

Connecting the right knots

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ORIGINAL ARTICLE

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Connecting the right knots: The impact of board committee interlocks on the performance of Indian firms

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Abstract

Research Question/Issue: Information processing, agency, and resource dependence perspectives provide diverging predictions regarding the relationship between board interlocks and firm performance, which are rooted in different perspectives on the roles of boards of directors. This study argues that these various approaches are reconcilable when considering the nature of board *committees* to which the interlocked directors are assigned.

Research Findings/Insights: We test our hypotheses on a sample of 5133 firm-year observations in India. Our analyses support our hypotheses. The results show that interlocks between audit committees, whose primary function relates to providing financial oversight and ensuring compliance, are negatively related to firm performance. In contrast, interlocks between nomination and remuneration committees of Indian firms, which provide them with access to resources such as human capital and information on appropriate incentive structures, are positively related to performance.

Theoretical/Academic Implications: Our study clarifies the relationship between board committee interlocks and firm performance by taking a multi-theoretical perspective. Our analysis suggests that information processing, agency, and resource dependence theories complement one another in explaining the effect of interlocks on firm performance.

Practitioner/Policy Implications: Our results show that it is not board interlocks per se that are detrimental to firm performance; in fact, appointing well-connected directors with experience in serving on other boards might be beneficial for firms. However, firms should not assign specific monitoring-intensive tasks such as auditing to directors who also serve on other firms' audit committees. Our findings suggest that these directors should have greater independence and focus.

KEYWORDS

audit committee, board committees, board interlocks, corporate governance, India, nomination and remuneration committee

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1 | INTRODUCTION

"In the corporate world, many directors will tell you that, in most board posts, 'it's not what you know but who you know.' [...] And social networks can spread the bad just as quickly as they can the good." (Forbes, 2012)

The relationship between board interlocks and firm performance has been of considerable interest to organizational scholars and practitioners alike. Scholars have used information processing approaches (Haunschild, 1993; Lamb & Roundy, 2016), resource dependence (Pfeffer & Salancik, 1978), and agency theory (Eisenhardt, 1989) in order to explore the effects of interlocks. According to information processing approaches, interlocks may help firms to acquire trustworthy information from interlock partners at low costs (Haunschild & Beckman, 1998) and facilitate organizational learning (Tuschke et al., 2014). In a related vein, resource dependence theory suggests that board interlocks enhance performance by reducing uncertainty and helping firms to acquire external resources (Hillman et al., 2009). In contrast, agency theorists argue that board interlocks can impair monitoring, weaken the checks on managerial opportunism, and thus decrease firm performance (Dalton et al., 2007). Despite their diverging predictions, there has been empirical support for these various perspectives (Devos et al., 2009; Geletkanycz et al., 2001; Hillman et al., 2011; Horton et al., 2012).

The theories alluded to above differ in their assumptions about what the key functions of directors are and which factors constrain them in exercising these functions. Agency theorists argue that the primary role of directors is to monitor management. In contrast, resource dependence scholars view directors as providers of resources to the board. Both of these functions involve internal and external information, and information processing approaches identify uncertainty, complexity, and information overload as factors that constrain the capacity of directors (and thus of boards) to achieve these objectives. In practice, directors may perform *both* monitoring and resource provision functions. Therefore, we believe that interlocks and their performance effects will best be understood by using multiple theoretical lenses.

In our paper, we focus on board *committees*, that is, subgroups of the board that are connected by interlocks between firms. Prior research has only studied the performance effects of *board interlocks*, situations where individual directors simultaneously hold positions on the boards of two companies (Ruigrok et al., 2006). In contrast, we analyze *committee interlocks*, a subset of board interlocks, defined as a situation where an individual director is a member of similar committees of two companies. The key functions of directors are reliant on the right mix of human and social capital that directors hold (Hillman & Dalziel, 2003). Given that their membership in committees determines the specific roles that directors on a board have (Brandes et al., 2016; Finkelstein et al., 2009; Shropshire, 2010), we propose that the effects of committee interlocks on firm performance depend on whether the primary purpose of the interlocked committee is to

monitor the firm, or to provide it with resources, and whether the kind of information provided through such interlocks will likely be of benefit to the firm.

In order to test our arguments, we use a novel, and large, panel dataset of publicly listed firms in India. This research setting is particularly useful, as the boards of Indian firms have committees that serve various purposes: those that primarily provide financial oversight (i.e., *audit committees*) and those that may support a combination of information and resource provisioning and incentive alignment objectives (i.e., the joint *nomination and remuneration committees*). Compared to firms in developed countries, those in emerging markets such as India face greater resource scarcity (Singh & Delios, 2017), institutional voids (Khanna & Palepu, 1997), and relatively less mature capital and labor markets. In less munificent environments, board interlocks may be a low-cost way for firms to access external resources, including information (Tuschke et al., 2014). However, interlocks may also reduce the independence of a board and thus impede its governance role, whereas strengthening the governance exercised by boards was a central objective of the post-1990 corporate governance reforms in India (Helmets et al., 2017). This tension makes the Indian corporate sector an ideal setting for examining committee interlocks and board effectiveness.

Our results confirm our argument that audit committee interlocks are negatively related to firm performance. In contrast, for committees that help a firm with resource, information access, and incentive alignment objectives, such interlocks have positive performance effects. Therefore, it is not interlocks per se that affect firm performance, but the question of whether or not such interlocks support directors in exercising their roles. Therefore, agency theory (Dalton et al., 2007), resource dependence theory (Hillman et al., 2009), and information processing approaches (Haunschild, 1993) may complement one another in explaining the effects of interlocks.

Our study contributes to the corporate governance and strategic management literatures by offering a more nuanced perspective on interlocks that takes into account which specific committees are connected between firms. We show that committee interlocks may be either beneficial or detrimental to firm performance, depending on the function served by the interlocked committee. Furthermore, we provide evidence on the role of board committees and their interlocks in the context of Indian corporate governance.

2 | REVIEW

2.1 | Boards of directors: Oversight, resource provisioning, and information processing objectives

The extant corporate governance literature offers diverging perspectives on the primary function of boards of directors (Hillman & Dalziel, 2003). Agency theoretic perspectives argue that an essential function of the board of directors is to oversee a firm's top executives in order to ensure that managerial behavior aligns with the objectives of shareholders as the owners of the firm. In this view, boards of

directors work in order to reduce principal-agent conflicts, on the assumption that shareholders themselves are ill-equipped to exercise the monitoring function themselves, due to moral hazard problems prevalent among a large shareholder base, information asymmetries, and the need for specialized expertise and experience (Dalton et al., 2007). While directors may not be able to “control” top managers on a continuous basis, they may be able to check their discretion and thus limit the likelihood of “the worst” kinds of misbehaviors and corporate excesses (Mizruchi, 1996). Agency theory scholars consider board independence to be critical for monitoring, seen as the primary function of directors. Moreover, information processing challenges are important barriers to directors performing the oversight functions of boards (Boivie et al., 2016), a key tenet of agency theory.

The resource dependence perspective argues that resource provisioning is a fundamental role of the board and of directors as its members. In this view, a board can add value to a firm by providing it with resources such as information about best practices, customers or market conditions, access to human capital, and business contacts more effectively and efficiently than other market players may be able to (Hillman et al., 2009). The resource provisioning role of boards of directors will be particularly valuable in imperfect market conditions, as is the case in emerging markets characterized by institutional voids (Khanna & Palepu, 1997). While agency theory and resource dependence theory emphasize different roles of boards of directors, both of them acknowledge the importance of information provisioning and information processing as important prerequisites for the effective functioning of boards of directors (Boivie et al., 2016).

