

# An investigation of corporate social responsibility conformity: The roles of network prominence and supply chain partners

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**Handling Editor:** James Abbey

## Abstract

Numerous studies on corporate social responsibility (CSR) indicate that firms adopt CSR practices for various reasons related to their supply chain. However, the necessity to conform to a firm's own industry CSR norm is overlooked. Conforming to one's industry CSR norm—a herding behavior known as *CSR conformity*—ensures firm in-group legitimacy and preserves internal resources for core business activities. On the other hand, deviating from industry norms sets a firm apart from its peers, making the firm more appealing to supply chain partners. Motivated by this dilemma, this study draws on middle-status conformity theory and explores how a firm's network prominence determines its CSR conformity. Panel data analyses of 1650 firm-year observations reveal an inverse U-shaped relationship between firm network prominence and its CSR conformity, indicating that firms with a mid-level network prominence engage in higher CSR conformity. However, the inverse U is flattened when a firm's supply chain partners (and their respective industries) share similar CSR standards, suggesting that a firm can only prioritize its own industry CSR norms if its supply chain partners share a compatible CSR standard. These findings highlight the importance of understanding CSR from an organizational conformity perspective, especially in the context of supply chain network.

## KEYWORDS

corporate social responsibility, herding behavior, middle-status conformity, organizational conformity, supply chain network

## HIGHLIGHTS

- Firms use industry CSR norms as a benchmark for CSR engagement—a firm herding behavior known as CSR conformity.

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- Firms conform to industry CSR norms to ensure legitimacy and preserve resources; however, they also need to deviate to differentiate themselves and attract supply chain partners.
- This research uncovers an inverse U-shaped relationship between firm network prominence and CSR conformity. Additionally, a focal firm can prioritize its industry CSR norms only when its supply chain partners share a compatible CSR standard.

## 1 | INTRODUCTION

Ample corporate social responsibility (CSR) research shows that firms engage in CSR due to various influences within their supply chains (Liu, Jia, et al., 2021; Peng et al., 2022; Villena et al., 2021). However, the necessity to conform to a firm's own industry CSR norm has been overlooked. Conforming to industry norms—a herding behavior called *CSR conformity*—is advantageous because it not only guarantees a firm's in-group legitimacy among peer firms but also establishes a reference point that conserves a firm's valuable internal resources for other core business operations (Liu, Dong, et al., 2021; Pan et al., 2020; Zhang et al., 2020). As a business owner commented to the author team, “When all of us practice the same CSR, we look good together... CSR is not like a product that you manufacture and compete with. We simply follow what everyone else does in the industry so we can keep our resources focused on our core business.”

While conformity provides legitimacy, deviation from norms also provides distinctiveness benefits that may attract supply chain partners because it sets a firm apart from competitors and creates a unique value proposition that can attract potential partners (Deephouse, 1999). Consider a recent scenario where firms across various sectors, from consumer electronics to apparel, packaging, furniture, carpets, and toys, face a pivotal CSR conformity decision: whether to integrate recycled plastics into their products (Marks & Whitehouse, 2023). In this landscape, a fascinating paradox emerges. Despite the conformity norm advocating the use of recycled plastics, some manufacturers opt not to incorporate any recycled plastics into their products. Simultaneously, others take a divergent path, choosing to go above and beyond by incorporating more exotic and expensive materials, such as ocean plastics or plant-based bioplastics. This intriguing dynamic prompts an exploration into the motivations behind such strategic decisions of conformity or deviation. Indeed, prior research shows that firms incessantly cope with conflicting forces pushing them toward

conformity with institutional norms to achieve legitimacy (DiMaggio & Powell, 1983) and deviance from norms to achieve competitive advantage (Barney, 1991; Haans, 2019). This paradox has led scholars to argue that firms need to pursue strategic balance, or optimal distinctiveness, between conformity and deviance to obtain a competitive advantage (Deephouse, 1999; Zhao et al., 2017).

Given the dilemma that a firm needs to conform to its industry CSR norm for legitimacy and to deviate to maintain attractiveness to its supply chain partners, what is missing from the current CSR studies in the Operations and Supply Chain Management (OSCM) field is an understanding of what drives a firm's CSR conformity decision. According to the network perspective, firms are embedded in an interconnected network of supply chain relationships (Borgatti & Li, 2009). Understanding a firm's position within a supply chain network can help explain their CSR strategy as it provides insight into their level of power, influence, and dependence within the network which can affect the firm's ability to access resources, manage risks, and achieve their strategic goals in the context of the network (Baum et al., 2014; Greve et al., 2010).

In this study, we propose that *network prominence* influences a firm's CSR conformity. Network prominence refers to a firm's status or position within the overall network of supply chain partners including buyers, suppliers, and industry peers since it captures the degree of visibility, recognition, and dominance with which a focal firm is endowed (Baum et al., 2014; Borgatti & Li, 2009; Greve et al., 2010). Further, we adapt insights from middle-status conformity theory (Phillips & Zuckerman, 2001) and its baseline notion that firms with middle-status, rather than low or high status, will more likely conform with industry CSR norms to achieve legitimacy. As one of the most influential theories in the study of organizational conformity (e.g., Pan et al., 2020; Philippe & Durand, 2011; Prato et al., 2019; Zhang et al., 2020), middle-status conformity is premised on the idea that firms are a set of actors bounded by a status

hierarchy and evaluated by a set of audiences, and that middle-status actors are more likely to conform to conventional norms than high- and low-status actors due to legitimacy pressures not experienced by low- and high-status actors (Phillips & Zuckerman, 2001). In the context of supply chain, focal firms are under constant scrutiny from their supply chain partners. This dynamic creates an “actor-audience” relationship, where focal firms (actors) calculate their CSR strategies knowing that supply chain partners (audiences) pay close attention to the focal firm's behavior and this calculation depends on how prominent the focal firm is within the supply chain network.

Following the logic of middle-status conformity theory we propose an inverse U-shaped relationship between a focal firm's network prominence and its CSR conformity. At a general level, we argue that low- and high-prominence firms are least vulnerable to repercussions for deviations from industry CSR norms and thus are least likely to conform (Pan et al., 2020; Phillips & Zuckerman, 2001; Zhang et al., 2020). Low-prominence firms have *little to lose* given their inferior network status and thus prefer to deviate from industry CSR norms to stand out and compete for supply chain partners attention, while high-prominence firms have *little to fear* given they are not as beholden to supply chain partners' expectations and tends to play a dominant role in the industry (D'Aveni et al., 2001). As such, they can deviate from industry CSR norms. Finally, middle-prominence firms prefer to conform to industry CSR norms because conformity enables social legitimacy and maintains stability to not only themselves but also to their supply chains partners.

While the extent of a focal firm's conformity or deviation from CSR norms is influenced by its network prominence, supply chain partners' CSR alignment can act as an external norm that moderates this influence (DiMaggio & Powell, 1983; Freeman, 1977; Freeman et al., 1991; Rowley & Moldoveanu, 2003). Supply chain partners' diverse origins and distinct roles result in varying CSR norms that may not align with each other. This misalignment can potentially distract the focal firm from its own core CSR competencies within its industry. Indeed, the increased attention directed toward sustainable supply chain management is due to expectations of firms to enforce each of their own CSR standards throughout their supply chains (Cruz & Matsypura, 2009; Ketchen & Hult, 2007; Kovacs, 2004). As a result, supply chain partner alignment in CSR becomes crucial because it reflects consistent CSR expectations and superior supply chain CSR image, allowing the focal firm to focus on their own industries' core CSR competencies.

Specifically, we further argue that *supply chain CSR congruence*, defined as the consistency of CSR practices among a focal firm's supply chain partners, will alter a firm's network prominence in pursuing CSR conformity. That is, a focal firm can only prioritize its own industry CSR norms if its supply chain partners share a compatible CSR standard. Adopted from prior OSCM research (Ghosh & John, 1999; Liu, Jia, et al., 2021; Tokman et al., 2007), two moderators are included in our model to capture supply chain CSR congruence—*supply chain partner CSR congruence* (i.e., the consistency of CSR practices among a focal firm's supply chain partners) and *supply chain industry CSR congruence* (i.e., the consistency of CSR industry norms of a focal firm's supply chain partners). In particular, we expect that as CSR norms become more aligned among a focal firm's supply chain partners, there will be a reduced inclination for both low- and high-prominence firms to deviate from industry norms, resulting in a more flattened inverse U. Taken together, this study addresses two research questions: *How does network prominence influence a focal firm's CSR conformity? And how does supply chain CSR congruence (i.e., supply chain partner CSR congruence and supply chain industry congruence) moderate this relationship?*

Throughout this paper, we make several contributions to theory and literature. First, we bring together the literature on organizational conformity and OSCM by introducing the concept of CSR conformity. Current CSR studies within the OSCM literature center on firm CSR engagement or performance, neglecting conformity to industry norms as a strategic option, even though CSR conformity has been shown to be a tactic that firms employ to avoid excessive pressure (Pan et al., 2020; Zhang et al., 2020). Second, we expand the middle-status conformity theoretical model and suggest that CSR conformity is a network-based decision. Our results show that firms deviate from or conform to industry norms depending on their supply chain network status. This paper also answers calls to utilize a network perspective when considering stakeholder influence (Rowley, 1997, 2017). In addition, this study contributes to the OSCM literature by capturing the multi-faceted nature of CSR norms within a supply chain. More specifically, this study demonstrates that a focal firm is not only shaped by its own industry norm but also the norms exerted by its supply chain partners. Our results show that a focal firm can only prioritize its industry's CSR norms if its supply chain partners share a compatible CSR standard. Finally, this study demonstrates a more in-depth insight to the practical challenges of CSR engagement in a supply chain. While CSR practices hold an important place in supply chain management, not all firms wholeheartedly engage

in these practices as evident by the trend of CSR conformity. Our paper further demonstrates that supply chain partners and policy makers should understand the trade-offs between network prominence and CSR conformity to motivate in substantial CSR engagement.

