, external monitoring and financial reporting quality. *Journal of Business Finance & Accounting*, *46*(7-8), 843–878.

Masulis, R. W. & Mobbs, S. (2014). Independent director incentives: Where do talented directors spend their limited time and energy? *Journal of Financial Economics*, *111*(2), 406 – 429.

Masulis, R. W., Wang, C., & Xie, F. (2012). Globalizing the boardroom—the effects of foreign directors on corporate governance and firm performance. *Journal of Accounting and Economics*, *53*(3), 527 – 554.

Maug, E. (1997). Boards of directors and capital structure: Alternative forms of corporate restructuring. *Journal of Corporate Finance*, *3*(2), 113 – 139.

Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, *45*(6), 633–644.

Nickell, S., Nicolitsas, D., & Dryden, N. (1997). What makes firms perform well? *European Economic Review*, *41*(3), 783 – 796.

Oyotode-Adebile, R. & Ujah, N. U. (2020). Is social capital a determinant of board gender diversity? *Journal of Financial Research*.

Payne, G. T., Moore, C. B., Griffis, S. E., & Autry, C. W. (2011). Multilevel challenges and opportunities in social capital research. *Journal of Management*, *37*(2), 491–520.

Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual review of sociology*, *24*(1), 1–24.

Posner, E. A. (2000). Law and social norms: The case of tax compliance. *Virginia Law Review*, *86*(8), 1781–1819.

Putnam, R. (1993). The prosperous community: Social capital and public life. *The American Prospect*, *13*(4).

Putnam, R. D. (2000). *Bowling Alone: America's Declining Social Capital*, (pp. 223–234). New York: Palgrave Macmillan US.

Putnam, R. D. (2007). E pluribus unum: Diversity and community in the twenty-first century the 2006 johan skytte prize lecture. *Scandinavian Political Studies*, *30*(2), 137–174.

Raheja, C. G. (2005). Determinants of board size and composition: A theory of corporate boards. *The Journal of Financial and Quantitative Analysis*, *40*(2), 283–306.

Randøy, T. & Jenssen, J. I. (2004). Board independence and product market competition in swedish firms. *Corporate Governance: An International Review*, *12*(3), 281–289.

Reeb, D. & Upadhyay, A. (2010). Subordinate board structures. *Journal of Corporate Finance*, *16*(4), 469 – 486.

Roberts, M. R. & Whited, T. M. (2013). Endogeneity in empirical corporate finance1. In *Handbook of the Economics of Finance*, volume 2 (pp. 493–572). Elsevier.

Rosen, S. (1983). Specialization and human capital. *Journal of Labor Economics*, *1*(1), 43–49.

Rosenstein, S. & Wyatt, J. G. (1990). Outside directors, board independence, and shareholder wealth. *Journal of Financial Economics*, *26*(2), 175 – 191.

Rupasingha, A., Goetz, S. J., & Freshwater, D. (2006). The production of social capital in us counties. *The Journal of Socio-Economics*, *35*(1), 83 – 101.

Schwartz-Ziv, M. & Weisbach, M. S. (2013). What do boards really do? Evidence from minutes of board meetings. *Journal of Financial Economics*, *108*(2), 349 – 366.

Scrivens, K. & Smith, C. (2013). Four interpretations of social capital.

Shleifer, A. & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance*, *52*(2), 737–783.

Spagnolo, G. (1999). Social relations and cooperation in organizations. *Journal of Economic Behavior Organization*, *38*(1), 1 – 25.

Staiger, D. & Stock, J. H. (1997). Instrumental variables regression with weak instruments. *Econometrica*, *65*(3), 557–586.

Stellner, C., Klein, C., & Zwergel, B. (2015). Corporate social responsibility and eurozone corporate bonds: The moderating role of country sustainability. *Journal of Banking & Finance*, *59*, 538–549.

Stevenson, W. B. & Radin, R. F. (2009). Social capital and social influence on the board of directors. *Journal of Management Studies*, *46*(1), 16–44.

Stock, J. (1997). Instrumental variables regression with weak instruments. *Econometrica*, *65*(3), 557–586.

Tian, G. Y. & Twite, G. (2011). Corporate governance, external market discipline and firm productivity. *Journal of Corporate Finance*, *17*(3), 403 – 417.

Uhlaner, C. J. (1989). "relational goods" and participation: Incorporating sociability into a theory of rational action. *Public choice*, *62*(3), 253–285.

Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociological Review*, *61*(4), 674–698.

Weisbach, M. S. (1988). Outside directors and CEO turnover. *Journal of Financial Economics*, *20*, 431 – 460.

Woolcock, M. (1998). Social capital and economic development: Toward a theoretical synthesis and policy framework. *Theory and Society*, *27*(2), 151–208.

Woolcock, M. (2010). The rise and routinization of social capital, 1988–2008. *Annual Review of Political Science*, *13*, 469–487.

Woolcock, M. et al. (2001). The place of social capital in understanding social and economic outcomes. *Canadian journal of policy research*, *2*(1), 11–17.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, *40*(2), 185–211.

Yu, F. F. (2008). Analyst coverage and earnings management. *Journal of Financial Economics*, *88*(2), 245 – 271.

Zhou, X. (2001). Understanding the determinants of managerial ownership and the link between ownership and performance: comment. *Journal of Financial Economics*, *62*(3), 559–571.

Table A.1 Variable Definitions

Variable	Definition	Source
Social Capital	The first principal component from a principal component analysis based on vote cast for presidential election (Pvote), census mail response (Pespn), the aggregate number of 10 types of social organisations (Assn), and the number of not-for-profit organisations (Nccs) of a county.	Northeast Regional Center for Rural Development (NRCRD)
Monitor Ratio	Number of directors performing monitoring duties to the total number of independent directors. The monitoring director is an independent director sitting in audit, compensation, nominating, or governance committees.	BoardEx
Advisor Ratio	Number of directors performing advising duties to the total number of independent directors. An advisory director is an independent director sitting in finance, investment, strategy, acquisitions, science and technology, or executive committees.	BoardEx
Advisory Committee	Dummy variable assigned a value of one if the firm sets up at least one advisory committee, and zero otherwise. Finance, investment, strategy, acquisitions, science and technology, and executive committees are classified as advising committees. Overlapping committees that have both monitoring and advising functions are classified as monitoring committees	BoardEx
Number of Advisory Board	Number of advisory committees within the board in a given year.	BoardEx
Monitor Attendance Problem	Dummy variable equals one if at least one of the monitoring directors of the firm attends less than 75% of the board meetings during a year, and zero otherwise.	ISS
Monitor Attendance Problem Ratio	Number of monitoring directors that have an attendance issue to the total number of monitoring directors, in percentage.	ISS
Other Attendance Problem	Dummy variable equals one if at least one of the non-monitoring directors of the firm attends less than 75% of the board meetings during a year, and zero otherwise.	ISS
Other Attendance Problem Ratio	Number of non-monitoring directors that have an attendance issue to the total number of independent non-monitoring directors, in percentage.	ISS
Attendance Problem	Dummy variable equals one if the director attends less than 75% of the board meetings during a year, and zero otherwise.	ISS
Firm Size	Natural logarithm of the book value of total assets.	Compustat
Number of Segments	Number of business segments for a focal firm.	Compustat
Firm Age	Natural logarithm of the number of years since the firm has its record in COMPUSTAT plus one.	Compustat
Leverage	Long-term debt plus current liabilities, all scaled by the book value of total assets.	Compustat
Complexity	The first principal component from a principal component analysis based on a firm's leverage, number of business segments and age.	Compustat