2.2 | Organizing the board's work: Board committees

In principle, boards are considered to be “flat,” with all directors having shared responsibilities and equal voting rights (Reeb & Upadhyay, 2010), although there may be exceptions to this principle. Most of the work of boards takes place through *committees* (Adams et al., 2015). Boards delegate authority to committees in order to alleviate coordination problems (Brick & Chidambaram, 2010). Committees provide benefits such as specialization, efficiency, and improved division of work (Daily et al., 1998). They also help boards to manage potential trade-offs between conflicting demands facing directors (Faleye et al., 2011). Human and relational capital affects the resource provisioning capacity of directors (Hillman et al., 2009), and board committees provide a way to acquire, organize, and deploy this capital. The value of a director's human and social capital at the level of the full board can unfold differently at the committee level: The specific function(s) of the committee concerned will determine what type of human and social capital will be most beneficial. Committees with expertise in specific tasks serve as a crucial source of reliable information for board decision-making to affect firm outcomes.

At the same time, committees may also increase the costs arising from complexity due to information segregation. More committees may lead to a larger number of directors and thus contribute to the

very problem they are meant to resolve. Mitigating these problems requires assigning directors to committees that align with their expertise and assigning directors to multiple committees to foster information exchange (Chen & Wu, 2015). The effective functioning of committees is critical for firm performance (Kolev et al., 2019).

In developed countries with a unitary board system (e.g., the United States, the United Kingdom, and Australia), corporate governance regulations and listing regulations of major stock exchanges require listed firms to have three standard committees: audit committee, compensation committee, and nomination committee (Kolev et al., 2019). The audit committee oversees the compliance of the firm's financial accounting, reporting, and disclosure practices with established norms (DeFond et al., 2005). It thus plays an important monitoring role (Carcello et al., 2011). The compensation committee makes proposals regarding the compensation structure of executives and directors (Vafeas, 2000). The quality of its work relates to the effectiveness of CEO pay structure (Sun & Cahan, 2009). The nomination committee identifies and recommends directors for future appointment to the board (Finegold et al., 2007). These committees provide a firm with information on best practices in executive compensation (Anderson & Bizjak, 2003) and with access to new leadership resources (Eminet & Guedri, 2010).

Boards typically have more committees than those mandated by the corporate governance regulations of the jurisdictions in which they are based. The roles and responsibilities of these “voluntary” (or “non-traditional”) committees are not legally defined (Faleye et al., 2013; Reeb & Upadhyay, 2010). Voluntary committees tend not to emphasize governance functions; they are mostly utilized to secure expert advice on financing, strategy, and special projects (Chen & Wu, 2015). In the United States, 71% of S&P 500 firms in 2019 had more than the three mandatory committees. On average, these firms had 4.2 committees in total (Spencer Stuart, 2019). In our study, we considered only the (interlocks connecting the) *required* committees across firms for two reasons. First, the exact purpose of voluntary committees is often not clearly defined. Second, the number of interlocks between such voluntary committees was fairly small. In more than 90% of the firms in our sample, interlocks between voluntary committees accounted for less than 10% of the total number of interlocks.

2.3 | Board interlocks, committee interlocks, and firm performance

Board interlocks occur when a person occupies a position on the board of two or more firms, providing a direct link between them (Fich & White, 2005). Much of the research on board interlocks is based on the idea that such interlocks facilitate the exchange of information and the diffusion of practices between firms (Howard et al., 2017). They may provide directors with high-quality information, beneficial access to social networks, and inspiration and enhance the sharing of best practices across firms (Zona et al., 2018). Research using the resource dependence perspective has shown that

information transferred through interlocks positively affects strategic decisions such as acquisitions (McDonald et al., 2008) and internationalization (Connelly et al., 2011). At the same time, board interlocks can compromise board independence, thereby increasing agency costs and weakening performance (Fich & Shivdasani, 2005; Perry & Peyer, 2005). Agency theorists also argue that interlocked directors' desire to retain social status and cohesion within directorate networks may lower their motivation to monitor managers. Furthermore, interlocks may overtax the "interlocked" directors by creating information overload (Khanna et al., 2014). The external information provided by board interlocks may also be less beneficial when the tasks that directors are meant to fulfill require primarily internal information.

The empirical results on the relationship between board interlocks and firm performance are mixed (Boivie et al., 2016; Dalton et al., 1998). Hillman and Dalziel (2003) suggest that extant research on board interlocks fails to capture the board's richness and complexity.

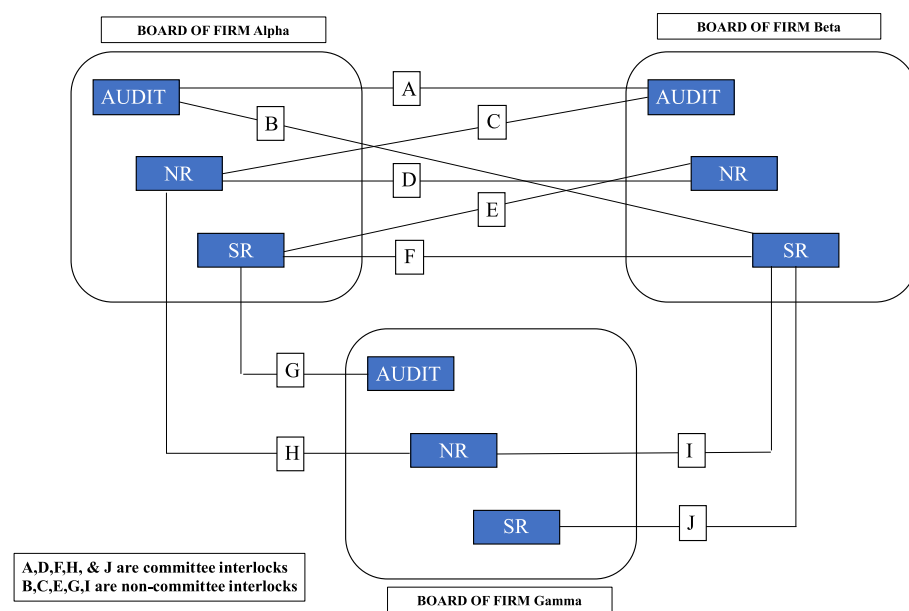
We overcome this limitation by providing an analysis on a more finely grained level, namely, the level of *committee interlocks*, a subset of general board interlocks. We define a committee interlock as a situation where an individual director simultaneously occupies a position on the same type of committee across two or more companies (see Figure 1 and Table S3). In this figure, interlocks labeled A to J connect the boards of firms Alpha, Beta, and Gamma. A subset of interlocks (A, D, F, H, and J) connect the same type of committees across firms.

Investigating interlocks at the committee level can provide a more accurate understanding of the extent to which boards of directors fulfill their objectives for three reasons. First, a director's ability to transmit information, knowledge, and experience across interlocked firms depends on their access to and involvement in committee-level discussions and decision-making processes in focal firms (Shropshire, 2010). Committee-level inputs and decisions play a

significant role in major strategic change in firms (Kolev et al., 2019). Second, firms with boards similar in composition and size but with different committee structures can perform their functions differently (Johnson et al., 2013). Moreover, variations in director characteristics that affect board interlocks can exist in subgroups, such as committees. Third, the value of external information an interlocked director provides may depend on the tasks handled by the committees that are connected across firms (Kolev et al., 2019). The nature and tasks of a board committee may also determine the extent to which a director needs to maintain status in particular social networks of directors and the fear of social sanctions from within those networks. Thus, the nature of the committees connected through interlocks is a critical determinant of differential effects of interlocks on firm performance (Jensen & Zajac, 2004).