## 2 | THEORETICAL FOUNDATION AND LITERATURE REVIEW

### 2.1 | CSR conformity versus CSR engagement in supply chain

Because “a chain is only as strong as its weakest link,” there is growing interest among supply chain partners and academic scholars to explore ways to promote increased engagement of firms in CSR practices (e.g., Delmas & Montiel, 2009; Liu, Jia, et al., 2021). Supply chain partners expect a focal firm to engage in CSR practices to improve the reputation of the firm and enhance its brand image, which can attract customers and generate positive word-of-mouth publicity. Additionally, supply chain partners are increasingly aware of the potential negative impacts that unsustainable or unethical practices of the focal firm can have on their own reputation and performance. Research shows that by encouraging the focal firm to engage in more CSR practices (Liu, Jia, et al., 2021; Peng et al., 2022), a more stable and sustainable environment can be created to benefit all partners in the supply chain.

Although scholars acknowledge the connection between supply chain and firm engagement in CSR, the current literature assumes that firms adopt CSR practices without any reference point. This perspective overlooks the possibility that firms may be conforming to their industry-specific CSR norms to sustain their in-group legitimacy and safeguard their position. Conforming to industry CSR norms is comparable to firm herding behavior (Palley, 1995), in that, conformity occurs when firms in the same industry follow a shared understanding of acceptable CSR practices<sup>1</sup> (Bansal & Roth, 2000). Indeed, literature on the peer effect in CSR engagement suggests that firms refer to peer behaviors as a standard to measure their own CSR practices. For example, Cao et al. (2019) show that firms tend to adopt CSR policies after their peer firms and argue that “the spillover effect of the adoption of CSR is a strategic response to competitive threat” (Cao et al., 2019, p. 5478). Similarly, prior literature has identified a phenomenon known as the bandwagon effect, wherein, if a trend emerges in an industry, numerous companies feel compelled to join in, irrespective of their genuine belief in it (Abrahamson, 1996; Loch & Huberman, 1999; Martins &

Kambil, 1999). However, as illustrated by the plastic recycling example and various contemporary industry trends, including but not limited to zero emissions, green energy, and zero waste to landfills, the motivations behind a firm's strategic decisions regarding conformity or deviation in CSR practices remain to be thoroughly investigated.

CSR conformity and CSR engagement are not mutually exclusive strategies. In fact, CSR conformity offers a boundary or a framework for CSR engagement, since engaging in perpetually increasing CSR is not realistic nor wise. Adhering to industry CSR norms can provide a fundamental guideline for firms to engage in CSR practices that are advanced, but not more than necessary. In addition, firms find conformity a desirable approach because it offers “safety in numbers” protection (Ahmadjian & Robinson, 2001). In other words, it is safer to follow the crowd because stakeholders compare firms to alternative peers and if they are all engaging in similar levels of CSR, criticism or expectations are difficult to mount (Ahmadjian & Robinson, 2001; Zavyalova et al., 2012). Failing to comply with an industry norm will make a firm stand out as an easy target for “persecution by industry peers” whether above or below the industry norm (Bansal & Roth, 2000, p. 731). For instance, below-industry norms can elicit criticism for not achieving expected levels of CSR, while above industry norms may elicit criticism from peers for setting the standard too high and imposing an expectation for costly CSR-related investments on other industry firms. Thus, conformity provides both safety and legitimacy to firms.

Although the legitimizing and safety benefits of conformity have not been widely examined in CSR-related research, they have been extensively explored in the literature on organizational and strategic conformity. For instance, an institutional consideration suggests that firms engage in conformity due to coercive, normative, and mimetic forces which allow for the conferring of legitimacy and the avoidance of penalties (DiMaggio & Powell, 1983). Drawing on these ideas, Deephouse (1999) provided evidence of how banks that conformed to the central strategic tendencies of the banking industry were granted legitimacy by the media and regulators. Further, Zimmerman and Zeitz (2002) argue that firms seek legitimacy, defined as a “social judgement of acceptance, appropriateness, and/or desirability” (Zimmerman & Zeitz, 2002, p. 416), by conforming with the demands and expectations of existing relationships. In the field of strategic management, the literature on optimal distinctiveness examines how firms can determine the optimal balance between conformity and distinctiveness. The key notion of this literature is that conformity can confer

legitimacy, but being too similar to competitors can increase competitive pressure, therefore, companies must find the appropriate level of distinctiveness to maintain their competitive advantage while still conforming to industry norms (e.g., Tauscher & Rothe, 2021).

While most research on conformity has centered on strategic considerations, a few recent studies have explored CSR conformity. These studies suggest that firms are less inclined to prioritize CSR initiatives if their industry peers are not doing the same (e.g., Pan et al., 2020; Zhang et al., 2020; Zuckerman, 2016). In their recent work, Pan et al. (2020) show that firms conform to the average industry CSR level for legitimization which shields them from engaging in extra CSR practices. Similarly, CSR conformity is described as an isomorphic process of legitimacy in Johansen and Nielsen (2012) that investigates organizational conformity and differentiation. While research on CSR conformity in strategic management is quite limited, it is even less prevalent in the OSCM literature as we could not find direct discussions of CSR conformity. However, expanding beyond a direct consideration, the need to conform to an industry norm can still be found. For example, Villena and Dhanorkar (2020) show that industry peer firms force focal firms to disclose carbon emissions, resulting in focal firms eventually conforming to industry-specific norms. An interesting aspect of their work is that both the buyer firm and industry peer pressures are considered. This presents a holistic scenario to understand firm CSR behaviors because a focal firm is pressured by supply chain partners and its industry norms (Aguilera et al., 2007; DiMaggio & Powell, 1983).

## 2.2 | Middle-status conformity and network prominence

Middle-status conformity theory (Phillips & Zuckerman, 2001) has emerged as a widely used theoretical foundation for studying organizational conformity in the literature on strategic management and organization behaviors (Pan et al., 2020; Philippe & Durand, 2011; Prato et al., 2019; Zhang et al., 2020). Middle-status conformity theory is premised on the idea that firms are a set of actors bounded by a status hierarchy and evaluated by a set of audiences in which middle-status actors are more likely to conform to conventional norms than high- and low-status actors (Phillips & Zuckerman, 2001). Because high-status actors are confident in their social acceptance and status, they have little fear of deviating from industry norms. At the other end of the status hierarchy, low-status actors are free to deviate from conventional norms because they are rejected from the status hierarchy

anyway (i.e., little to lose). In contrast to both of these, middle-status actors may lose their status if they deviate from norms creating insecurity in their position in the hierarchy (Dittes & Kelley, 1956). As Phillips and Zuckerman (2001) state, “such insecurity fuels conformity as middle-status actors labor to demonstrate their bona fides as group members (Phillips & Zuckerman, 2001, p. 380).” This premise has become a popular theoretical foundation for analyzing organizational behaviors, such as decision-making propensity, technology diffusion, team member selection, and innovation development performance (Durand & Kremp, 2016; Earle, 2018; Liu, Dong, et al., 2021; Perretti & Negro, 2006).

In this study, we argue that one of the key audiences relevant to middle-status conformity theory is supply chain partners. Firms are embedded in a network of supply chain partners that are the immediate recipients of social or financial consequences of a focal firm (Borgatti & Li, 2009). As such, the CSR decisions of a focal firm are influenced not only by its industry norms but also the need to appease supply chain partners. Unlike other audiences, a focal firm's efficiency and profitability can have a significant impact on the performance stability of the supply chain partners which makes them extremely relevant in the context of CSR. Hence, supply chain provides a unique stage where firms can leverage CSR conformity to maintain legitimacy and efficiency or deviate to compete and attract for supply chain partners' resources.