(*continued on next page*)

Table A.1 (*continued*)

Variable	Definition	Source
Market-to-Book Equity	Market value of equity to book value of equity.	Compustat
R&D	Maximum of research and development expenses and zero, scaled by the book value of total assets.	Compustat
Stock Return Volatility	Standard deviation of monthly return over the previous 12-month period.	CRSP
Information Costs	The first principal component from a principal component analysis based on firm market-to-book equity, R&D, and stock return volatility.	Compustat, CRSP
Independent Board Size	Number of independent directors.	BoardEx
ROA	Earnings before interest and taxes sacaled by book value of total assets.	Compustat
CEO Tenure	Natural logarithm of CEO tenure in years plus one.	BoardEx
CEO Ownership	Shares owned by the CEO to total shares outstanding.	ExecuComp
CEO Duality	Dummy variable equals one if the CEO is also the chairperson, and zero otherwise.	BoardEx
CEO Entrenchment	The first principal component from a principal component analysis based on CEO tenure, ownership and duality.	Compustat, BoardEx, ExecuComp
Female CEO	Dummy variable equals one if the CEO of a firm is female, and zero otherwise.	BoardEx
CEO Age	Natural logarithm of CEO age.	BoardEx
Ivy League CEO	Dummy variable equals one if the CEO graduated from an Ivy League university (Brown University, Columbia University, Cornell University, Dartmouth College, Harvard University, Princeton University, University of Pennsylvania, and Yale University), and zero otherwise.	BoardEx
Recession CEO	Dummy variable equals one if the CEO graduated his/her first degree in a National Bureau of Economic Research recession year, and zero otherwise.	BoardEx
Per Capita Income	Natural logarithm of the income per capita of the county.	Bureau of Economic Analysis
Population Growth	County population in the current period to that of the prior period, minus one.	United States Census Bureau
Population Density	Number of populations per square mile.	United States Census Bureau
Religiosity	Fraction of residents in a county that adhere to organised religions.	Association of Religion Data Archives
Education	Percentage of people who are 25 years old or above in a county with bachelor's degree or higher.	United States Census Bureau
County Median Age	Natural logarithm of the population median age in a county.	United States Census Bureau

(*continued on next page*)

Table A.1 (*continued*)

Variable	Definition	Source
County Information	The first principal component from a principal component analysis based on county population growth, population density, religiosity, education, and county median age.	Association of Religion Data Archives, Bureau of Economic Analysis, United States Census Bureau
High Coverage	Dummy variable equals one if the number of analyst coverage lies in the top tertile of all sample firms, and zero otherwise.	IBES
High Complexity	Dummy variable equals one if the principle factor of complexity lies in the top tertile of all sample firms, and zero otherwise.	Compustat
High Competition	Dummy variable equals one if the industry Herfindahl-Hirschman Index lies in the bottom tertile of all sample firms, and zero otherwise.	Compustat
Average Director Age	Natural logarithm of the average monitoring (non-monitoring) director age.	ISS
Average Director Tenure	Natural logarithm of the average monitoring (non-monitoring) director tenure plus one.	ISS
Average Outside Seats	Average number of directorships the focal company's director held in other companies.	ISS
US Director Ratio	Number of U.S. directors to the total number of monitoring (non-monitoring) directors.	ISS
Board Size	Number of total board of directors.	ISS
Retired	Dummy variable equals one if the director is retired, and zero otherwise.	ISS
Retired Director Ratio	Number of retired directors to the total number of monitoring (non-monitoring) directors.	ISS
Female Director Ratio	Number of female directors to the total number of monitoring (non-monitoring) directors.	ISS
Race Diversity	One minus the race HHI index of a county. The ethnic categories are: Non-Hispanic White, Non-Hispanic Black or African American, Asian, and Hispanic	United States Census Bureau
Increase Relocation	Dummy variable equals one if the firm relocates to a county with higher social capital, and zero if the firm relocates to a county with lower or equal social capital.	EDGAR
Post Relocation	Dummy variable equals one in the year of headquarter relocation and afterwards, and zero for the years preceding the headquarter relocation.	EDGAR

Table A.2 Correlation Matrix

		A	B	C	D	E	F	G	H	I	J
Social Capital	A	1.000									
Organ Donation	B	0.363*	1.000								
Monitor Ratio (%)	C	-0.081*	-0.106*	1.000							
Advisor Ratio (%)	D	0.116*	0.114*	-0.760*	1.000						
Have Advisory Board	E	0.084*	0.112*	-0.689*	0.859*	1.000					
Number of Advisory Board	F	0.085*	0.114*	-0.733*	0.908*	0.889*	1.000				
Monitor Attendance Problem	G	0.015	-0.023*	0.009	-0.013	-0.006	-0.012	1.000			
Other Attendance Problem	H	0.001	-0.016	0.008	-0.012	-0.018*	-0.008	0.055*	1.000		
Firm Size	I	0.031*	0.032*	-0.346*	0.279*	0.297*	0.324*	0.020*	0.015	1.000	
Board Size	J	0.117*	0.046*	-0.311*	0.279*	0.273*	0.297*	0.036*	0.025*	0.472*	1.000
Number of Segments	K	0.062*	0.068*	-0.147*	0.142*	0.166*	0.163*	0.003	0.011	0.315*	0.205*
Firm Age	L	0.133*	0.169*	-0.326*	0.303*	0.317*	0.327*	-0.013	-0.030*	0.409*	0.361*
Leverage	M	0.053*	0.052*	-0.108*	0.092*	0.095*	0.083*	0.006	0.000	0.245*	0.082*
Market-to-Book Equity	N	0.029*	-0.030*	-0.011	0.008	-0.013	0.007	-0.009	0.002	0.003	0.012
R&D	O	-0.025*	-0.136*	0.104*	-0.073*	-0.096*	-0.096*	0.019*	-0.005	-0.267*	-0.047*
Stock Return Volatility	P	-0.070*	-0.034*	0.114*	-0.119*	-0.124*	-0.143*	-0.007	0.013	-0.343*	-0.169*
CEO Tenure	Q	-0.025*	-0.059*	0.077*	-0.059*	-0.055*	-0.057*	-0.019*	0.001	-0.107*	-0.084*
CEO Ownership	R	0.031*	-0.006	0.152*	-0.134*	-0.118*	-0.113*	0.006	0.015	-0.193*	-0.146*
CEO Duality	S	0.079*	0.058*	-0.077*	0.072*	0.071*	0.088*	-0.011	0.005	0.150*	0.014