2.4 | Corporate governance in India: Directors, boards, and board committees

Our analysis takes place in the corporate governance context of India, an emerging economy that provides an interesting context for understanding board structures and their implications. The presence of institutional voids (Khanna & Palepu, 1997) makes firms operating in emerging markets vulnerable to macroeconomic and political uncertainty. In the absence of strong institutions that facilitate market transactions, provide information, and validate the credibility of participants (Khanna & Palepu, 2010; Landau et al., 2016), firms struggle to compete and survive in these emerging markets (Gao et al., 2017). To mitigate these problems, firms resort to concentrated ownership structures prevalent in emerging economies (Dharwadkar, George, & Brandes, 2000; Young et al., 2008), such as business groups controlled by dominant owners ("patrons" and their families and associates).



Audit=Audit Committee; NR=Nomination & Remuneration Committee; SR=Stakeholders Relationship Committee

FIGURE 1 Illustration of board interlocks and committee interlocks between three firms. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/j.1522-3175.2023.12523.x)]

They also rely on networks that often involve board interlocks (Manikandan & Ramachandran, 2015). Interlocks are important sources of information and relational capital to compensate for the lack of strong institutions (Gaur et al., 2014), yet they may also exacerbate the difficulty of monitoring a firm and its management with an appropriate degree of independence from those dominant owners.

Indian corporate governance standards are guided by (a) The Companies Act 2013 and (b) Listing Obligations and Disclosure Requirements formulated by the Security Exchange Board of India (SEBI), the securities market regulator. In the early 2000s, SEBI made significant reforms to Clause 49 of the Listing Agreement of stock exchanges, a watershed moment in Indian corporate governance (Black & Khanna, 2007). They replaced the voluntary corporate governance code with new standards containing both mandatory and non-mandatory requirements for listed firms. Clause 49 became fairly similar to the Sarbanes-Oxley Act of the United States, making governance standards in India more comparable to those in developed countries (Black & Khanna, 2007; Helmers et al., 2017; Reed, 2002). The Companies Act, initially passed in 1956, was replaced by a new version that came into effect in August 2013, although most firms had already set up the requisite committees in the financial years 2012–2013 upon the passing of the bill in the Lok Sabha (the lower house of the Indian parliament) in 2012.

Boards of Indian firms consist of three groups of directors (SEBI, 2015; The Institute of Company Secretaries of India, 2014; The Ministry of Corporate Affairs, 2013). First, *executive directors* are top managers involved in day-to-day operations of the firm, usually through an employment relationship. Second, *non-executive directors* may be individuals affiliated to the firm or its subsidiaries previously as employees or as advisors, or they may be nominees of or related to majority owners (“promoters”) who are closely associated with the firm; yet they do not play an executive role through a concurrent employment relationship. The third category are the *independent directors* who are non-executive and not nominated by the firm's majority owners. The different types of directors in Indian boards are tabulated in Table S1. Firms above specific levels of share capital, revenue, and outstanding loans are required to have a minimum of two independent directors.

The Indian Institute of Corporate Affairs (IICA, 2020), under the Ministry of Corporate Affairs, maintains a databank of individuals who satisfy the requirements for assuming positions as independent directors. As per recent (January 2023) data available on the website, the databank had 21,110 independent directors registered, 28% of whom were women (IICA, n.d.). The databank was created with the objective to empanel both existing directors and individuals intending to become directors. It also provides e-learning resources on corporate governance and related topics to build capacity among both existing and aspiring directors. Further, the databank is designed to serve as a platform, linking individuals interested in director positions and firms seeking independent directors. The Companies Act 2013 mandates that every individual who requests to be listed in the databank should clear an online proficiency test within 2 years of listing (IICA, 2020). The test covers subjects such as basic accounting and corporate

governance regulations deemed essential for independent directors. Individuals are exempted from taking the self-assessment test under certain conditions such as having served for at least 3 years as a director in a publicly listed company already, serving as director or equivalent in any government or quasi-government entity, or possessing certain professional qualifications (IICA, n.d.). Firms select the directors from this databank based on their requirements and appoint them to the board by passing a resolution in the general shareholder assembly. The SEBI also mandates that during the appointment process of directors, publicly listed firms should inform the shareholders about details such as directors' qualifications, functional expertise, relationship with the firm, board and committee positions in other firms, and shareholdings of non-executive directors in the focal firm (Koshy & Khetan, 2022).

In the Indian corporate governance context, board *committees* play an even bigger role than is the case in the United States (the average number of committees in the firms in our sample [2014–2019] is 5.2, as compared to 4.2 in S&P 500 firms in the United States [Spencer Stuart, 2019] during the same period). According to the Companies Act 2013, there are three mandatory committees, namely, the *audit*, the *nomination and remuneration* (NR), and the *stakeholders relationship* (SR) committees (see the overview in Table S2, including a comparison with the United States).

The key functions of the *audit committee* include monitoring the financial reporting processes and overseeing the disclosure of financial information to comply with legal and regulatory requirements. The audit committee caters not only to shareholders but also to a wide group of financial market actors including regulators, analysts, and debtholders. The Companies Act 2013 mandates that this committee should be chaired by an independent director and have a minimum of three members, the majority of whom are independent directors. The audit committee is thus designed to provide independence both from executive management and from dominant owners, in order to enable the committee to monitor the firm and its management and provide effective financial oversight.

In contrast to the United States, the compensation committee in Indian firms is not a separate committee but, together with the nomination committee, forms a single, joint committee called the NR committee. The law mandates that NR committees should have a minimum of three non-executive directors as members, of whom at least 50% are independent. The NR committee has two major functions:

- supporting the firm in finding the right human resources for top management and for future board-level positions; and
- putting appropriate compensation structures in place that help the firm “to attract, retain and motivate directors of the quality required to run the company successfully” (The Ministry of Corporate Affairs, 2013, section 178).

The work of the NR committee is thus focused on creating beneficial human resources-related structures and policies *ex ante*, not on *ex post* performance monitoring.

Further, the concentrated ownership structures dominated by patrons in India (Aggarwal et al., 2019; Bhaumik & Selarka, 2012) give rise to the emergence of principal–principal conflicts between large and minority shareholders (Jameson et al., 2014). Against this background, the aim of the SR committee is to strengthen the rights of minority shareholders and other securityholders against the interests of dominant shareholders. More specifically, an SR committee's functions include the promotion of voting rights of (different groups of) shareholders, overseeing investor service standards, highlighting concerns of shareholders to the board, and encouraging efficient whistleblower mechanisms (Balasubramanian, 2013). However, the law is relatively unspecific as to how the SR committee should achieve these objectives. Their charters typically highlight the objective of SR committees to enhance cooperation among different groups of *shareholders*. It is important to point out, therefore, that despite its name, the SR committee in the Indian corporate governance context has little to do with the aim of balancing the interests of multiple “stakeholders” more broadly conceived, such as employees, suppliers, customers, and governmental or wider societal stakeholders (Balasubramanian, 2013).

3 | HYPOTHESIS DEVELOPMENT

How much time and effort directors invest in performing the various functions that boards are tasked with is difficult to gauge accurately. However, directors spend most of their board time in committees and committee-related affairs (Kolev et al., 2019). Committee tasks define the predominant function that directors prioritize and perform in their meetings. The nature of the tasks of a committee determines whether its members focus predominantly on providing financial oversight (as is the case for audit committees) or on the provision of information and on ensuring appropriate incentive systems (as is the case for NR committees). In the following, we develop these arguments more fully.