The existing OSCM research employs network prominence as an indicator of firm status (e.g., Bellamy et al., 2020; Liu, Jia, et al., 2021), in line with the broad notion of firm position within a socially constrained hierarchy (Shen et al., 2014). A firm's network prominence is important to its decision-making as it can impact the firm's ability to control and access critical resources, such as raw materials from the suppliers and finished goods to the buyers, which can affect its profitability and competitiveness (Pathak et al., 2014). From a self-autonomy perspective, a firm's prominence within its supply chain network can affect its ability to make decisions independently and to pursue its own strategic goals without being overly dependent on other network members (Kim & Zhu, 2018).

Similarly, when considering the role of supply chain network on firms' CSR engagement, network prominence represents resource orchestration and captures supply chain power and status among supply chain partners (Borgatti & Li, 2009; Prato et al., 2019; Wu & Pullman, 2015). For example, focusing on a firms' ego network, Liu, Dong, et al. (2021) found that network prominence, measured as network centrality in their study, regulates the effect of buyer-supplier CSR

orientation incongruence (Liu, Jia, et al., 2021). They argued that firms take advantage of network centrality to govern other supply chain partners' CSR behavior and a lower centrality results in "a loss of autonomy" (Liu, Jia, et al., 2021, p. 244). Focusing on the network at a broader supply chain level, Gualandris et al. (2021) demonstrate that a firm's supply chain network structure, captured as network density and clustering, explains why a firm discloses its environmental, social, and governance (ESG) to the public. A firm with a denser network will be more motivated to reveal its ESG since network interconnectedness between supply chain members enables information sharing and the development of norms and practices (Gualandris et al., 2021).

Taken together, the prior network structure and network prominence literature provide two conceptions that may influence a firm's CSR conformity decision: first, upon occupying a more prominent position, a firm will enjoy higher supply chain resource accessibility and controllability, resulting in higher self-autonomy and responsibility to maintain supply chain stability through legitimacy (Borgatti & Li, 2009; Prato et al., 2019; Wu & Pullman, 2015). Second, as a firm's network prominence grows, so does its perceived credibility and trustworthiness among supply chain partners. This, in turn, increases the responsibility of the firm to maintain a stable supply chain (Bellamy et al., 2020; Chandler et al., 2013; Shipilov et al., 2011). Although network prominence is one of the key antecedents to CSR engagement, extant literature has yet to explore how network prominence influences firm conformity in a CSR-supply chain context.

Based on the middle-status conformity perspective, in the next section we hypothesize that low- and high-prominence firms will deviate from its industry CSR norm while mid-prominence firms will conform to the corporate social industry norms. This depicts an inverse U-shaped relationship between firm network prominence and CSR conformity. In addition, the supply chain CSR congruence (i.e., supply chain partner CSR congruence and supply chain industry CSR congruence) will alleviate the inverse U-shaped relationship between network prominence and CSR conformity, resulting in a flattened inverse U-shape.

### 3 | HYPOTHESIS DEVELOPMENT

#### 3.1 | Network prominence and CSR conformity

Drawing on the middle-status conformity theory, we argue that there is an inverse U-shaped relationship (Figure 1) between a focal firm's network prominence and its CSR conformity (Phillips & Zuckerman, 2001).

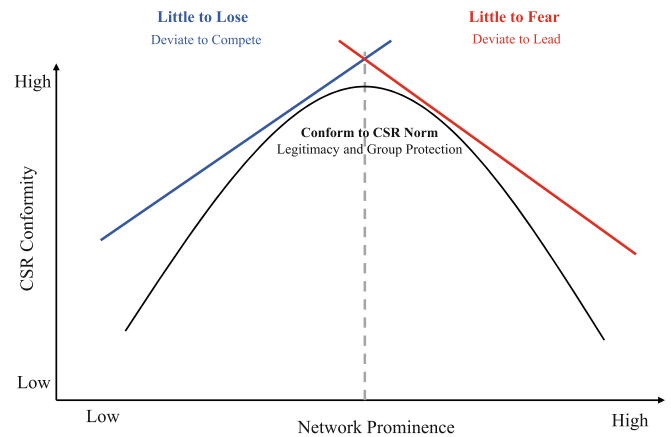


FIGURE 1 The conceptualization of the inverse U-shaped relationship.

That is, while low-prominence firms have little to lose from deviance from industry norms due to their low status, and high-prominence firms have little to fear because they have established their place in the hierarchy and thus feel less need to conform to industry CSR norms. In contrast, firms with middle-prominence need to conform to conventional CSR norms because they are more concerned with maintaining their position in the hierarchy (relative to the low-prominence firms) and have less buffer in terms of risk management (relative to high-prominence firms).

Indeed, firms respond to "external demands to the extent that these actors have discretion over resources that are both critical and scarce" (Durand & Jourdan, 2012, p. 1295). Firms with low network prominence will need to deviate to attract different supply chain partner's attention and to maintain resource flows (Crook & Combs, 2007; Delmas & Montiel, 2009). If a firm must conform to either an industry CSR norm, which provides indirect benefits through legitimacy, or deviate to compete for supply chain partners' attention and resource flows, the latter option will loom large to a low prominence firm. Further, given low-prominence firms are already excluded from the hierarchy, there is little to lose from distinguishing itself from competitors and much to gain (Durand & Kremp, 2016). Consequently, we expect that a low-prominence firm will deviate from its industry CSR norm.

However, as a firm obtains higher prominence within the supply chain network (i.e., mid-prominence level), it gains more self-autonomy and bears greater responsibility for the stability of the supply chain. This leads to a decreased necessity to deviate from its own industry CSR norms. Meeting the industry CSR norms provides social legitimacy, which in turn promotes supply chain stability in relation to CSR practices, as consumers or other stakeholders are less likely to penalize firms that adhere to

industry norms even if they violate certain CSR practices (i.e., “safety in numbers” effect; Ahmadjian & Robinson, 2001). Further, as suggested by middle-status conformity theory, middle-prominence firms are reluctant to deviate from industry norms to maintain the initially achieved legitimacy rather than potentially lose their position in the supply chain hierarchy.

Finally, again following arguments from middle-status conformity, we expect a focal firm with very high network prominence will prefer to deviate from the norm instead of following the crowd. In other words, as the network prominence of a firm continues to increase, it becomes less dependent on conforming to industry norms to maintain relationships with its supply chain partners, and thus can begin to prioritize its own unique CSR values and goals, leading to a deviation from the industry norm. Very high network prominence enables a firm to develop and champion new CSR norms because it has a significant amount of power and influence over the network, allowing it to shape the norms and expectations of the industry in which it operates (e.g., Aguilera et al., 2007). For example, Patagonia’s “Footprint Chronicles,” a transparency program that allows customers to trace the environmental and social impact of a specific Patagonia product from design to delivery, goes beyond the industry norm of disclosing manufacturing facilities and suppliers and sets a new standard for supply chain transparency and accountability in the fashion manufacturing industry (Polley, 2021). As Durand and Jourdan state, “in most industries, a single institutional logic is generally one established by dominant players” (Durand & Jourdan, 2012, p. 1297). This suggests that high network prominence firms will distinguish themselves from industry peers by engaging in differentiation and deviation from the industry norm. Taken together, we hypothesize a curvilinear relationship (i.e., inverse U-

shaped relationship) between a focal firm’s network prominence and its CSR conformity. Specifically:

**H1.** There is an inverse U-shaped relationship between focal firm network prominence and its CSR conformity such that CSR conformity will be lowest at high and low levels of network prominence.

### 3.2 | The moderating roles of supply chain CSR congruence

Building on this, we further argue that supply chain CSR congruence (i.e., supply chain partner CSR congruence and supply chain industry CSR congruence) can act as an external norm that moderates the relationship between a focal firm’s network prominence and its CSR conformity (DiMaggio & Powell, 1983; Greenwood et al., 2011; Rowley & Moldoveanu, 2003). Figure 2 visualizes the complete conceptual model. As demonstrated by previous research, the congruence or compatibility among external supply chain partners’ values, goals, and objectives can lead to trust and supply chain efficiency (Cao et al., 2019; Lejeune & Yakova, 2005; Yan & Dooley, 2013), providing a harmonious environment for a focal firm to focus on its own industry norm. In contrast, a lack of congruence may lead to miscommunication, mistrust, and conflicts (Luo & Zheng, 2013; Price & Sun, 2017), resulting in inefficiency and increased supply chain costs, distracting the focal firm from its industry norm. This is evidenced by many companies that developed and enforced standardized codes of conduct across their entire supply base. For instance, Ford, an automotive manufacturer that has a broad supply chain that includes thousands of suppliers located in different industries, has developed a set of