		K	L	M	N	O	P	Q	R	S
Number of Segments	K	1.000								
Firm Age	L	0.360*	1.000							
Leverage	M	0.066*	0.023*	1.000						
Market-to-Book Equity	N	-0.047*	-0.023*	-0.030*	1.000					
R&D	O	-0.190*	-0.187*	-0.059*	0.079*	1.000				
Stock Return Volatility	P	-0.146*	-0.223*	0.003	-0.064*	0.159*	1.000			
CEO Tenure	Q	-0.047*	-0.049*	-0.086*	0.004	0.053*	-0.018*	1.000		
CEO Ownership	R	-0.066*	-0.134*	-0.075*	0.017*	0.029*	0.047*	0.404*	1.000	
CEO Duality	S	0.044*	0.105*	0.019*	0.014	-0.096*	-0.080*	0.318*	0.213*	1.000

Note: This table presents the pairwise Pearson correlation coefficients for all variables used in our baseline analysis. Table A1 in the Appendix provides detailed variable definition.

Table A.3 The Effect of Social Capital on Individual Director Attendance

Dep. Var.	Whole Sample	Major Committe	Non-Major Committe
	Attendance Problem		
	(1)	(2)	(3)
Social Capital	0.063**	0.067**	0.051
	(0.029)	(0.030)	(0.110)
Director Age	-0.066	0.074	-1.039**
	(0.197)	(0.213)	(0.474)
Director Tenure	-0.075**	-0.086**	0.039
	(0.032)	(0.036)	(0.084)
Outside Board Seats	0.024	0.023	0.058
	(0.019)	(0.021)	(0.051)
US Director	-0.002	0.016	-0.009
	(0.051)	(0.053)	(0.210)
Retired	-0.246***	-0.251***	-0.118
	(0.059)	(0.057)	(0.190)
Female	-0.154***	-0.167***	0.159
	(0.054)	(0.056)	(0.190)
Board Size	0.031**	0.028**	0.030
	(0.014)	(0.014)	(0.039)
Firm Size	-0.033*	-0.027	-0.112**
	(0.019)	(0.020)	(0.047)
Firm Age	-0.101**	-0.081	-0.340**
	(0.048)	(0.052)	(0.134)
Market-to-Book Equity	-0.003	-0.002	-0.020**
	(0.004)	(0.004)	(0.009)
R&D	0.669	0.797	-0.810
	(0.472)	(0.493)	(1.373)
Stock Return Volatility	0.689	0.924	-2.069
	(0.579)	(0.598)	(1.573)
ROA	-0.070	0.050	-0.853
	(0.306)	(0.314)	(0.979)
Per Capita Income	-0.186	-0.138	-1.032**
	(0.133)	(0.145)	(0.486)
Population Growth	2.968**	2.659*	6.797*
	(1.448)	(1.513)	(3.800)
Population Density	0.019	0.010	0.133*
	(0.025)	(0.029)	(0.078)
Religiosity	-0.267	-0.279	-0.133
	(0.166)	(0.172)	(0.633)

(*continued on next page*)

Table A.3 (*continued*)

Education	0.005	0.004	0.019
	(0.004)	(0.005)	(0.014)
County Median Age	-0.049	-0.202	1.015
	(0.328)	(0.382)	(1.119)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Constant	0.637	0.078	10.459**
	(1.518)	(1.718)	(4.849)
Observations	61,567	59,058	2,040
Pseudo/Adj R-squared	0.047	0.047	0.160

Note: This table presents the regression analysis of the influence of social capital on director meeting attendance at the individual director-level. Column (1) examines the whole sample, column (2) examines monitoring directors, and column (3) examines non-monitoring independent directors. The dependent variable is a dummy variable equals one indicating the director has an attendance problem. Social capital is the first principle components of variables that capture county-level cooperative norms and social networks from the NRCRD. Detailed variable definitions are given in Table A.1. All continuous variables are winsorized at the 1st and the 99th percentile to eliminate the influence of outliers. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