3.1 | Audit committee interlocks and firm performance in Indian firms

As is the case in other jurisdictions, the audit committee in the boards of Indian corporations predominantly serves financial oversight functions. This committee is primarily concerned with the firm's compliance with legal and regulatory requirements through overseeing financial reporting, setting up effective audit processes, and checking related party transactions (Dharwadkar, Harris, et al., 2020). By doing so, the audit committee aims to constrain discretionary behavior on the part of the firm's management and to strengthen the basis for an unbiased assessment of its financial state by a wide range of stakeholders. In order to exercise their function well, audit committee members thus require a high degree of independence (Chan & Li, 2008) both from the firm's management and from its dominant shareholders (“promoters”) (Ahmed & Siddiqui, 2011; Khan et al., 2013).

If independent monitoring to provide a counter-balance against the interests of top managers and of “promoters” is a major function of audit committees in India, then *interlocks* between audit committees of different firms may impede the capacity of committee members to exercise this function effectively, for three reasons. First, interlocks involve the formation of social ties through which audit committee members may gain psychological benefits, however, at the expense of monitoring independence (Fich & White, 2005; Withers et al., 2012). Director interlocks are critical for maintaining social cohesion and engaging in low-level monitoring, which enhances the likelihood of future board appointment (Westphal & Stern, 2007). Therefore, directors who are members of audit committees of several firms simultaneously are more likely to be part of (and benefit from) established networks that may discourage whistleblowing and strong, impartial oversight. Given that a director's reputation for activism or passivity in his/her current board can influence his/her future board appointment (Zajac & Westphal, 1996), a director who serves on the audit committee of two firms will be less likely to “dig deep” into matters such as unaccounted-for liabilities in one firm, if doing so earns him/her a reputation for being a “troublemaker” in another one, which would lead to self-selection of more “lenient” members to serve on multiple audit committees simultaneously. Therefore, audit committee interlocks may reduce audit committee members' ability to monitor other directors and top managers scrupulously and with scrutiny. In contrast, highly independent audit committees can signal intense monitoring and thereby reduce the “cosiness” between independent directors and executives (Adams & Ferreira, 2007; Faleye et al., 2011; Holmstrom, 2004).

Second, with increasing responsibilities of audit committee members, serving on multiple audit committees may well overburden the directors concerned and exacerbate the problem of information overload (Ashraf et al., 2020). Service on the audit committee involves a higher meeting frequency (Brandes et al., 2016), and greater responsibilities with respect to the management of financial risks (Vera-Munoz, 2005), than is the case with any other mandatory committee. While holding multiple board (and board committee) memberships simultaneously increases the demands on directors in general, Boivie et al. (2016) argue that exercising monitoring-related roles requires consistent effort to be effective, whereas other activities that are more geared towards providing the firm with resources are more latent and less rule based in nature. Serving on multiple audit committees may thus make it particularly challenging for directors to serve any one of them adequately.

Third, while audit committee interlocks may provide the directors concerned with additional information (e.g., on the accounting and auditing practices of other firms), the potential gain from this particular information may be more limited than is the case with other types of committees. Audit committee members are not the firm's auditors; they provide oversight over accounting, auditing, and financial reporting processes (Braiotta et al., 2010). Major components of financial reporting are relatively inflexible (Ball et al., 2000) and allow for little discretion. In fact, when experiences obtained through audit committee interlocks affect the financial reporting practices of interlocked

firms (as appears to be the case; Shepardson, 2013), the consequences may well be undesirable: Brown (2011) has provided evidence of widespread diffusion of aggressive tax sheltering practices among interlocked firms. Audit committee interlocks are associated with the transfer of accounting policy choices with relation to negative special items. These are accounting acknowledgment of large income-decreasing events used by managers to bias perceptions of firm performance (Riedl & Srinivasan, 2010) that may have a substantial deteriorating effect on future earnings (Dharwadkar, Harris, et al., 2020). Therefore, while it is possible that audit committee interlocks can transfer accounting *practices* across firms, evidence suggests that the practices thus transferred may well be *unhealthy* ones (Carrera et al., 2017; Dharwadkar, Harris, et al., 2020). In sum, we propose that an increase in interlocks among audit committees in Indian firms will be related to a decline in effectiveness and thus decrease firm performance, as compared to a situation where audit committees are less interlocked and thus more independent. Therefore, we hypothesize the following:

Hypothesis 1. Audit committee interlocks among Indian firms will be negatively related to firm performance.

3.2 | NR committee interlocks and firm performance in Indian firms

As outlined above, the NR committee on the boards of Indian corporations has dual responsibilities: identifying and nominating qualified individuals to a firm's board and ensuring good governance by devising appropriate compensation structures for top executives *ex ante*. To perform these functions effectively, directors depend on resources such as information about firms in their operating environment (Kolev et al., 2019) and about effective compensation practices. They benefit from strong social networks that can help to acquire the requisite information at limited costs. The social capital of directors, which can be attained through interlocks between NR committees across firms, can add significant value to the firms involved.

Nominating directors to serve on a firm's board, or to strengthen a firm's bench of top managerial talent, requires carefully evaluating its needs and finding individuals with the appropriate capabilities (Faleye, 2007; Zhang, 2008). Devising effective remuneration policies involves setting executive pay structures that are compatible with industry standards and benchmarking against best practices followed by competitors (Faulkender & Yang, 2010; Perry & Zenner, 2001). Using social comparison theory, Ezzamel and Watson (1998, 2002) argue that by reducing the problem of overpayment or underpayment of managers, compensation committees help to achieve alignment between the goals of agents (managers) and their principals (shareholders). Agency theory suggests that outside directors play a key role in tying executive pay to market performance (Devers et al., 2007). By spreading information on

compensation practices in other firms, NR committee interlocks provide salient reference points for devising executive compensation practices in focal firms. This is particularly important in the Indian context, as Indian legislation provides no structured guidance on the level or composition of executive pay (The Institute of Company Secretaries of India, 2014).

Extant evidence suggests that, in contrast to audit committees, the effectiveness of remuneration committees is not necessarily contingent on their independence (Faleye, 2007). Furthermore, the social capital of compensation committee members influences executive compensation (Belliveau et al., 1996). In sum, interlocks between NR committees may reduce directors' independence, yet the upside of this may be a gain in the ability of directors to exercise both their resource provisioning function and their responsibility for devising incentive-aligned remuneration structures for top managers (Shen et al., 2022).

Due to the fairly balanced structure of NR committees in Indian firms (see Table S2), NR committee members have access to firm-specific information. Extant research underlines the importance of such firm-specific knowledge for director selection (Callahan et al., 2003; Faleye, 2007) and compensation decisions (Klein, 1998). The access to firm-specific information allows NR committees to balance shareholder interests for executive pay to be related to performance with executive interests to negotiate pay structures that provide flexibility for strategic decision-making. The quality of advice is proportional to the information acquired (Duchin et al., 2010), and social capital is critical for acquiring this information. NR committee interlocks help directors to develop such social capital. NR interlocks act as primary routes for the transfer of information and organizational practices across firms (Kang, 2008). In sum, we propose that interlocks connecting NR committees of different firms in India will be positively related to firm performance.

Hypothesis 2. NR committee interlocks among Indian firms will be positively related to firm performance.

3.3 | SR committee interlocks and firm performance

As indicated above, the SR committee in Indian firms aims to balance the interests of different groups of *shareholders* and other securityholders, against the background of highly concentrated ownership structures typically dominated by *promoters*. The typical tasks of SR committees may involve activities that could reduce principal-principal conflicts (e.g., strengthening minority shareholder rights) but also those that could provide the firm with resources (e.g., spreading best practices regarding investor relations) (Companies Act 2013). However, the exact nature of the work of SR committees is difficult to gauge, and the effects of SR committee interlocks are hard to predict. We thus refrain from proposing a hypothesis in this regard.