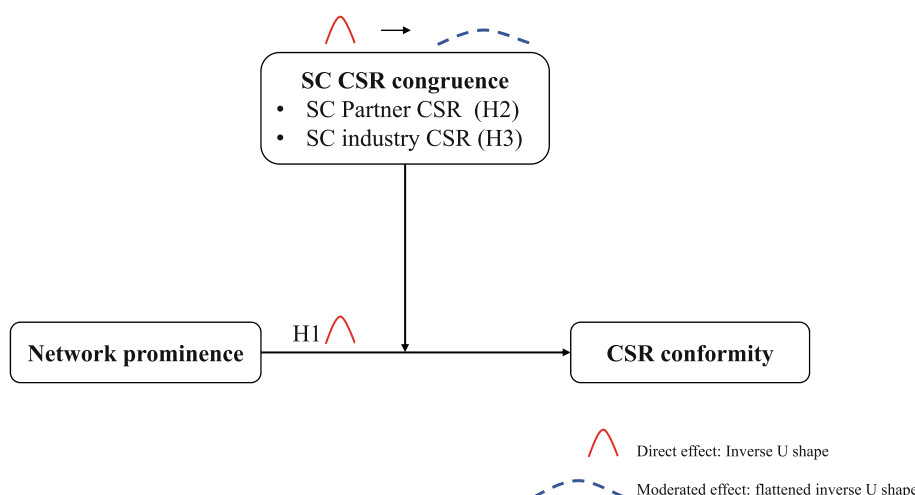


FIGURE 2 Conceptual model.

sustainability and human rights policies that apply to all its suppliers. This ensures the consistency in CSR practices among its suppliers and thus reduces potential risks of reputational damage or legal liabilities (Dearborn, 2021). To gain a comprehensive understanding of CSR conformity, we next consider the level of CSR congruence among the external supply chain partners of a focal firm and argue that a focal firm can only prioritize its own industry CSR norms if its supply chain partners share a compatible CSR standard.

### 3.2.1 | Supply chain partner CSR congruence

The presence of diverse CSR practices among a focal firm's supply chain partners can create a challenging CSR environment, resulting in increased complexity and diversity of external CSR norms surrounding the firm. For example, studies of supply network (i.e., a focal firm's network of suppliers only) have used the number of suppliers to indicate the complexity of a focal firm's network, showing that an increasing number of suppliers can negatively lead to firm innovation and financial performance (Lu & Shang, 2017; Sharma et al., 2020). In the CSR context, supply chain partners are found to employ their own heterogeneous, self-interested CSR practices to secure performance gains (Price & Sun, 2017).

We argue that as the alignment of supply chain partners' CSR practices increases, the inverse U-shaped network prominence-CSR conformity relationship will be eased (i.e., flattened). First, consistent supply chain partner CSR practices minimize distractions, enabling higher freedom and autonomy for the focal firm to pursue its own CSR norm. Second, a focal firm's reputation increases as its supply chain partners share consistent CSR practices, thus mitigating the need for low- and high-prominence firms to deviate. In other words, consistent CSR practices among supply chain partners enables good signaling and reputational effect to the focal firm, which can decrease its need to deviate to appease (or to lead) supply chain partners and thus increase its desire to conform. Similarly, by following similar standards to promoting responsible business practices, supply chain partners share knowledge, vision, and best practices, leading to improved social and environmental outcomes throughout the supply chain (Aguilera et al., 2007; DiMaggio & Powell, 1983). This creates a superior competitive advantage for the focal firm, as it demonstrates the focal firm and its entire supply chain's commitment to CSR practices (Ketchen & Hult, 2007). Taken together, the alignment of a focal firm's supply chain partners' CSR practices generates superior flexibility, competitive

advantage, and motivation in pursuing one's own industry core CSR practices, resulting in less deviation for both firms with low- and high-prominence. Specifically, we hypothesize that:

**H2.** As the supply chain partner CSR congruence increases, the inverse U-shaped relationship between a focal firm network prominence and its CSR conformity will be less acute; that is, the inverse U-shaped relationship will become flatter.

### 3.2.2 | Supply chain industry CSR congruence

While supply chain partner CSR congruence focuses on CSR practices among the focal firm's supply chain partners, it is necessary to distinguish it with supply chain industry CSR congruence because supply chain industry CSR congruence reflects a broader industry-level CSR environment within which the supply chain partners operate (Villena & Dhanorkar, 2020; Wu & Pagell, 2011). Supply chain industry CSR congruence is conceptually linked to the foundation of CSR conformity, as a focal firm's consideration of its own industry's CSR norms should also prompt each supply chain partner to use their own industry's CSR norms as a benchmark, resulting in a wider and more diverse range of CSR norms surrounding the focal firm.

Although focusing on the industry level, we again anticipate that supply chain industry CSR congruence serves as a positive moderator, flattening the inverse U-shaped relationship for similar reasons. First, supply chain industry alignment in CSR also reflects consistent CSR benchmarks, allowing the focal firm to focus on their own industry core CSR competencies (Aguilera et al., 2007; DiMaggio & Powell, 1983). In other words, if the industry CSR norms in the supply chain are inconsistent, this can create challenges for focal firms to adopt their own industry CSR standards. This means that even if a focal firm's supply chain partners have consistent CSR practices, the firm may still face difficulties in implementing and maintaining its own CSR conformity due to the prevailing industry norms. Second, supply chain industry CSR congruence may induce a stronger need for a focal firm to stick with its own CSR norm for group protection (Ahmadjian & Robinson, 2001). This is because CSR conformity creates a culture of shared responsibility and accountability, thus helping to mitigate any potential risk of negative attention and criticism. When a firm deviates from its own CSR norm, it becomes more visible and vulnerable to negative attention and



criticism which creates instability within the supply chain and damage the reputation of the focal firm, as well as the other firms within the supply chain. As such, our expectation is that supply chain industry CSR congruence will not only decrease distractions but also heighten the imperative for a focal firm to partake in its own CSR conformity, flattening the inverse U-shaped relationship. Specifically, we hypothesize that:

**H3.** As the supply chain industry CSR congruence increases, the inverse U-shaped relationship between a focal firm network prominence and its CSR conformity will be less acute; that is, the inverse U-shaped relationship will become flatter.

## 4 | METHODS

### 4.1 | Sample and data collection

Our sample includes all the publicly traded manufacturing firms in North America (SIC codes 2000–3999) and their supply chain partners from years 2003 to 2013.<sup>2</sup> The unit of analysis is the manufacturing focal firm by year. Given that each manufacturing firm is matched with multiple customers and suppliers each year, we follow prior research by aggregating the supply chain partner relevant variables to the focal firm level by taking the average value of the supply chain partner variables (Barker et al., 2022; Falcone et al., 2022). We focus on manufacturing firms because they often face upstream and downstream pressures to engage in diverse CSR practices in addition to their own manufacturing industry CSR norms, which provides a prime context to test our theory of CSR conformity.

The empirical sample is a consolidation of data from four sources: FactSet Revere, KLD (i.e., Kinder, Lydenberg, and Domini, Inc.), BoardEx, and Compustat. Particularly, supply chain relationships are identified from the FactSet Revere database. Supply chain relationships include contractual relationships of all manufacturing firms' suppliers and customers within North America. Customers and suppliers establish a supply chain network in which a focal firm is embedded, thus influencing a focal firm's CSR decision (e.g., Peng et al., 2022). Using these relationships and the Igraph package in R, annual adjacency matrices were created, establishing an annual supply chain network that is used for the calculation of the network variables.

CSR data was obtained from the KLD database to determine corporate engagement in social activities (Flammer, 2018; Husted et al., 2016; Mattingly &

Berman, 2006). KLD data is employed to evaluate firm annual social practices by indicating the existence of both positive (i.e., strengths) and negative (i.e., concerns) social practices. Each evaluation is rated with a binary variable with 1 indicating the existence of a certain "strength" or "concern" practice and 0 showing the non-existence of the practice (Flammer, 2018; Mattingly & Berman, 2006). Annual accounting and industry-related information on the focal firm and their supply chain partners were collected from Compustat as control variables. In addition, CEO-level variables were collected from BoardEx and used as the instrumental variables in the fixed-effect two-stage least squares regression analysis to alleviate endogeneity concerns.

Compustat data was used as the base data for data consolidation. We first downloaded the entire Compustat database for the observed year range, then identified the manufacturing firms using their 2-digit SIC industry code (SIC codes 20–39). Ticker symbols were used to merge FactSet Revere, KLD, and BoardEx databases with Compustat. This step was cross-checked using company full names. The lead author and a graduate assistant manually verified the records to resolve inconsistencies. Missing data can be a major challenge when handling a network of supply chain relationship data because dropping any firms could potentially change the data value and sample size. Hence, we only dropped focal firms with missing data when they are missing across all observed years. Specifically, focal firms with missing CSR or financial records across the observed years were eliminated. However, missing CSR records or accounting information for the supply chain partners were replaced by zeroes. We replaced missing supply chain partner records with zeroes to ensure that when the supply chain partner data is aggregated to the focal firm level, the value will represent an accurate average value of the complete supply chain network of a focal firm. For example, imagine focal firm *i* has five supply chain partners of which two have missing CSR records. Removing the two partners will shrink *i*'s partner number to three, causing an inaccurate average value of the supply chain partner CSR. As an alternative approach, we performed an additional analysis using the raw data without imputing the missing values of supply chain partner firms. The results of this analysis are provided in the online supplement Table A1, and they show consistent findings with the main analysis. The final sample size after data consolidation, accounting for missing data, and lagged variables is 1650 firm-year observations in the main analysis. The online supplement Figure A1 depicts the data collection and consolidation processes. Table 1 below shows the summary of all variables. The descriptive statistics of all variables are provided in Table 2.