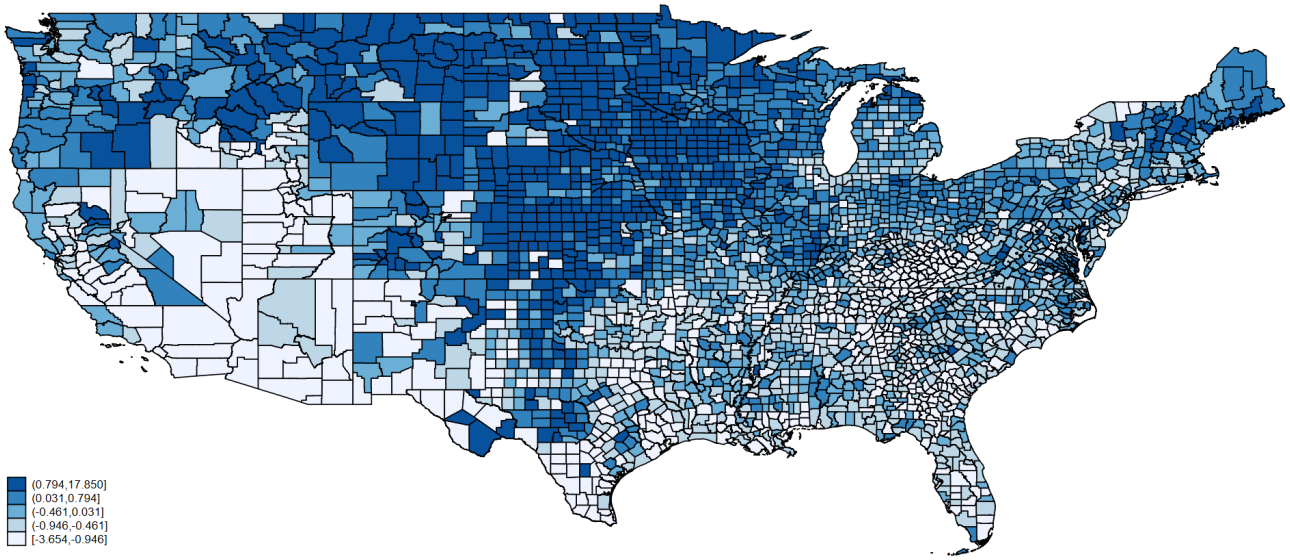

Figure 1. Geographical Distribution of Social Capital This figure depicts the average county-level social capital index of 2005, 2009 and 2014 for contiguous U.S geographical areas. A darker shade reflects a higher level of social capital, and a lighter shade represents a lower level of social capital. Detailed variable definitions are displayed in Table A.1.

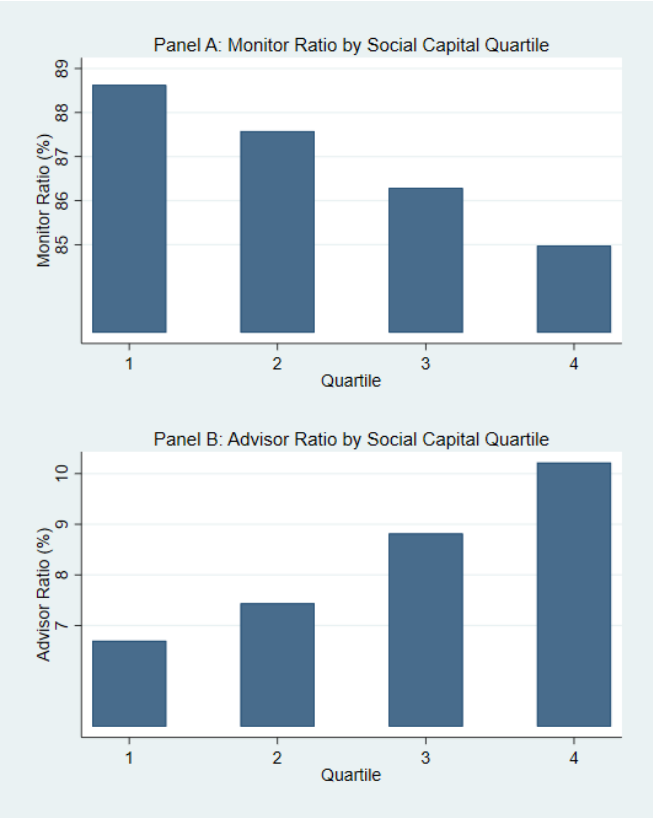

Figure 2. Monitor and Advisor Ratios This figure depicts the mean value for the ratio of monitoring directors (*Monitor Ratio*) and advisory directors (*Advisor Ratio*) based on social capital quartiles. 1 represents the bottom quartile, and 4 represents the top quartile. Detailed variable definitions are displayed in Table A.1.

Table 1 Descriptive statistics.

Variable	N	Mean	SD	P25	Median	P75
Social Capital	11,022	-0.55	0.75	-1.12	-0.51	-0.04
Board characteristic						
Monitor Ratio (%)	11,022	86.88	15.34	76.47	92.31	100.00
Advisor Ratio (%)	11,022	8.28	11.33	0.00	0.00	16.67
Advisory Committees	11,022	0.42	0.49	0.00	0.00	1.00
Number of Advisory Committee	11,022	0.53	0.70	0.00	0.00	1.00
Monitor Attendance Problem	8,603	0.04	0.18	0.00	0.00	0.00
Monitor Attendance Problem Ratio (%)	8,603	0.53	2.92	0.00	0.00	0.00
Other Attendance Problem	8,603	0.01	0.12	0.00	0.00	0.00
Other Attendance Problem Ratio (%)	8,603	0.41	3.49	0.00	0.00	0.00
Firm characteristic						
Firm Size	11,022	7.60	1.61	6.47	7.48	8.64
Number of Segments	11,022	2.59	1.67	1.00	2.00	4.00
Firm Age	11,022	25.90	16.38	13.00	21.00	39.00
Leverage	11,022	0.50	0.30	0.31	0.46	0.63
Market-to-Book Equity	11,022	3.79	6.09	2.00	3.15	5.04
R&D	11,022	0.05	0.09	0.00	0.01	0.07
Stock Return Volatility	11,022	0.11	0.06	0.07	0.09	0.13
ROA	9,938	0.11	0.10	0.06	0.10	0.16
CEO characteristic						
CEO Tenure	11,022	7.35	7.16	2.00	5.00	10.00
CEO Ownership	11,022	0.02	0.05	0.00	0.00	0.01
CEO Duality	11,022	0.48	0.50	0.00	0.00	1.00
Female CEO	11,022	0.05	0.21	0.00	0.00	0.00
CEO Age	11,022	55.69	7.08	51.00	56.00	60.00
County characteristic						
Ln (Per Capita Income)	11,022	10.90	0.32	10.68	10.86	11.06
Population Growth	11,022	0.01	0.01	0.00	0.01	0.02
Population Density	11,022	7.25	1.13	6.66	7.27	7.70
Religiosity	11,022	0.57	0.12	0.47	0.58	0.65
Education	11,022	34.78	10.61	27.30	32.65	44.00
County Median Age	11,022	36.87	2.98	34.80	36.50	38.60

Note: This table presents the number of observations (N), the mean (Mean), the standard deviation (SD), the 25th percentile (P25), the median (Median), and the 75th percentile for main variables. Detailed variable definitions are given in Table A.1. All continuous variables are winsorized at the 1st and the 99th percentile to eliminate the influence of outliers.

Table 2 The Effect of Social Capital on Board Structure.