4 | METHODOLOGY

4.1 | Sample

We compiled a novel panel dataset using data collected from the Prowess database published by the Centre for Monitoring Indian Economy (CMIE). This database compiles information on all firms listed on the two major stock exchanges (Bombay Stock Exchange and the National Stock Exchange) in India. These firms contribute 75% of the overall corporate taxes collected in the country (Kumar et al., 2020). The CMIE Prowess database has been used in several prominent studies on Indian firms (e.g., Chacar & Vissa, 2005; Helmers et al., 2017; Lamin & Ramos, 2016; Vissa et al., 2010). It is common practice to focus analyses on non-financial firms, as the meaning of many control variables (e.g., leverage ratios and assets as a measure of firm size) differs considerably between non-financial and financial firms. In addition, financial sector firms in India are highly regulated by both the Central Bank of India and the Ministry of Finance, and they face additional requirements regarding board composition (Nayak et al., 2014). Therefore, following prior studies (Beckman et al., 2004; Kim et al., 2016), we excluded banks and other financial service firms (38 firms) from our analysis.

Since the Companies Act, which effected significant changes in board structure in India, was implemented in 2013, we decided to use the financial year 2014 as the starting point for our analysis. The final sample is a panel of 5133 firm-year observations between the financial years 2014 and 2018. Our panel involves 1799 unique firms, with an average of 3.22 years of data. It includes firms from a wide variety of industries with wholesale trading, pharmaceuticals, and automotive supplies occupying the top three spots, yet no single industry accounting for more than 7% of the total (see Table S4 for details).

Inspection of the descriptive statistics (see Table 1) indicated the presence of outliers in our data that could influence our analyses. However, we note that for the majority of the variables used in the model, the standard deviation (SD) was well within 2.24 SD units away from the mean (M. A. Martin & Roberts, 2010), alleviating this concern. Further, we winsorized the data to the 1st and 99th percentiles to minimize the influence of outliers. Winsorization is a highly recommended (Aguinis et al., 2013) and widely used (e.g., Roccapiore & Pollock, 2022; Tang et al., 2015) technique to address the effect of outliers in regression models.

4.2 | Measures

4.2.1 | Dependent variable: *Firm performance*

We used Tobin's q , a measure of long-term profitability, to measure firm performance. Previous studies attribute market perceptions of a firm's current and potential profitability to variations in Tobin's q (Carpenter, 2002; Richard et al., 2007). Tobin's q is defined as the ratio of the market value of a firm to the replacement value of its assets (Erickson & Whited, 2006; Lewellen & Badrinath, 1997). It has

been used widely in the board literature (Anderson & Reeb, 2004; Chen et al., 2016; Haynes & Hillman, 2010; Hillman, 2005) and in recent studies on board interlocks (Howard et al., 2017; Sauerwald et al., 2016).

4.2.2 | Independent variables: *Committee interlocks*

In Figure 1, interlocks numbered A to J connect boards of firms Alpha, Beta, and Gamma. We consider all interlocks from A to J as *board interlocks*. A subset of these interlocks, namely, A, D, F, H, and J, are *committee interlocks* as they connect the same committees across firms. The value of a firm's *committee interlock* measure is the total number of companies that the focal firm has interlocks with through the respective committee.

$$Cl_i = \sum_{i \neq j} CInt_i^j \quad (1)$$

$CInt$ takes the value of 1 if there is at least one common committee member in the respective committees of both firm i and firm j , and 0 otherwise. A committee interlock occurs when a director from a particular committee on the board of one firm also sits on the same committee in the board of another firm. The measure is applied to all committees concerned.

4.2.3 | Control variables

We controlled for several firm-level and board-level factors in our analyses. Since committee interlocks are a subset of board interlocks, there is a possibility that variations across firms in the number of interlocks that are not committee interlocks could affect our hypothesized relationships. Therefore, we defined the control variable *non-committee interlocks*, which is mutually exclusive from, yet collective exhaustive with the three types of committee interlocks (audit/NR/SR committee interlocks) analyzed here. The *non-committee interlocks* variable is the degree centrality of a firm (Freeman, 1978; Helmers et al., 2017; Koka & Prescott, 2002), that is, the total number of firms that the focal firm had interlocks with through the board of directors, except for those interlocks that satisfied the criteria for committee interlocks. Degree centrality is widely considered a suitable measure of interlocks as it is an effective measure of connectedness of an actor in a network (G. Martin et al., 2015; Ruigrok et al., 2006).

Furthermore, we controlled for board-level and governance-related variables such as board independence, number of committees, ownership concentration, board size, and CEO duality, commonly used in the literature on interlocks (Zona et al., 2018). We measured *board independence* as the ratio between the number of independent directors on the board and board size (Capezio et al., 2011). In models with individual committees, we calculated committee-level independence similar to the measure of board independence. Since the number of committees also varied across firms, we controlled for the

TABLE 1 Summary statistics.

	Mean	SD	Min	Max
<i>Firm performance</i>	2.659	3.715	0.118	30.786
<i>Audit committee interlocks</i>	2.077	2.343	0.000	18.000
<i>NR committee interlocks</i>	1.474	2.052	0.000	19.000
<i>SR committee interlocks</i>	0.943	1.436	0.000	12.000
<i>Non-committee interlocks</i>	2.804	3.730	0.000	30.000
<i>Audit committee independence</i>	0.534	0.288	0.000	0.875
<i>NR committee independence</i>	0.370	0.343	0.000	0.923
<i>SR committee independence</i>	0.390	0.266	0.000	0.923
<i>Audit committee size</i>	1.397	0.258	0.000	2.484
<i>NR committee size</i>	1.298	0.277	0.000	3.091
<i>SR committee size</i>	1.306	0.362	0.000	2.639
<i>Board independence</i>	0.454	0.099	0.000	0.875
<i>Number of committees</i>	5.166	1.366	4.000	12.000
<i>Ownership concentration</i>	56.031	14.971	0.000	98.190
<i>Firm age (log)</i>	3.348	0.574	0.000	5.036
<i>Board size</i>	9.934	2.956	3.000	26.000
<i>CEO duality</i>	0.350	0.477	0.000	1.000
<i>Leverage</i>	1.148	1.691	0.001	11.620
<i>Firm size</i>	8.325	1.816	2.815	13.099
<i>Industry performance</i>	2.106	2.470	0.118	30.786
<i>Capex</i>	0.042	0.048	0.000	0.256

Note: $N = 5133$.

Abbreviations: NR, nomination and remuneration committee; SR, stakeholders relationship committee.

number of committees on a firm's board. *Ownership concentration* was measured as the percentage of shares held by promoters (Gul et al., 2010). *Board size* captures the number of a firm's board members. In models with individual committees, we calculated committee size similar to board size. We measured *CEO duality* as a binary variable that takes the value of 1 if the CEO and chair positions were held by the same individual (Desender et al., 2013).

We also controlled for common firm characteristics such as size and age. We measured *firm size* as the log of assets owned by the firm (Dang et al., 2018). We calculated *firm age* as the time (in years) between the year of incorporation and the end of the panel year, or the end of the firm's operations. We performed a logarithmic transformation of *firm age* to offset the variation between small and large values. Additionally, we controlled for financial variables such as *leverage*, *capital expenditure*, and *industry performance* that can affect a firm's financial performance. We measured *firm leverage* as the overall debt-to-book value of equity (Lemmon et al., 2008). *Capital expenditure* is the ratio of a firm's capital expenditures to total assets (Feldman, 2020). We calculated *industry performance* as the median Tobin's q of firms operating in the same industry identified by the two-digit National Industry Classification code proposed by the Ministry of Statistics in India (Ghani et al., 2014).