TABLE 1 Variable descriptions and creation.

Variable	Description	Source	Calculation	Adapted from
CSR conformity	A comparison of the focal firm's CSR engagement and its average industry CSR engagement	KLD	CSR conformity = abs. (focal firm net CSR—focal firm industry net CSR average) where the net CSR value is captured as CSR strength minus CSR concerns	Tang et al. (2015)
Network prominence	Eigenvector centrality of a focal firm within the supply chain network	FactSet Revere	$x_{it} = \frac{1}{\lambda} \sum_{j=1}^n a_{ij} x_{jt}, i = 1, \dots, n$ <p>where <math>x_{it}</math> is the eigenvector centrality of firm <math>i</math> in year <math>t</math>, <math>\lambda</math> is the largest eigenvalue of the adjacency matrix, <math>n</math> is the number of firms. <math>x_{jt}</math> is eigenvector centrality of partner firm <math>j</math> in year <math>t</math>, and <math>a</math> represents the adjacency matrix.</p>	Bonacich (2007)
Supply chain partner CSR congruence	The consistency of CSR practices of a focal firm's supply chain partners	FactSet Revere; KLD	The reverse coded standard deviation of the net CSR value of a focal firm's supply chain partners	New
Supply chain industry CSR congruence	The consistency of CSR practices across a focal firm's supply chain partners' industries	FactSet Revere; KLD	The reverse coded standard deviation of the supply chain partners' industry average net CSR per focal firm	New
Firm size	Sales	Compustat	The natural logarithm of firm sales	Koufteros et al. (2007)
ROA	Return on assets	Compustat	Focal firm net income divided by total assets	Dong et al. (2020)
Market share	Market share	Compustat	Firm sales divided by the total industry sales at the 2-digit SIC code level	Upadhye et al. (2019)
CSR asymmetry	The CSR engagement difference between a focal firm and its supply chain partners	KLD, FactSet Revere	The absolute value of focal firm CSR engagement minus the average partner CSR engagement = abs. (focal firm CSR – avg. partner CSR)	New
Strategic conformity	A comparison of the focal firm's strategies such as R&D, expenses, and capital intensity and its average industry strategies.	FactSet Revere	Identify focal firm R&D intensity (R&D expenditures divided by firm sales), capital intensity (capital expenditures divided by firm sales), SGA intensity (selling and general administration expense divided by firm sales), and debt to equity, then	Miller et al. (2013)

(Continues)

TABLE 1 (Continued)

Variable	Description	Source	Calculation	Adapted from
			created the absolute difference between each component and the two-digit SIC code industry average and multiplied it by $-1$ so that higher values indicate greater conformity. The value is then standardized and summed to create our composite measure of strategic conformity	
CEO network prominence (instrumental variable)	Focal firm CEO's prominence in her professional network	BoardEx	Eigenvector centrality of the focal firm CEO. Used as the instrumental variable in the FE-2SLS analysis.	El-Khatib et al. (2015)
Cash-to-cash (Instrumental variable)	Cash-to-cash cycle	Compustat	The sum of accounts receivable days and inventory days minus the account payable days, where receivable days is the accounts receivable divided by total revenue then multiplied by 365 days; inventory days is the ending inventory divided by the cost of goods sold then multiplied by 365; payable days is the average accounts payable divided by the cost of goods sold then multiplied by 365. Used as the instrumental variable in the FE-2SLS analysis.	Grosse-Ruyken et al. (2011) and Randall and Farris (2009)
IMR	Inverse mill's ratio; a variable to adjust for possible selection bias	Compustat, KLD, FactSet Revere	A result of the first-stage analysis probit model to predict firm inclusion in our sample (included in sample = 1; otherwise = 0). Then the residual inverse mill's ratio was captured and used as a control variable	Wiengarten et al. (2019)

## 4.2 | Measures

### 4.2.1 | Dependent variables

*CSR conformity* is this study's dependent variable, measured as the difference between the focal firm's CSR

engagement and its average industry CSR engagement (Deephouse, 1999; Pan et al., 2020). We began the operationalization of CSR conformity by first identifying the *net* CSR engagement of the focal manufacturing firm—calculated as CSR strengths minus CSR concerns—two groups of variables obtained from the KLD database

TABLE 2 Descriptive statistics and correlations.

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. CSR conformity	0.42	4.76											
2. Network prominence	0.19	0.55	0.40										
3. SC partner CSR congruence	2.49	0.35	0.70	0.28									
4. SC industry CSR congruence	1.68	1.49	0.55	0.27	0.54								
5. Firm size	5.40	2.88	-0.45	0.28	0.54	0.51							
6. ROA	0.24	2.20	-0.15	0.02	0.08	0.20	0.22						
7. Market share	0.47	0.20	-0.14	0.12	0.28	0.23	0.44	0.05					
8. Strategic conformity	0.47	2.22	0.08	0.05	0.21	0.15	0.55	0.24	0.21				
19. CSR asymmetry	3.14	2.57	-0.04	-0.01	-0.04	-0.05	-0.10	-0.03	-0.04	-0.07			
10. Inverse mill's ratio	0.72	0.20	0.08	-0.01	-0.25	-0.21	-0.26	-0.04	-0.12	-0.12	-0.02		
11. CEO network prominence	0.15	0.91	0.13	0.10	0.11	0.16	0.13	0.01	0.06	-0.01	-0.02	-0.10	
12. Cash-to-cash	82.60	135	0.18	0.02	0.02	0.20	-0.01	0.05	0.01	-0.01	-0.12	-0.02	0.06

Note:  $N = 1650$ ; Correlations above  $|0.036|$  are significant at  $p < 0.05$ .

(Tang et al., 2015). In particular, both the CSR engagement strengths and concerns include indicators for the following seven elements: environmental, community, employee relations, diversity, product, human rights, and corporate governance strength or concerns. These indicators are a result of the KLD advisory team's evaluation based on firm actual CSR practices or potential CSR issues per year. The KLD advisory team grade each of the environmental, community, employee relations, diversity, product, human rights, and corporate governance categories with a set of binary value questions based on how a firm addresses the relevant CSR needs of their stakeholders, society, and environment. Take the *environment-strength* category as an example: it includes questions such as whether a firm derives substantial revenue from investing in innovative products with environmental benefits; whether a firm has a strong pollution prevention program, recycling program, and clean energy program; whether a firm publishes environment reports to maintain internal communications and practices of environmental protection, and whether the firm maintains its property, plant, and equipment. KLD then provides a total score for these questions and labels it as "environmental strengths." Consistent with prior literature findings, we obtained both the CSR strengths and CSR concerns of a focal firm and calculated a net CSR

value per focal firm per year using the differences between the strengths and concerns<sup>3</sup> (Tang et al., 2015).

Following the literature on strategic conformity (Deephouse, 1999; Pan et al., 2020), we calculated the focal firm's industry net CSR average for each of the seven CSR components based on the 4-digit industry codes. Focal firm CSR conformity is calculated as the absolute value of the difference between a firm's net CSR on each CSR component relative to its respective industry net CSR average on each of the seven components. We reversed the value by multiplying it by  $-1$  so that a higher value indicates greater conformity. We then standardized and summed the seven conformity components of each firm to have a composite measurement of a firm's CSR conformity each year. CSR conformity is measured in year  $t + 1$  and independent variables are measured in  $t$  to establish temporal precedence.

#### 4.2.2 | Independent variables

Our independent variable is *network prominence* of the focal firm. Following prior supply chain network literature, we use eigenvector centrality as the proxy to capture firm network prominence (Li et al., 2022). Eigenvector centrality reflects the degree to which a focal firm and its

supply chain partners relate to other highly connected firms in the network (Carnovale & Yenyurt, 2014; Li et al., 2022; Ozmel et al., 2017). It takes “both direct and indirect ties and tie strength into account which is essential for the supply chain network” (Li et al., 2022, p. 7).