Dep. Var.	Monitor Ratio			Advisor Ratio		
	(1)	(2)	(3)	(4)	(5)	(6)
Social Capital	-0.633	-0.840	-0.753	1.155***	1.231***	1.190***
	(0.498)	(0.582)	(0.572)	(0.349)	(0.389)	(0.383)
Firm Size	-2.448***	-1.865***		1.345***	0.942***	
	(0.285)	(0.319)		(0.212)	(0.228)	
Number of Segments	0.538	0.730		0.012	-0.116	
	(0.615)	(0.613)		(0.485)	(0.493)	
Firm Age	-4.862***	-3.916***		3.321***	2.674***	
	(0.678)	(0.736)		(0.466)	(0.532)	
Leverage	-0.943	-1.119		0.800	0.972	
	(0.886)	(0.876)		(0.630)	(0.622)	
Complexity			-4.770***			3.152***
			(0.363)			(0.252)
Market-to-Book	-0.010	-0.007		0.003	0.001	
	(0.020)	(0.021)		(0.015)	(0.016)	
R&D	1.385	2.346		2.956	2.402	
	(3.860)	(3.754)		(3.264)	(3.315)	
Stock Return Volatility	-6.844	-5.737		0.486	-0.479	
	(4.734)	(4.892)		(3.681)	(3.634)	
Information Costs			0.311			-0.086
			(0.452)			(0.370)
CEO Tenure	0.204	0.397		0.016	-0.005	
	(0.312)	(0.352)		(0.232)	(0.270)	
CEO Ownership	0.246***	0.234***		-0.192**	-0.178***	
	(0.048)	(0.049)		(0.037)	(0.036)	
CEO Duality	-0.973*	-1.046*		0.843*	0.932**	
	(0.582)	(0.580)		(0.462)	(0.458)	
CEO Entrenchment			0.582**			-0.305*
			(0.236)			(0.179)
Independent Board Size		-0.368***			0.262***	
		(0.071)			(0.056)	
Female CEO		0.047			0.217	
		(1.352)			(0.935)	
CEO Age		-5.229**			1.370	
		(2.452)			(1.691)	
Ivy League CEO		-1.052			0.541	
		(0.912)			(0.565)	
Recession Graduate CEO		0.533			-0.195	
		(0.600)			(0.492)	

(*continued on next page*)

Table 2 (*continued*)

Per Capita Income		1.135			-1.638	
		(2.055)			(1.334)	
Population Growth		10.279			-9.443	
		(47.757)			(32.953)	
Population Density		-0.259			0.500	
		(0.497)			(0.346)	
Religiosity		1.793			-0.271	
		(3.550)			(2.632)	
Education		0.045			-0.029	
		(0.069)			(0.043)	
County Median Age		1.693			1.056	
		(6.542)			(4.494)	
County Information			0.034			0.060
			(0.305)			(0.210)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	95.807***	95.909***	65.167***	-0.967	5.335	17.609***
	(2.999)	(24.946)	(0.672)	(2.191)	(17.923)	(0.478)
Observations	11,022	11,022	11,022	11,022	11,022	11,022
Adj R-squared	0.214	0.231	0.158	0.168	0.183	0.129

Note: This table presents the regression analysis of the influence of social capital on the fraction of monitoring and advisory directors. In columns (1) through (3), the dependent variable is the ratio of monitoring director to the total number of independent directors. In columns (4) through (6), the dependent variable is the ratio of advisory director to the total number of independent directors. Monitoring directors are independent director from audit, compensation, nominating and governance committees, and advisory directors are independent director from finance, investment, strategy, acquisitions, science and technology, and executive committees. Social capital is the first principle components of variables that capture county-level cooperative norms and social networks from the NRCRD. Detailed variable definitions are given in Table A.1. All continuous variables are winsorized at the 1st and the 99th percentile to eliminate the influence of outliers. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Table 3 Cross-Sectional Variations.

	Analyst Converge		Competition		Complexity	
Dep. Var.	Monitor Ratio	Advisor Ratio	Monitor Ratio	Advisor Ratio	Monitor Ratio	Advisor Ratio
	(1)	(2)	(3)	(4)	(5)	(6)
Social Capital	-0.152	0.918***	-0.295	0.852***	-0.170	1.005***
	(0.305)	(0.219)	(0.637)	(0.196)	(0.295)	(0.237)
× High Coverage	-1.038***	0.611**				
	(0.364)	(0.257)				
× High Competition			-1.734**	1.204***		
			(0.740)	(0.298)		
× High Complexity					-1.405***	0.635**
					(0.354)	(0.275)
High Coverage	0.517	-0.675**				
	(0.375)	(0.283)				
High Complexity			-3.351***	2.175***		
			(0.372)	(0.303)		
High Competition					-1.117**	0.675
					(0.562)	(0.413)
Control	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	11,022	11,022	11,022	11,022	11,022	11,022
Adjusted R-squared	0.229	0.200	0.232	0.184	0.218	0.171

This table presents the cross-sectional variations of the influence of social capital on the fraction of monitoring and advisory directors. Monitoring directors are independent director from audit, compensation, nominating and governance committees, and advisory directors are independent director from finance, investment, strategy, acquisitions, science and technology, and executive committees. Social capital is the first principle components of variables that capture county-level cooperative norms and social networks from the NRCRD. High Analyst Coverage is a dummy variable equals one indicating the firm has analyst coverage in the top tertile of the sample and zero otherwise. High Competition is a dummy variable equals one indicating firms operate in industries with HHI index in the bottom tertile of the sample and zero otherwise. High Complexity is a dummy variable equals one indicating the firm has the principle factor complexity in the top tertile of the sample and zero otherwise. All columns adopt the same control as the full model in Table 2. Detailed variable definitions are given in Table A.1. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level to control for potential correlation in the error terms. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Table 4 The Effect of Omitted Variables.