4.3 | Analysis and estimation technique

Since we used a lagged dependent variable in our models, there could be a dynamic panel bias in our estimations (Nickell, 1981). To overcome this challenge, we used the general method of moments (GMM) method of Arellano and Bover (1995) and Blundell and Bond (1998) to test our hypotheses. The system GMM (SGMM) estimator is well suited for panels with a short time period and large cross-section. SGMM permits time-invariant variables to be estimated along with other variables and allows the use of several instruments, making hypothesis testing more efficient (Roodman, 2009). Furthermore, the GMM estimator draws instruments from the data to address potential endogeneity concerns. Recent studies on boards and interlocks have used GMM for estimation (Bennouri et al., 2018; Zona et al., 2018). We controlled in all our estimations for year-fixed effects and firm-fixed effects.

5 | RESULTS

5.1 | Main results

We present the summary statistics in Table 1. Listing regulations in India permit an individual to hold directorships in a maximum number

TABLE 2 Bivariate correlations.

	1	2	3	4	5	6	7	8	9
1 Firm performance	1.000								
2 Audit committee interlocks	.017	1.000							
3 NR committee interlocks	.013	.594*	1.000						
4 SR committee interlocks	-.009	.426*	.376*	1.000					
5 Non-committee interlocks	.016	.351*	.245*	.239*	1.000				
6 Board independence	-.029	.052*	.035*	.005	-.019*	1.000			
7 Audit committee independence	.020*	.067*	.053*	.040*	.009	.023*	1.000		
8 NR committee independence	.050*	.088*	.075*	.033*	.017	-.097*	.324*	1.000	
9 SR committee independence	.014	.004	.020*	.026*	.001	.075*	.254*	.334*	1.000
10 Number of committees	-.002	.177*	.152*	.075*	.143*	.023*	-.002	.068*	-.031*
11 Ownership concentration	.044*	.066*	.028*	.027*	.048*	-.084*	.017	-.011	-.039*
12 Firm age	-.011	.074*	.062*	.007	.061*	.059*	-.027*	.003	-.061*
13 Board size	.025*	.323*	.216*	.126*	.413*	-.048*	.044*	.052*	-.048*
14 Audit committee size	.041*	.257*	.155*	.108*	.140*	.043*	.184*	.080*	.015
15 NR committee size	.040*	.173*	.159*	.071*	.102*	.018*	.062*	.223*	.082*
16 SR committee size	.023*	.108*	.074*	.142*	.072*	.022*	.045*	.048*	.060*
17 CEO duality	-.048*	-.078*	-.052*	-.016	-.078*	.111	-.042*	-.091*	.001
18 Leverage	.157*	.012	-.002	.012	.012	-.029*	-.021	-.046*	-.018
19 Firm size	.008	.392*	.281*	.170*	.324*	.030*	.100*	.088*	.007
20 Industry performance	.189*	.018	.017	-.004	.033*	-.029*	.002	.022*	.002
21 Capex	.063*	-.011	-.019	-.005	.033*	0	.016	-.018	-.027*

Note: N = 5133.

Abbreviations: NR, nomination and remuneration committee; SR, stakeholders relationship committee.

*Statistically significant at the 10% level.

TABLE 2 (Continued)

	10	11	12	13	14	15	16	17	18	19	20
1											
2											
3											
4											
5											
6											
7											
8											
9											
10	1.000										
11	.042*	1.000									
12	.159*	.055*	1.000								
13	.401*	.116*	.174*	1.000							
14	.251*	.081*	.100*	.356*	1.000						
15	.336*	.033*	.074*	.305*	.543*	1.000					
16	.298*	.060*	.060*	.195*	.412*	.379*	1.000				
17	-.013	.047*	.015	-.109*	-.042*	-.021*	.004	1.000			
18	-.040*	.027	-.008	.005	-.020	-.059*	.014	.002	1.000		
19	.458*	.143*	.119*	.588*	.374*	.300*	.209*	-.034*	.077*	1.000	
20	.049*	.044*	.035*	.091*	.003	.042*	-.017	-.023*	-.107*	.065*	1.000
21	.017	.028*	-.039*	.073*	.050*	.033*	.052*	-.016	-.059*	.011	.084*

Note: N = 5133.
Abbreviations: NR, nomination and remuneration committee; SR, stakeholders relationship committee.
*Statistically significant at the 10% level.

TABLE 3 SGMM estimation (FY2014 to FY2019).

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Audit committee interlocks</i>		−0.353** (0.142)			−0.304** (0.152)
<i>NR committee interlocks</i>			0.109** (0.051)		0.097** (0.048)
<i>SR committee interlocks</i>				0.039 (0.086)	0.065 (0.064)
<i>Non-committee interlocks</i>	−0.033 (0.146)	−0.035 (0.075)	−0.079 (0.179)	0.031 (0.108)	0.111 (0.153)
<i>Board/committee independence^a</i>	−0.198 (0.866)	0.056 (0.293)	0.016 (0.791)	−0.933 (1.888)	−1.08 (10.547)
<i>Number of committees</i>	−0.177 (0.426)	−0.238 (1.575)	0.309* (0.175)	0.191 (0.135)	−0.125 (0.509)
<i>Ownership concentration</i>	0.007* (0.004)	0.008* (0.005)	0.007 (0.005)	0.008* (0.004)	−0.001 (0.026)
<i>Board size/committee size^a</i>	−0.12 (0.314)	1.394** (0.620)	−3.186 (3.970)	0.063 (0.174)	−0.166* (0.098)
<i>CEO duality</i>	−0.029 (0.597)	−0.156 (0.102)	−0.093 (0.142)	−0.067 (0.098)	−0.005 (0.225)
<i>Firm size</i>	0.589 (0.932)	−0.284 (0.561)	−0.262 (0.498)	−0.364 (0.277)	0.533 (0.425)
<i>Firm age</i>	−0.012 (0.397)	0.454** (0.229)	0.231 (0.180)	0.199 (0.152)	0.035 (0.285)
<i>Leverage</i>	0.667** (0.334)	0.34 (0.287)	0.259 (0.189)	0.666*** (0.216)	0.256 (0.295)
<i>Capex</i>	20.112 (12.658)	38.425** (18.335)	15.49 (11.021)	12.909 (10.260)	7.252 (16.162)
<i>Firm performance (t − 1)</i>	0.504** (0.216)	0.554*** (0.143)	0.591*** (0.123)	0.552** (0.221)	0.534** (0.212)
<i>Industry performance</i>	0.526*** (0.138)	0.516*** (0.113)	0.518*** (0.092)	0.662* (0.383)	0.703* (0.368)
<i>Constant</i>	−4.16 (3.452)	−0.957 (4.778)	2.744 (2.754)	−0.405 (1.490)	−2.213 (6.118)
<i>Year effects</i>	Included	Included	Included	Included	Included
Wald's χ^2	2534.827***	2808.296***	4744.865***	7224.739***	2764.771***
AR(1)	−0.943***	−0.685***	−1.376***	−1.147***	−1.150***
AR(2)	0.346	0.493	0.169	0.251	0.250
Number of instruments	31	29	32	39	40
Hansen's test	5.497	10.826	18.861	17.885	7.323

Note: $N = 5133$. The dependent variable (DV) is Tobin's q of each firm. Standard errors presented below the coefficient estimates in parentheses. Independent variables lagged by 1 year.

Abbreviations: NR, nomination and remuneration committee; SGMM, system general method of moments; SR, stakeholders relationship committee.