In particular, eigenvector centrality is well-suited for assessing firm status because it considers both the number and the importance of a firm's connections. In a supply chain network, a firm's network prominence is determined not only by the number of partners it is connected to, but also by the prominence of those partners. Eigenvector centrality captures this by assigning higher value to a firm if it is connected to other well-connected and influential firms in the network. This reflects the idea that a firm's status is enhanced when it is associated with other key players, indicating its significance and influence within the overall network. As a result, eigenvector centrality provides a comprehensive measure that takes into account both the breadth and depth of a firm's relationships, making it a suitable indicator for evaluating firm status within a supply chain context. Specifically, an increasing eigenvector centrality reflects an increasing number of supply chain partners who are also widely connected to a broader number of supply chain partners (Borgatti & Li, 2009). Eigenvector centrality in this study is calculated as

$$x_{it} = \frac{1}{\lambda} \sum_{j=1}^n a_{ijt} x_{jt}, i = 1, \dots, n,$$

where  $x_{it}$  is eigenvector centrality of firm  $i$  in year  $t$ ,  $\lambda$  is the largest eigenvalue of the adjacency matrix,  $n$  is the number of firms,  $x_{jt}$  is eigenvector centrality of partner firm  $j$  in year  $t$ , and  $a$  represents the adjacency matrix<sup>4</sup> (Bonacich, 2007). *Supply chain partner CSR congruence* and *supply chain industry CSR congruence* are the moderators in our conceptual model. Supply chain partner CSR congruence is calculated as the similarity (i.e., reverse coded standard deviation) of the net CSR of a focal firm's supply chain partners. By capturing the similarity among the supply chain partners, this variable reflects the level of consistency and uniformity of the CSR practices among a focal firm's supply chain partners. The higher the supply chain partner CSR congruence, the less the CSR deviation among a focal firm's supply chain partners, resulting in a consistent and stable external CSR influence on a focal firm.

The second moderator, supply chain industry CSR congruence, is calculated as the net CSR similarity of the supply chain partners' industry averages. It is logical to contend that if a focal firm is willing to conform to its own industry CSR norm, supply chain partners can be heavily influenced by their own industry CSR norms as well. Thus, the supply

chain industry CSR average can further demonstrate how a focal firm's CSR decisions are influenced by external norms brought by the supply chain partners. Accordingly, this moderator focuses on the consistency of the CSR demands across supply chain partners' industries. Particularly, we first calculated the industry net CSR average of each supply chain partner, then captured and reverse coded the standard deviation of the supply chain industry net CSR average per focal firm per year.

### 4.2.3 | Control variables

As suggested in prior research, we included several control variables to account for other potential supply chain power and resource-related factors that may affect our model. We first controlled for *firm size*, measured as the natural logarithm of firm sales, given bigger firms are more autonomous in firm strategies and can easily withstand supply chain partners' pressure (Koufteros et al., 2007). *Market share* (i.e., the percentage of a firm's sales of the total two-digit industry sales) was included because it represents the competitiveness within an industry, which may alter a focal organization's willingness to leverage CSR engagement (Upadhye et al., 2019). Given that we are focusing on CSR conformity in the context of supply chain, we controlled for *CSR asymmetry*, calculated as the absolute value of the difference between a focal firm's CSR engagement and its supply chain partner's average CSR engagement. We also controlled for *strategic conformity*, measured using R&D intensity (R&D expenditures divided by firm sales), capital intensity (capital expenditures divided by firm sales), SGA intensity (selling and general administration expense divided by firm sales), and debt to equity, because this may impact the degree to which CSR conformity is a concern for an organization. Analogous to the CSR variables, we calculated the absolute difference between each component and the two-digit SIC code industry mean and multiplied it by  $-1$  so that higher values indicate greater conformity. We then standardized and summed the different components to create our composite measure of strategic conformity (Miller et al., 2013). Lastly, we captured operational performance as the firm's *ROA* (i.e., net income divided by total assets), as ROA reflects firm profitability and how efficiently a firm deploys its asset resources (Dong et al., 2020).

## 5 | ANALYSIS AND RESULTS

### 5.1 | Statistical model

Given the longitudinal nature of our data and the potential concerns of endogeneity issues, we utilize the analysis

of the fixed effects two-stage least squares (*hereafter*: FE-2SLS) for panel-data model. Specifically, our statistics model is shown in Equation (1) below where  $i$  denotes the focal firm,  $t$  denotes time, and  $SC$  stands for supply chain.

$$\begin{aligned}
 \text{CSR conformity}_{it+1} = & \beta_0 + \beta_1 \text{Network prominence}_{it} \\
 & + \beta_2 \text{Network prominence}_{it}^2 \\
 & + \beta_3 \text{Network prominence}_{it} \\
 & \times \text{SC partner CSR congruence}_{it} \\
 & + \beta_4 \text{Network prominence}_{it} \\
 & \times \text{SC industry CSR congruence}_{it} \\
 & + \beta_5 \text{Network prominence}_{it}^2 \\
 & \times \text{SC partner CSR congruence}_{it} \\
 & + \beta_6 \text{Network prominence}_{it}^2 \\
 & \times \text{SC industry CSR congruence}_{it} \\
 & + \beta_7 \text{SC partner CSR congruence}_{it} \\
 & + \beta_8 \text{SC industry CSR congruence}_{it} \\
 & + \beta_9 \text{control variables} + \varepsilon_{it}
 \end{aligned} \tag{1}$$

## 5.2 | Endogeneity issues

Despite the use of multiple data sources and multiple control variables, there may still be endogeneity issues that arise from a potential sample selection bias of focal firms since focal firms with no CSR values reported in KLD database or no supply chain partners reported in FactSet Revere across the observed years were eliminated from our final sample (Ketokivi & McIntosh, 2017). This means that not all publicly traded manufacturing firms are included in our model, resulting in a potential sample bias. We account for this through the inclusion of the *inverse mill's ratio*—a statistical approach to control for the selection bias by including the ratio of the probability density function over the cumulative distribution function of a distribution as a control variable in the main analysis.

A Heckman sample selection analysis was conducted using all publicly traded manufacturing firms, their network position and control variables mentioned above. The objective of this analysis is to obtain the inverse mill's ratio and include it in the main analysis as an additional control variable to adjust for selection concerns. The first step of this analysis is set to predict the probability of a firm's inclusion in our final data, and this demands that “at least one additional variable, that is

absent from the theoretical model, should be included in the selections equation” (Barker et al., 2022, p. 393).

We predict that firms with higher industry Herfindahl–Hirschman Index (HHI) and industry sales growth will have a higher probability of being reported in both the CSR and supply chain relationship databases, and therefore, higher likelihood to be included in our analysis sample. As such, we leveraged two exogenous variables, namely, the industry HHI and industry sales growth, as the predictors of the first-stage probit model (Wiengarten et al., 2019). Specifically, we conducted a probit model analysis using HHI and industry sales growth to predict firm inclusion in our sample (included in sample = 1; otherwise = 0). HHI is calculated as the sum of squared shares of all firms' market shares in an industry, with industry defined at the four-digit level. Industry sales growth is calculated by subtracting the industry sales of the previous year from those of a current year, dividing by the industry sales of the prior year, then multiplying by 100 to obtain the sales growth as a percentage. Following this analysis, we calculated the inverse mill's ratio and included it in the main analysis as an additional control variable to adjust for selection concerns. The first stage probit analysis is shown in Table A1 sample selection model in the Appendix 1.

We also conducted a test to determine the impact threshold of a confounding variable (ITCV test) to further understand the degree of the endogeneity issues in our study. This test is used to identify a threshold for percent bias and the probability that any omitted variable bias may invalidate our inference. The test was conducted following a fixed effects analysis focusing on the curvilinear results of focal firm network prominence using Stata. Results suggest that 40% (652 observations) of the estimate would have to be replaced with an effect size of zero to invalidate our inferences, indicating that a significant portion of the estimate would need to be altered to potentially lead to a different inference. This insight provides us with a statistical perspective on the robustness of our findings and the potential impact of omitted variable bias on our inferences.

## 5.3 | Model testing

As stated, we conducted our primary evaluations by utilizing the FE-2SLS to further alleviate endogeneity. FE-2SLS uses exogenous instrumental variables to account for the endogenous potential that an independent variable is correlated with error terms in the regression (Lu & Shang, 2017). Suitable instrumental variables should be theoretically and statistically connected to the

independent variable but not connected to the dependent variable. Two instrumental variables are utilized for this study—focal firm CEO network prominence and focal firm cash-to-cash cycle (C2C). CEO network prominence captures a focal firm's CEO network power which is equivalent to a dominant supply chain network position that facilitates information and resource gathering (Falcone et al., 2022; Geletkanycz et al., 2001). We leverage the focal firm CEO eigenvector centrality as the CEO's network position (El-Khatib et al., 2015; Koka & Prescott, 2008). Theoretically, a CEO with a prominent social network position is equivalent to capturing a central, dominant network status that facilitates information and resource gathering (Bonacich, 2007).

C2C reflects the upstream and downstream financial flows of a focal firm, which influences the firm's network prominence among its supply chain partners but not necessarily the focal firm's CSR conformity decision (Grosse-Ruyken et al., 2011; Randall & Farris, 2009). C2C is the sum of accounts receivable days and inventory days minus the account payable days, where receivable days is accounts receivable divided by total revenue then multiplied by 365 days; inventory days is the ending inventory divided by the cost of goods sold then multiplied by 365; payable days is the average accounts payable divided by the cost of goods sold then multiplied by 365. The results of the first stage analysis (i.e., using the instrumental variables to predict the independent variable network prominence) is presented in Table A1 in the Appendix 1.