Panel A: Region and Division Fixed Effect

Dep. Var.	Monitor Ratio	Advisor Ratio	Monitor Ratio	Advisor Ratio
	(1)	(2)	(3)	(4)
Social Capital	-0.454	0.843***	-0.131	0.771***
	(0.642)	(0.178)	(0.257)	(0.200)
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	No	No
Division Fixed Effects	No	No	Yes	Yes
Observations	11,022	11,022	11,022	11,022
Adj R-squared	0.162	0.135	0.165	0.136

Panel B: State and County Fixed Effect

Dep. Var.	Monitor Ratio	Advisor Ratio	Monitor Ratio	Advisor Ratio
	(1)	(2)	(3)	(4)
Social Capital	-0.746	0.561**	-0.087	0.330*
	(0.880)	(0.267)	(0.253)	(0.191)
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	No	No
County Fixed Effects	No	No	Yes	Yes
Observations	11,022	11,022	11,022	11,022
Adj R-squared	0.188	0.161	0.320	0.286

Panel C: Unobservable Firm-Level Variables

Dep. Var.	Monitor Ratio	Advisor Ratio	$\Delta MonitorRatio_{t+1,t+5}$	$\Delta AdvisorRatio_{t+1,t+5}$
	(1)	(2)	(3)	(4)
Social Capital	-1.150	0.797*		
	(0.795)	(0.415)		
$\Delta Social\ Capital_{t-6,t-1}$			-1.054	1.616***
			(0.712)	(0.581)
E-Index	-0.253	0.515*		
	(0.351)	(0.281)		
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Observations	11,022	11,022	8,311	8,311
R-squared	0.104	0.096	0.152	0.138

(*continued on next page*)

Table 4 (*continued*)

Note: This table presents the regression analysis of the influence of social capital on the fraction of monitoring and advisory directors controlling for omitted variables. Panel A presents the regression analysis with region and division fixed effects. The geographical areas in the U.S are sorted into four regions and nine divisions according to the classification of the U.S. Department of Commerce Economics and Statistics Administration. Panel B adds states fixed effects and county fixed effects. Panel C present the regression results from controlling for unobservable firm-level variables. Columns (1) and (2) of Panel C present the analysis using E-Index to capture the time-invariant firm-level factors. Columns (3) and (4) use the long-window change analysis where the dependent variable is measured as the change from year t to t+5 and allindependent variables are measured as the change from year t-6 to t-1. Detailed variable definitions are given in Table A.1. All continuous variables are winsorized at the 1st and the 99th percentile to eliminate the influence of outliers. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Table 5 The Effect of Social Capital on Board Structure: Two-Stage Least Square.

	First Stage	Second Stage	
Dep. Var.	Social Capital	Monitor Ratio	Advisor Ratio
	(1)	(2)	(3)
Social Capital IV		0.391	1.373***
		(0.522)	(0.402)
Race Diversity	-2.573***		
	(0.050)		
Firm Size	-0.032***	-1.700***	0.923***
	(0.004)	(0.119)	(0.091)
Number of Segments	0.009	0.953***	-0.134
	(0.009)	(0.230)	(0.177)
Firm Age	0.110***	-4.183***	2.692***
	(0.009)	(0.249)	(0.192)
Leverage	0.132***	-1.700***	1.256***
	(0.018)	(0.482)	(0.371)
Market-to-Book Equity	0.001**	-0.003	-0.002
	(0.001)	(0.015)	(0.012)
R&D	-0.189***	3.211*	2.563*
	(0.066)	(1.766)	(1.359)
Stock Return Volatility	-0.265***	-5.969**	0.689
	(0.103)	(2.753)	(2.118)
CEO Tenure	-0.023***	0.185	0.103
	(0.006)	(0.168)	(0.129)
CEO Ownership	0.002	0.233***	-0.184***
	(0.001)	(0.029)	(0.022)
CEO Duality	0.075***	-1.187***	0.769***
	(0.011)	(0.297)	(0.228)
Independent Board Size	0.004***	-0.372***	0.251***
	(0.001)	(0.027)	(0.021)
Female CEO	0.014	0.152	0.122
	(0.024)	(0.643)	(0.495)
CEO Age	0.005	-5.356***	2.228**
	(0.043)	(1.160)	(0.892)
Ivy League CEO	0.032**	-1.158***	0.364
	(0.013)	(0.341)	(0.263)
Recession Graduate CEO	-0.024**	0.846***	-0.172
	(0.010)	(0.275)	(0.212)
Per Capita Income	0.152***	0.802	-1.654**
	(0.033)	(0.859)	(0.661)

(*continued on next page*)

Table 5 (*continued*)

Population Growth	-19.590***	9.809	-0.495
	(0.697)	(21.294)	(16.386)
Population Density	0.073***	-0.243	0.421***
	(0.007)	(0.180)	(0.138)
Religiosity	-0.057	-0.957	0.942
	(0.048)	(1.276)	(0.982)
Education	0.030***	-0.014	-0.031
	(0.001)	(0.034)	(0.026)
County Median Age	-0.400***	3.057	1.226
	(0.099)	(2.585)	(1.989)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Constant	-0.138	97.909***	7.996
	(0.465)	(12.536)	(9.101)
Observations	10,288	10,288	10,288
Cragg-Donald Wald F statistic	2621.125		
Adj R-squared	0.538	0.229	0.202

Note: This table presents the regression analysis of the instrumental variable approach. Column (1) presents estimates from the first-stage analysis, where the dependent variable is social capital. Social capital is the first principle components of variables that capture county-level cooperative norms and social networks from the NRCRD. The instrument is the Race Diversity in the county. Race Diversity is calculated as one minus the Racial Herfindahl Index across the ethnic categories reported in the U.S. Census Bureau, namely Non-Hispanic White, Non-Hispanic Black or African American, Asian, and Hispanic. A higher value of Race Diversity represents a higher level of racial fragmentation. In column (2), the dependent variable is the ratio of monitoring director to the total number of independent directors. In column (3), the dependent variable is the ratio of advisory director to the total number of independent directors. Monitoring directors are independent director from audit, compensation, nominating and governance committees, and advisory directors are independent director from finance, investment, strategy, acquisitions, science and technology, and executive committees. Detailed variable definitions are given in Table A.1. All continuous variables are winsorized at the 1st and the 99th percentile to eliminate the influence of outliers. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Table 6 The Effect of Social Capital on Board Structure: Propensity Score Matching.

Panel A: The average treatment effect on the treated

	High Social Capital	Low Social Capital	Difference	T-stat
Monitor Ratio (%)	85.33	87.5	-2.17	-3.05
Advisor Ratio (%)	9.78	7.56	2.22	4.31

Panel B: Regression Analysis

Dep. Var.	Monitor Ratio	Advisor Ratio
	(1)	(2)
High Social Capital	-2.534	3.728***
	-1.923	(1.188)
Controls	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Observations	924	924
Adj R-squared	0.299	0.239

Note: This table presents the results from a propensity score matching analysis. The treatment group is firms resided in high social capital counties. High social capital counties are those with social capital index in the top quartile of the sample. Each treated firm is matched with a similar firm reside in low social capital counties. The matching does not allow replacement and the propensity score is calliper the propensity scores at 1% between the treatments and controls. Panel A presents the average treatment effect on the treated for Monitor Ratio and Advisory Ratio, and Panel B presents the regression analysis using the matched sample. All columns adopt the same control as the full model in Table 2. Detailed variable definitions are given in Table A.1. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Table 7 Difference-in-Differences Analysis on Firm Headquarter Relocation.