^aCommittee-specific variables are included in Models 2–4, and board-level variables are included in Models 1 and 5.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

of 10 boards of listed companies (SEBI, 2015). In our sample, in 2019, directors of listed firms in India held board positions in 3.7 boards on average. Independent directors held positions in 3.4 boards, whereas for S&P firms in the United States, the corresponding number was 2.1 (Spencer Stuart, 2019). The boards of the firms in our sample had an average of 9.9 members (45% of whom were independent directors) and 5.2 committees. Whereas they had a mean value of 2.8 non-committee interlocks, the mean value of individual committee interlocks ranged between 0.9 and 2.1.

Table 2 provides an overview of the correlations between the variables included in our analysis. The *non-committee interlocks*, *audit committee interlocks*, and *NR committee interlocks* variables are positively correlated with *firm performance*, whereas the *SR committee interlocks* variable is negatively correlated with it. Interestingly, the *audit committee interlocks*, *NR committee interlocks*, and *SR committee interlocks* variables are positively and significantly correlated with one another, so firms that have more interlocks with respect to one type of committee also tend to have more interlocks with respect to other types of committees. The independent variables included in our analysis had an average variance inflation factor (VIF) of 1.41, and none of the variables had a VIF greater than 3, considerably below even a conservative threshold of 4 (O'Brien, 2007), providing no indication of multicollinearity.

Table 3 reports the results of the SGMM regressions to test the relationships between various committee interlocks and firm performance. Model 1 constitutes the baseline controls-only model. Model 2 tests the relationship between audit committee interlocks and firm performance. Audit committee interlocks are negatively associated with firm performance ($\beta = -.353$, $p = .032$). This supports Hypothesis 1, according to which audit committee interlocks in Indian firms are negatively related to firm performance.

In Hypothesis 2, we predicted that interlocks among NR committees are positively related to firm performance. Model 3 shows that NR committee interlocks are positively associated with firm performance ($\beta = .109$, $p = .024$), confirming this hypothesis. Closer inspection of the results indicated that, *ceteris paribus*, an increase in the number of audit committee interlocks (respectively in the number of NR committee interlocks) is associated with a material decrease (increase) in Tobin's q . Both these results are economically significant, considering the average number of committee interlocks among the firms in our sample.

We also tested the performance effects of SR committee interlocks. The results of Model 4 show that the coefficient for the relationship between SR committee interlocks and firm performance is positive but not statistically significant.

Model 5 includes all independent variables in an overall model, and the signs and statistical significance of the coefficients of the variables of interest remained largely unaffected. In order to assess the significance of the overall model, we applied the Arellano-Bond tests of autocorrelation and the Hansen test for instrument validity. The Wald chi-square statistics for all models in Table 3 are statistically significant (at the $p < .001$ level). Furthermore, for all models, the AR(1) statistic is significant, whereas the AR(2) statistic is not significant. Thus, our models satisfy the assumption of no serial correlation

in the error terms, and autocorrelation does not affect the validity of lagged instruments. It is also evident from Table 3 that for all models, the Hansen test failed to reject the null hypothesis that the variables used in the respective models are suitable instruments. In the SGMM regressions, we employed the second, third, and fourth lags of the dependent variable and the explanatory variables as instruments in order to mitigate endogeneity concerns. The number of instruments employed in each estimation is shown in Table 3. In keeping with Roodman's (2009) advice, the number of instruments employed in our SGMM estimations is considerably smaller than the number of firms in the cross-section.

5.2 | Robustness tests

We performed four additional analyses to ascertain the robustness of our results. First, we noticed from Table 1 that while board and committee interlocks are common in Indian firms, there are also some firms that do not have any such interlocks. In order to avoid selection effects (i.e., firms of particular types self-selecting into having interlocks), we ran our full model (Model 5 in Table 3) with all types of committee interlocks as a two-stage Heckman model, to analyze whether firms had interlocks in the first stage of the analysis, and the effects of these interlocks on Tobin's q in the second stage. The signs and significance levels of the variables of interests remained unchanged; hence, we refrain from including them here.

Second, as an alternative approach to estimating our model, we employed an ordinary least squares fixed effects (OLS-FE) model with the Driscoll and Kraay (1998) technique for the baseline estimation (see Table S5). This method is more robust than other estimation techniques since it corrects the standard errors for heteroscedasticity, cross-sectional dependence, and autocorrelation. All estimations control for year-fixed effects along with firm-fixed effects. Previous research (Sun et al., 2016) has indicated that fixed-effects models mitigate potential endogeneity problems as they control for all factors that vary across entities but are constant over time and for all factors that vary over time but are constant across entities (Wooldridge, 2010). We also included a 1-year lagged variable (*past firm performance*) as a control in all our estimations. This approach helps to capture a large proportion of variance that can be explained by many factors that might potentially be omitted in our models. Hence, such models are considered conservative, and results are highly robust (Tan & Rider, 2017; Zona et al., 2018). The direction of the coefficients of the relationship between audit committee interlocks ($\beta = -.072$, $p = .002$) respectively NR committee interlocks ($\beta = .041$, $p = .005$) and firm performance aligns with those obtained in the SGMM model. All the coefficients are statistically significant, providing support for our hypotheses. Further, we used F -tests to compare Model 1 (the controls-only model) to models with the committee interlocks of interest (Models 2, 3, and 5). These tests confirmed that all these models of interest had significantly higher explanatory power than the baseline Model 1.

Third, we evaluated the sensitivity of our results to potential omitted variable bias by performing Oster's (2019) coefficient stability test. This method is commonly used in economics as an important diagnostic to detect omitted variable bias, but its use in strategy research is limited to a few recent studies (Lazzarini et al., 2021; Lyons & Zhang, 2018; Starr et al., 2019). The test is based on the assumption that the link between the treatment and unobservable components can be understood by the link between the treatment and observable components (Mavis et al., 2020). Hence, the inclusion of omitted variables in the model can result in a maximum R -squared (R_{Max}) that equals 1.3 times the estimated R -squared with controls. We thus constructed this conservative upper bound R_{Max} and then calculated the estimates β with the assumed value of $\delta = 1$ and the value of δ when $\beta = 0$ for the given R_{Max} . The results show that potential omitted variables do not have any notable effect on our results. The bias-adjusted β values (for audit committee interlocks: $-.097$; for NR committee interlocks: $.033$) have the same signs and similar values as the estimated β with controls (for audit committee interlocks: $-.075$; for NR committee interlocks: $.039$). Furthermore, the proportional selection coefficient δ (given $\beta = 0$ and R_{Max}) is either greater than the proposed threshold value of 1 or negative (audit committee interlocks $\delta = -3.634$; NR committee interlocks $\delta = 5.304$). δ -values that are either greater than 1 or negative indicate that the inclusion of controls strengthens the estimated effect, making it unlikely that omitted variables bias the original estimate (Gorodnichenko & Weber, 2016; Graham et al., 2017).

Fourth, we performed a sub-sample analysis (Goldfarb & King, 2016) to test the robustness of our results against any delayed effects of the introduction of the Companies Act 2013. This legislation brought significant changes to board size and committee characteristics (Aggarwal et al., 2020). Although most firms complied with this mandate early on, we sought to mitigate the effect of firms that failed to comply with the Act in the immediate years after 2013. Hence, we tested our hypotheses using our OLS-FE model with a sub-sample of 3173 firm-year observations for the years 2016–2018. We refrain from presenting the results here, as they are substantively the same as those of our main analysis shown in Table 3.

6 | DISCUSSION

6.1 | Main findings

Both management research and practice consider board interlocks as a key source of inter-firm ties (Johnson et al., 2013). The literature has resorted to a variety of theories—information processing theory, agency theory, and resource dependence theory—in order to explain the effects of interlocks on firm performance (Zona et al., 2018). However, these theories provide inconsistent predictions in this regard, as they draw on different underlying assumptions (Shaw et al., 2018). It is no surprise then that the empirical results on the effects of board interlocks on firm performance are inconclusive.