We evaluated the 2SLS using Stata command *xtivreg, fe* with the inclusion of robust standard errors and year dummies. Additional instrumental tests were conducted to ensure the validity of the two selected instrumental variables. We found statistically significant results for the under-identification test – Anderson canonical correlation LM statistic, suggesting a rejection of the null hypothesis that the model with the instrumental variables is under identified. In other words, the significant result suggests that the FE-2SLS model is identified given the relationship between the instrumental variable and the instruments is sufficiently strong to justify inference from the results ( $\chi^2 = 13.965, p < .001$ ). In addition, we found no significant results for Sargen–Hansen tests ( $\chi^2 = 0.1689, p = .20$ ) where the null hypothesis is that the instruments are valid, that is, uncorrelated with the error term and are not overidentified. These tests indicate that the usage of these two instruments in our analysis would be appropriate. Further, we conducted a VIF test to ensure that multicollinearity is not a concern. The VIF values of all variables vary from 1.33 to 2.60 with an average of 1.26, suggesting that multicollinearity should not be a concern.

## 5.4 | Results

Our proposed theoretical model is that network prominence has an inverse U-shaped relationship with CSR conformity. Meanwhile, supply chain partner CSR congruence and supply chain industry CSR congruence moderate this inverted U-shape relationship. The FE-2SLS results are provided from Model 1 to Model 4 in Table 3. To begin with, we introduced the linear effects of the focal firm network prominence in Model 1. Consistent with the general expectation and prior literature, *network prominence* is found to have a positive and significant linear effect on firm CSR conformity ( $\beta = 1.828, p < .05$ ). This indicates that before introducing the squared term of network prominence, as a focal firm occupies a more prominent network position, its CSR conformity also increases.

Model 2 in Table 3 introduces the squared term—*Network prominence*<sup>2</sup>—to test H1, that is, network prominence has an inverse U-shaped relationship with focal firm CSR conformity such that CSR conformity will be lowest at high and low levels of network prominence. The result of Model 2 provides support for H1 given the squared term of network prominence—*Network prominence*<sup>2</sup>—is negative and significant ( $\beta = -1.162, p < .01$ ). Following the guidance in Haans et al. (2016), a multi-step robustness check was conducted and elaborated in Section 5.3.2 to further ensure the validity of the inverse U-shaped relationship suggested in Model 2. The results support H1 that focal firm network prominence is positively associated with focal firm CSR conformity, however, this positive effect lessens and eventually becomes a negative influence on CSR conformity.

Looking at the moderating roles of supply chain CSR congruence. H2 and H3 posit that, as supply chain partners or the partner's industry CSR becomes more consistent, a focal firm will conform more to its own industry CSR norm. That is, we expect to see a flatter inverse U-shape as supply chain partner CSR congruence (H2) and supply chain industry congruence (H3) increase. These hypotheses are supported in Models 3 and Model 4 in Table 3. The curvilinear interaction in Model 3 for the supply chain partner CSR congruence is significant and positive indicated by the coefficient of the term “*Network prominence*<sup>2</sup> × *SC partner CSR congruence*” ( $\beta = .233; p < .05$ ). This result suggests that as the CSR practices of a focal firm's supply chain partners become more consistent, the inverted U-shaped network prominence and conformity relationship will be alleviated.

Figure 3 further interprets and demonstrates through a 3D surface plot the moderating effect of supply chain partner CSR congruence. Three variables are included in

TABLE 3 Hypotheses testing and results.

Dependent variable: CSR conformity	Model 1	Model 2	Model 3	Model 4
Inverse mill's ratio	−0.067 (0.707)	−0.445 (0.527)	−0.602 (0.529)	−0.562 (0.533)
Firm size	−0.118 (0.636)	−0.435 (0.485)	−0.090 (0.389)	−0.016 (0.392)
Market share	0.211* (0.098)	0.226** (0.077)	0.258** (0.084)	0.255** (0.084)
CSR asymmetry	0.584* (0.228)	0.115 (0.132)	0.085 (0.123)	0.098 (0.124)
Strategic conformity	−0.073 (0.246)	−0.168 (0.198)	−0.182 (0.173)	−0.214 (0.174)
ROA	0.801 (0.631)	0.695 (0.507)	0.176 (0.427)	0.171 (0.432)
SC partner CSR congruence	6.036*** (0.310)	5.894*** (0.253)	6.818*** (0.273)	6.181*** (0.248)
SC industry CSR congruence	0.453*** (0.098)	0.377*** (0.080)	0.078 (0.072)	0.014 (0.007)
Network prominence	1.828* (0.872)	1.221*** (0.289)	1.057 (4.896)	0.761 (0.404)
Network prominence <sup>2</sup>		−1.162** (0.392)	−0.428 (1.337)	−0.814 (1.200)
Network prominence × SC partner CSR congruence			0.019*** (0.042)	
Network prominence <sup>2</sup> × SC partner CSR congruence			0.233* (0.101)	
Network prominence × SC industry CSR congruence				0.313** (0.115)
Network prominence <sup>2</sup> × SC industry CSR congruence				0.640* (2.486)
Constant	6.378*** (1.490)	4.200*** (1.060)	2.715*** (0.450)	2.415*** (0.447)
<i>N</i>	1650	1650	1650	1650
Within <i>R</i> <sup>2</sup>	0.338	0.361	0.369	0.466
$\Delta R^2$	–	0.023	0.031	0.128
Wald <i>Chi</i> <sup>2</sup>	968.10***	888.91***	915.84***	128.26***

Note: All tests are two-tailed; Robust standard errors in parentheses. Year dummies included.

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

Figure 3—focal firm network prominence as the right *x*-axis (*X*), supply chain partner CSR congruence as the left *x*-axis (*Z*), and focal firm CSR conformity as the vertical *y*-axis (*Y*). The CSR conformity surface plot changes as the values of the right *x*-axis and left *x*-axis change. When looking only at network prominence (*X*) and CSR conformity (*Y*), an inverse U-shaped is shown as line *AB*. That

is, as the value of network prominence increases along the *x*-axis, the value of CSR conformity increases along the *y*-axis up to a point then it begins to decrease, ultimately forming an inverse U-shape. Considering the moderator, when looking at the network prominence and supply chain partners CSR congruence together (left and right *x*-axes taken together), the inverse U-shaped



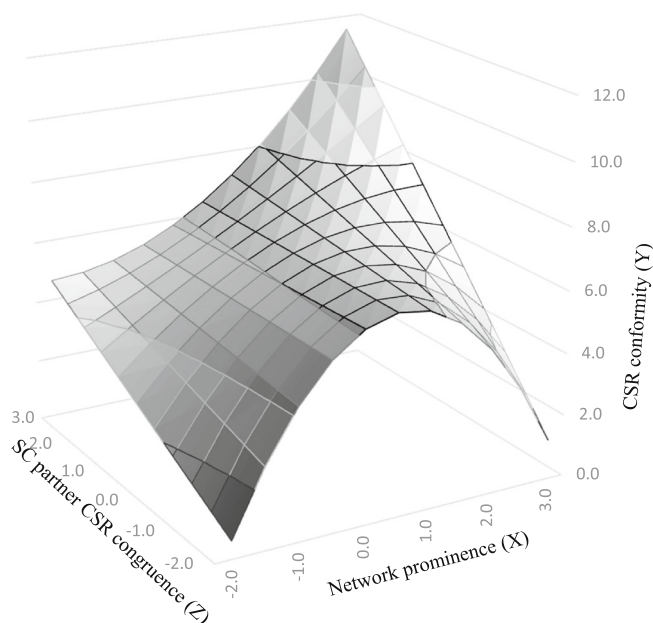


FIGURE 3 Network prominence and SC partner CSR interaction 3D plot.

between network prominence and CSR conformity flattens and approaches to near linearity as shown by the far edge of the 3D surface, suggesting that as the supply chain partner CSR congruence increases, the inverse U-shaped relationship between network prominence and CSR conformity flattens (from *AB* to *CD*). This supports our theoretical model. Interestingly, comparing points *A*, *B*, *C*, and *D*, the flattened inverse U-shape shows that high-network prominence firms have the highest CSR conformity (*point D*) as supply chain partner CSR becomes more congruent. We argue that this result implies that, when supply chain partners' CSR norms are in harmony, high-network prominence firms will follow the industry standards to gain safety-in-numbers, since they have an elevated stake given the higher network status. Taken together, the 3D plot provides further support to **H2**.