Dep. Var.	Monitor Ratio	Advisor Ratio
	(1)	(2)
Increase Relocation × Post Relocation	-2.356	2.597***
	(1.807)	(0.879)
Increase Relocation	2.282	0.875
	(2.832)	(0.932)
Firm Size	-2.614***	1.113***
	(0.916)	(0.308)
Number of Segments	-0.160	1.371***
	(1.299)	(0.521)
Firm Age	-4.470**	2.697***
	(1.871)	(0.564)
Leverage	-0.394	1.162
	(1.505)	(0.892)
Market-to-Book Equity	0.102	-0.045
	(0.065)	(0.037)
R&D	-4.627	3.607
	(7.610)	(3.810)
Stock Return Volatility	-15.998*	11.647**
	(9.017)	(5.813)
CEO Tenure	1.462*	-1.170***
	(0.763)	(0.373)
CEO Ownership	0.255	-0.199**
	(0.260)	(0.087)
CEO Duality	0.382	1.829***
	(1.397)	(0.567)
Independent Board Size	-0.609***	0.277***
	(0.168)	(0.068)
Female CEO	11.959**	4.959***
	(5.548)	(1.874)
CEO Age	-3.473	-0.179
	(6.409)	(2.816)
Ivy League CEO	0.748	-0.373
	(2.364)	(0.709)
Recession Graduate CEO	1.748	-1.514***
	(1.490)	(0.586)
Per Capita Income	5.302	2.061
	(5.716)	(2.156)

(*continued on next page*)

Table 7 (*continued*)

Population Growth	-34.323	41.039
	(84.950)	(35.716)
Population Density	-1.788	0.417
	(1.494)	(0.468)
Religiosity	8.054	1.269
	(7.943)	(2.586)
Education	0.076	-0.018
	(0.178)	(0.065)
County Median Age	-17.192	-3.806
	(17.597)	(5.650)
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Constant	118.797	-30.421
	(85.870)	(26.018)
Observations	1,291	1,291
Adj R-squared	0.437	0.302

Note: This table presents the results from the difference-in-differences analysis on 135 firms with headquarter relocations, of which 68 firms move to counties with higher social capital, and 67 firms relocate to counties with lower social capital. In column (1), the dependent variable is the ratio of monitoring director to the total number of independent directors. In column (2), the dependent variable is the ratio of advisory director to the total number of independent directors. Monitoring directors are independent director from audit, compensation, nominating and governance committees, and advisory directors are independent director from finance, investment, strategy, acquisitions, science and technology, and executive committees. Post Relocation is a dummy variable that equals one indicating years after headquarter relocation. Increase Relocation is a dummy variable that equals one indicating firms move to counties with higher social capital, and zero for firms move to counties with lower social capital. Detailed variable definitions are given in Table A.1. All continuous variables are winsorized at the 1st and the 99th percentile to eliminate the influence of outliers. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Table 8 Alternative Sampling and Measure.

Panel A: Years with Social Capital Index

	Full Model	PCA Model	Full Model	PCA Model
Dep. Var.	Monitor Ratio		Advisor Ratio	
	(1)	(2)	(3)	(4)
Social Capital	-0.671	-0.769	0.933**	1.112***
	(0.630)	(0.614)	(0.442)	(0.413)
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Observations	2,415	2,415	2,415	2,415
Adj R-squared	0.235	0.158	0.181	0.120

Panel B: Interpolated Social Capital Index

	Full Model	PCA Model	Full Model	PCA Model
Dep. Var.	Monitor Ratio		Advisor Ratio	
	(1)	(2)	(3)	(4)
Social Capital	-0.873	-0.799	1.261***	1.323***
	(0.655)	(0.626)	(0.447)	(0.429)
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Observations	8,560	8,560	8,560	8,560
Adj R-squared	0.248	0.170	0.194	0.140

Panel C: Alternative Measure of Social Capital

	Full Model	PCA Model	Full Model	PCA Model
Dep. Var.	Monitor Ratio		Advisor Ratio	
	(1)	(2)	(3)	(4)
Organ Donation	-0.082	-0.053	0.083**	0.062*
	(0.053)	(0.052)	(0.042)	(0.036)
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Observations	11,022	11,022	11,022	11,022
Adj R-squared	0.240	0.163	0.191	0.135

(*continued on next page*)

Table 8 (*continued*)

This table presents the regression analysis of the influence of social capital on the fraction of monitoring and advisory directors using alternative sampling methods and alternative measures of social capital. Panel A presents the analysis using years with available social capital index (2005, 2009, and 2014), Panel B presents the analysis using the linearly interpolated social capital, and Panel C presents the analysis using the alternative social capital measured by organ donation at the state-level. The models adopted in Panel C replace county-level variables with state latitude and longitude to control for state fixed effect. Detailed variable definitions are given in Table A.1. All continuous variables are winsorized at the 1st and the 99th percentile to eliminate the influence of outliers. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Table 9 The Effect of Social Capital on Advisory Committee Set-up.

Dep. Var.	Advisory Committee			Number of Advisory Committee		
	(1)	(2)	(3)	(4)	(5)	(6)
Social Capital	0.061***	0.101***	0.073***	0.033***	0.031***	0.033***
	(0.019)	(0.022)	(0.019)	(0.008)	(0.010)	(0.009)
Firm Size	0.167***	0.126***		0.102***	0.088***	
	(0.011)	(0.012)		(0.005)	(0.005)	
Number of Segments	0.052**	0.036		0.010	0.006	
	(0.022)	(0.022)		(0.011)	(0.010)	
Firm Age	0.445***	0.363***		0.213***	0.166***	
	(0.024)	(0.025)		(0.010)	(0.010)	
Leverage	0.072	0.085*		0.006	0.018	
	(0.047)	(0.047)		(0.021)	(0.020)	
Complexity			0.416***			0.221***
			(0.014)			(0.007)
Market-to-Book	-0.002	-0.002		0.000	-0.000	
	(0.001)	(0.001)		(0.001)	(0.001)	
R&D	0.153	0.272		0.091	0.064	
	(0.178)	(0.181)		(0.069)	(0.066)	
Return Volatility	0.014	-0.124		-0.038	-0.113	
	(0.280)	(0.278)		(0.117)	(0.112)	
Information Costs			-0.044*			-0.022**
			(0.023)			(0.010)
CEO Tenure	0.029*	0.020		-0.003	-0.002	
	(0.016)	(0.017)		(0.008)	(0.007)	
CEO Ownership	-0.026***	-0.025***		-0.008***	-0.005***	
	(0.003)	(0.003)		(0.001)	(0.001)	
CEO Duality	0.057**	0.060**		0.053***	0.053***	
	(0.028)	(0.029)		(0.013)	(0.013)	
CEO Entrenchment			-0.030***			-0.009*
			(0.011)			(0.005)
Independent Board Size		0.031***			0.015***	
		(0.003)			(0.001)	
Female CEO		-0.004			0.038	
		(0.065)			(0.030)	
CEO Age		0.257**			0.109**	
		(0.116)			(0.049)	
Ivy League CEO		0.038			0.042**	
		(0.034)			(0.016)	