To advance the discussion on the determinants of board performance, we are taking a multi-theoretical approach. We argue that

committees, structural devices that boards use to organize their work (Finkelstein et al., 2009; Johnson et al., 2013), help boards to simultaneously achieve the objectives of (a) monitoring the firm and its management in order to reduce agency costs and (b) providing it with valuable information and access to other types of resources. However, the activities involved in pursuing these objectives have different prerequisites. Some committee tasks require a considerable degree of independence and neutrality (Boivie et al., 2016). In contrast, resource provisioning relies on and benefits from utilizing a social network, in particular as far as access to human resources and valuable information is concerned (Hillman et al., 2009). We thus suggest that the performance effects of committee interlocks, as a subset of board interlocks, depend on the type of committee concerned. We propose that interlocks between audit committees that are tasked with providing oversight and ensuring legislative and regulatory compliance are detrimental to executing this set of tasks effectively. Serving on the audit committees of multiple firms simultaneously may reduce the independence of committee members and/or overburden them, without providing offsetting benefits. In contrast, interlocks between NR committees can be helpful to the firms concerned and thus have positive performance effects. Our empirical results support these arguments.

Our analysis focuses on a large sample of Indian publicly listed firms from 2014 to 2018, shortly after the introduction of the Companies Act 2013 that mandated firms to institute particular committee structures that have similarities and differences as compared to those in other countries, such as the United States. According to corporate governance rules in India, audit committees are designed to have a high degree of independence, in order to provide a counterweight against the strong influence of promoters (dominant owners and their affiliates). We suspect audit committee interlocks to lessen this independence and incur the kind of agency costs audit committees are meant to reduce in the first place (Brandes et al., 2016).

In contrast, we find that interlocks between NR committees have positive effects on firm performance. These effects are economically material, they are robust to alternative model specifications, and their inclusion improves the explanatory power of our regressions as compared to the baseline model. The analyses also indicate that SR committee interlocks do not have any significant effect on firm performance. The SR committee is a type of committee specific to the Indian corporate governance context that involves a variety of tasks.

Our study contributes to the literature on board interlocks in general and to the emerging literature on committees in particular (Clark et al., 2020; Garg et al., 2018; Omer et al., 2020). First, research that considers interlocks in relation to the various functions of boards—information processing, monitoring, and resource provisioning—is still limited. Few studies that consider the functions of boards have investigated the mechanisms through which board capital mitigates (Feldman & Montgomery, 2015; Tian et al., 2011) or exacerbates (Sun et al., 2016) agency conflicts and the relative level of resources between interlocked firms (Zona et al., 2018). We argue that boards can fulfill several functions simultaneously, by structuring the committees to which the associated tasks are devolved in such a way as to align with the nature and purpose of these tasks.

Second, our study makes important contributions to resource dependence, information processing, and agency perspectives of organizations. Resource dependence scholars assume that firms are resource constrained; hence, inter-organizational strategies, such as board interlocks, help firms to acquire the required resources (Pfeffer & Salancik, 1978). However, the conditions that enable directors to provide these critical resources are less well understood. Previous research has identified multiple challenges directors face in contributing effectively to firm strategy, irrespective of their formal powers (Westphal, 1999; Westphal & Zajac, 1997). Resource dependence scholars have attributed these challenges primarily to inadequate board capital (Hillman et al., 2009; Hillman & Dalziel, 2003). Our study advances the resource dependence perspective by highlighting the role of committees, and of inter-firm linkages at the committee level, through which directors help firms to acquire such resources. Simultaneous membership in board committees of different firms provides the “interlocked” directors with information, points of reference, access to further contacts, and other such resources that allow them to exercise some governance functions well. However, simultaneous committee membership can also backfire, as it may overburden directors or cloud their judgement and independence, which are particularly important for providing effective oversight. Devolving such monitoring tasks to specialized committees such as audit committees is beneficial for firm performance (Kolev et al., 2019). Our analysis shows that it is important that these committees retain the independence (Chan & Li, 2008) they require.

Third, our analysis thus elucidates the importance of corporate governance regulations in India. In emerging economies characterized by institutional voids (Khanna & Palepu, 2010), the ability of boards and their members to attract external resources, for example, information on best practices in areas such as executive compensation and others, can provide firms with material advantages. However, the opaque and occasionally even archaic corporate structures dominated by “promoters” in India call for considerable independence of boards, in particular when it comes to monitoring-intensive functions such as auditing and financial oversight. Achieving both of these objectives simultaneously can be difficult (Shen et al., 2022), yet boards can use the committee structures mandated by law to achieve these aims. They should limit interlocks among audit committees, whereas with respect to NR committees, they may be much more receptive to the presence of interlocks.

To the best of our knowledge, ours is the first study to provide a committee-level analysis of interlocks on firm performance. Scholars have emphasized the need to look beyond board-level data and study subgroups within boards to account for their actual functioning (Finkelstein et al., 2009; Johnson et al., 2013). Our study responds to this call by providing a nuanced understanding of the relationship between committee interlocks and firm performance.

In consequence, our research holds practical implications for boards of directors, shareholders, and policy-makers alike. Shareholders should pay careful attention not only to whom they appoint as directors but also to the specific tasks conferred upon them. Appointing directors who also serve on the boards of other

companies, or encouraging existing directors to do so, can be beneficial; valuable connections and access to information and insight gained through such outside roles may outweigh the time and attention spent on these tasks. However, firms benefit if those directors on audit committees who hold specific responsibilities for ensuring financial and regulatory compliance do not also serve on the audit committees of other firms. These directors should have greater independence and focus.

In a similar vein, our results provide a counter-perspective to the criticism often expressed in the debate of board interlocks (Hodgson, 2012) and of “overboarding” (holding multiple board memberships) in general (Raval, 2023). In emerging economies, multiple board memberships may serve an important purpose, although concerns about the directors' independence and the load that they impose on directors are equally valid. We show that it is not board interlocks per se that are detrimental to the performance of Indian firms; in fact, appointing well-connected directors with experience in serving on other boards might well be beneficial. However, public policy should define the rules and requirements for serving on the audit committee more tightly. Holding simultaneous audit committee memberships in several firms may dampen the neutrality and the “healthy skepticism” that directors require. By accepting multiple audit committee memberships, these directors may do a disservice to the firms concerned.

6.2 | Limitations and future research

Our paper is subject to limitations that call for further research. First, we do not directly observe the processes through which directors serving on (multiple) boards and committees share information. Even though directors may perform several tasks, we have interpreted a board committee's major function as the major function of its members. Studying how individual directors “mix” these tasks as they serve on the boards of several firms would require an in-depth process analysis involving multiple cases. We also acknowledge that our study uses aggregate measures on the committee level; hence, we do not consider how individual directors' characteristics affect their board services and ultimately firm performance (Hillman et al., 2000; Withers et al., 2012). Nevertheless, our study has demonstrated that in order to understand the role of boards and of board interlocks, a more finely grained analysis on the committee level is required. The next step requires analyzing how such committees (including voluntary ones; Premuroso & Bhattacharya, 2007) prepare and predetermine the decisions for which the entire board takes the responsibility.

Second, our analysis is restricted to interlocking board relationship at the inter-firm level. Given that intra-board committee overlaps are also an important determinant of board functions such as compensation and director appointment (Brandes et al., 2016; Liao & Hsu, 2013), future research should take a multi-level approach that includes intra-board overlaps, committee level, and board-level interlocks, in order to understand the differential effects of subgroups of the board (Johnson et al., 2013).

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CONFLICT OF INTEREST STATEMENT

DATA AVAILABILITY STATEMENT

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SUPPORTING INFORMATION

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