(*continued on next page*)

Table 9 (*continued*)

Recession Graduate CEO		-0.065**			-0.020*	
		(0.027)			(0.012)	
Per Capita Income		-0.228***			-0.148***	
		(0.086)			(0.037)	
Population Growth		0.728			-1.139	
		(1.808)			(0.773)	
Population Density		0.099***			0.029***	
		(0.017)			(0.008)	
Religiosity		0.141			0.105**	
		(0.119)			(0.053)	
Education		-0.010***			-0.000	
		(0.003)			(0.001)	
County Median Age		0.239			0.138	
		(0.236)			(0.103)	
County Information			-0.005			0.006
			(0.011)			(0.005)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-3.358***	-2.922**	-1.095**	0.411***	0.779*	1.703***
	(0.591)	(1.248)	(0.538)	(0.059)	(0.468)	(0.028)
Observations	10,974	10,974	10,974	11,022	11,022	11,022
Pseudo/Adj R-squared	0.137	0.152	0.109	0.184	0.221	0.143

This table presents the regression analysis of the influence of social capital on the set-up of advisory committees. Columns (1) through (3) display probit model results where the dependent variable is a dummy variable equals one indicating the board has at least one advisory committee and zero otherwise. Columns (4) through (6) display the ordinary least squares regression results where the dependent variable is the number of advisory committees in the board. Monitoring committees are audit, compensation, nominating and governance committees, and advisory committees are finance, investment, strategy, acquisitions, science and technology, and executive committees. Social capital is the first principle components of variables that capture county-level cooperative norms and social networks from the NRCRD. Detailed variable definitions are given in Table A.1. All continuous variables are winsorized at the 1st and the 99th percentile to eliminate the influence of outliers. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Table 10 The Effect of Social Capital on Director Attendance.

	Monitor Attendance Problem		Non-Monitor Attendance Problem	
Dep. Var.	Dummy	Ratio	Dummy	Ratio
	(1)	(2)	(3)	(4)
Social Capital	0.109***	0.103**	-0.140*	-0.158**
	(0.037)	(0.049)	(0.076)	(0.076)
Average Director Age	0.128	-0.074	0.604	0.489
	(0.610)	(0.848)	(0.478)	(0.476)
Average Director Tenure	-0.109	-0.136	0.009	0.008
	(0.088)	(0.113)	(0.007)	(0.008)
Average Outside Board Seats	0.007	-0.006	0.010	0.004
	(0.064)	(0.082)	(0.056)	(0.063)
US Director Ratio	0.080	0.093	-0.210	-0.256*
	(0.110)	(0.123)	(0.143)	(0.144)
Retired Director Ratio	-0.399**	-0.412**	-0.290	-0.285
	(0.158)	(0.199)	(0.218)	(0.223)
Female Director Ratio	-0.253	-0.482*	0.262	0.218
	(0.222)	(0.267)	(0.213)	(0.259)
Board Size	0.064***	0.051**	0.093***	0.073***
	(0.017)	(0.023)	(0.023)	(0.026)
Firm Size	0.012	-0.006	-0.028	-0.020
	(0.025)	(0.031)	(0.039)	(0.038)
Firm Age	-0.079	-0.130	-0.235***	-0.184*
	(0.068)	(0.090)	(0.088)	(0.100)
Market-to-Book Equity	-0.001	-0.001	-0.006	-0.004
	(0.003)	(0.002)	(0.004)	(0.004)
R&D	0.950**	1.038	-2.129*	-1.409**
	(0.463)	(0.743)	(1.115)	(0.577)
Stock Return Volatility	0.586	0.903	0.122	0.793
	(0.597)	(0.875)	(0.757)	(1.055)
ROA	0.163	0.193	-0.921**	-0.528
	(0.277)	(0.375)	(0.439)	(0.411)
Per Capita Income	-0.104	-0.074	-0.354	-0.467*
	(0.195)	(0.226)	(0.255)	(0.273)
Population Growth	4.446	3.358	-10.289*	-13.033**
	(3.816)	(4.631)	(5.368)	(5.388)
Population Density	0.002	-0.012	0.002	0.007
	(0.039)	(0.051)	(0.048)	(0.051)
Religiosity	-0.327*	-0.523*	-0.572	-0.550
	(0.197)	(0.278)	(0.397)	(0.429)

(*continued on next page*)

Table 10 (*continued*)

Education	0.002	0.005	0.028***	0.029***
	(0.007)	(0.008)	(0.008)	(0.010)
County Median Age	0.063	-0.272	0.032	-0.000
	(0.501)	(0.654)	(0.706)	(0.708)
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Constant	-1.659	3.185	-1.147	3.165
	(2.889)	(3.953)	(3.477)	(3.463)
Observations	8,603	8,603	8,603	8,603
Pseudo/Adj R-squared	0.044	0.007	0.109	0.009

This table presents the regression analysis of the influence of social capital on director meeting attendance at the firm-level. In column (1), the dependent variable is a dummy variable equals one indicating the firm has at least one monitoring director with an attendance problem. In column (2), the dependent variable is the ratio of monitoring directors with an attendance problem. In column (3), the dependent variable is a dummy variable equals one indicating the firm has at least one non-monitoring independent director with an attendance problem. In column (4), the dependent variable is the ratio of non-monitoring independent directors with an attendance problem. Social capital is the first principle components of variables that capture county-level cooperative norms and social networks from the NRCRD. Detailed variable definitions are given in Table A.1. All continuous variables are winsorized at the 1st and the 99th percentile to eliminate the influence of outliers. The industry is defined by the first two-digit of SIC codes. The standard errors are presented in the parentheses and are clustered at the county level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.