The results of the moderating role of the *supply chain industry CSR congruence* are represented in Model 4 of Table 3 and Figure 4. The results are consistent with **H3** as the coefficient of the interaction term *Network prominence*<sup>2</sup> × *SC industry CSR congruence* shows a positive and significant effect ( $\beta = 0.313$ ;  $p < .01$ ). This suggests that as the industry CSR average of supply chain partners becomes more consistent, the inverse U-shaped relationship between network position and CSR conformity will be alleviated, resulting in a flatter shape. This result supports **H3** and is consistent with that of the supply chain partner CSR congruence. Figure 4 provides a 3D

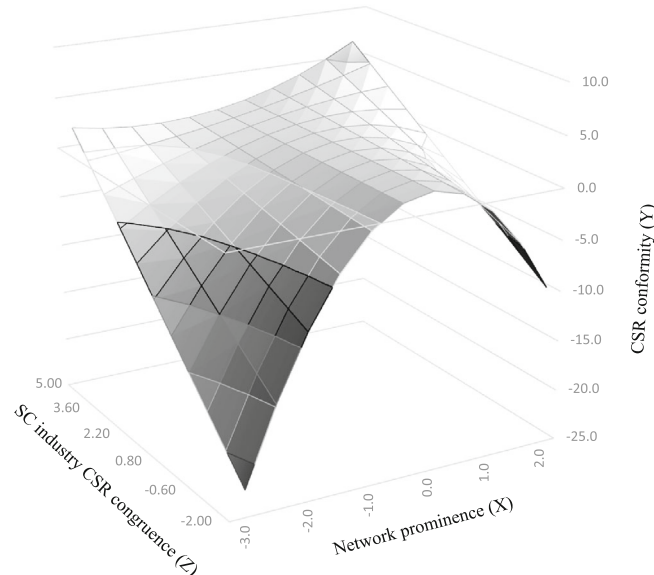


FIGURE 4 Network prominence and SC industry CSR interaction 3D plot.

visualization of the moderating effect of the supply chain industry CSR congruence. The plot supports our hypothesis, given the curvilinear line *AB* becomes flatter and transformed to line *CD* as supply chain industry CSR consistency increases. Again, the 3D plot yields further interesting insights—it appears that the highest CSR conformity, when considering supply chain industry CSR congruence, occur with low- and high-prominence firms—a phenomenon termed as “shape-flipping curves” by Haans et al. (2016). Although not hypothesized in our theorizing, we contend that this flipping effect coincides with the fundamental notion of this study, that is, firms strive to conform to CSR industry norm. But this cannot be done unless the external supply chain norm permits and is shown as the increasing consistency of supply chain industry CSR. Taken together, the FE-2SLS results and the 3D surface plots support **H3**.

## 5.5 | Robustness tests

### 5.5.1 | Alternative measure of network prominence

Alternatively, we leverage structural holes as an alternative metric for capturing the network prominence of a focal firm. The calculation of structural holes is operationalized as the reverse value of Burt's constraint formula (Burt, 2004). Particularly, let *sh* represent the value of the structural holes of a focal firm *i*;

$$sh_i = - \left( p_{ij} + \sum_q p_{iq} p_{qj} \right)^2 \text{ with } i \neq q \neq j,$$

where  $p_{ij}$  is the proportion of  $i$ 's social effort spend on  $j$  out of all  $i$ 's total effort to maintain all possible ties. The notion of social effort refers to the actual connections within, between, and among the focal firms and their supply chain partners in the overall network as constructed by the annual adjacency matrix (Falcone et al., 2022). In short, a structural hole exists when two disconnected supply chain partners, such as two buyers, two suppliers, or a buyer and supplier pair and share a connection to a common focal firm. The higher the structural holes value, the more autonomy and control power the focal firm  $i$  has, resulting in higher network prominence.

The results are shown in Table 4 and remain consistent with our theorizing. Model 1 of Table 4 shows that *Network prominence* has a positive and significant direct effect on focal firm CSR conformity ( $\beta = .579$ ,  $p < .01$ ). Model 2 tests H1 – the inverse U-shaped relationship between network prominence and CSR conformity. The results support H1, given a negative and significant coefficient of term *Network prominence*<sup>2</sup> ( $\beta = -1.630$ ,  $p < .001$ ). Results in Model 3 and 4 corresponding to H2 and H3 which posit that, as supply chain partners or these partner's industry CSR becomes more consistent, the inverse U-shaped relationship between network prominence and CSR conformity will become flatter. These hypotheses are supported in Models 3 and Model 4 in Table 4. Specifically, the curvilinear interaction in Model 3 for the supply chain partner CSR congruence is significant and positive indicated by the coefficient of the term *Network prominence*<sup>2</sup>  $\times$  *SC partner CSR congruence* ( $\beta = 1.240$ ;  $p < .001$ ). This result suggests that as the CSR practices of a focal firm's supply chain partners become more consistent, the inversed U-shaped network prominence and conformity relationship will be alleviated. While the coefficient of the interaction term *Network prominence*<sup>2</sup>  $\times$  *SC industry CSR congruence* shows a positive and significant effect ( $\beta = 9.880$ ;  $p < .001$ ), suggesting that as the industry CSR average of supply chain partner becomes more consistent, the inverse U-shaped relationship between network position and CSR conformity will be alleviated, resulting in a flatter shape. Figures 5 and 6 demonstrate the moderating effect when using structural holes as the independent variable. Taken together, both eigenvector centrality and structural holes, as the measures of network prominence, support our hypotheses.

## 5.5.2 | Robustness checks of the inverted U and the moderating effects

Following the guidance of Haans et al. (2016), we conducted a multi-step robustness check (Table 5) of the inverted U-shaped relationship and moderation effects to ensure the validity of our statistical analysis. Assuming  $Y = \beta_0 + \beta_1 X + \beta_2 X^2 + \beta_3 XZ + \beta_4 X^2 Z + \beta_5 Z$ , Step 1 of the robustness check requires a significant and negative coefficient for the square term of the independent variable before introducing any moderation terms. Our statistical analyses above show that  $\beta_2$  is significant and negative, providing the fundamental support of the inverse U-shaped relationship between network prominence and firm CSR conformity ( $\beta = -1.162$ ,  $p < .01$  and  $\beta = -1.630$ ,  $p < .001$  using eigenvector centrality and structural holes, respectively).

Step 2, leveraging the *margin* command in Stata, we confirmed that both the left and right slopes of the inverse U-shaped are significantly steep, given the minimum and maximum values of the independent variable (Barker et al., 2022). Specifically, given an inverse U-shaped, we expect to see  $\beta_1 X + 2\beta_2 X_L$  to be significant and positive while  $\beta_1 X + 2\beta_2 X_H$  to be significant and negative, where  $X_L$  and  $X_H$  represent the minimum and maximum values of the independent variable. Our margin tests support this claim in both the eigenvector centrality and structural holes models.

Step 3 requires the turning point, calculated as  $-\beta_1/2\beta_2$ , of the inverse U-shape to remain in the data range. When looking at Model 2 of Table 3, we obtain the turning point 0.52 (i.e.,  $-1.221/(2 \times -1.162)$ ) which is well between the range of eigenvector centrality (0 to 1). When looking at Model 2 of Table 4, a turning point of  $-0.037$  is obtained (i.e.,  $0.121/(2 \times -1.630)$ ), suggesting that the turning point is within the range of structural holes ( $-0$  to 1). In Step 4, we introduced a cubic term in the statistical analyses and the coefficient of the cubic term is not significant, which ensures the network prominence and CSR conformity relationship is indeed a quadratic instead of a cubic function.

Step 5 suggests that additional analyses should be conducted by splitting and clustering the samples based on the turning point. Above the turning point sample should show a negative relationship between network prominence (X) and CSR conformity (Y) while below the turning point sample should find a positive relationship between network prominence and CSR conformity. Table 6 shows the results of the split sample testing. Specifically, Models 1 and 3 demonstrate the sample groups above the turning points found in the eigenvector centrality and structural holes models, respectively. The

TABLE 4 Robustness checks using structural holes as alternative independent variable.

DV: CSR conformity	Model 1	Model 2	Model 3	Model 4
IMR	-0.142 (0.415)	-0.178 (0.619)	-0.028 (0.337)	-0.345 (0.533)
Firm size	-0.757** (0.199)	-0.063 (0.564)	-0.874*** (0.142)	-0.096 (0.392)
Market share	0.398*** (0.0972)	0.275** (0.086)	0.132* (0.056)	0.255** (0.085)
CSR asymmetry	2.209** (0.815)	0.452** (0.167)	0.520*** (0.105)	0.326* (0.140)
Strategic conformity	0.444* (0.197)	-0.067 (0.218)	0.188 (0.139)	-0.200 (0.174)
ROA	0.323 (0.424)	0.657 (0.555)	0.583 (0.348)	0.219 (0.428)
SC partner CSR congruence	5.508*** (0.264)	6.047*** (0.273)	5.727*** (0.196)	6.073*** (0.251)
SC industry CSR congruence	0.766*** (0.082)	0.431*** (0.087)	0.692*** (0.051)	0.119 (0.081)
Network prominence	0.579** (0.187)	0.121*** (0.033)	2.140 (2.800)	2.170 (3.340)
Network prominence <sup>2</sup>		-1.630*** (3.230)	-3.110 (2.460)	-1.060 (3.950)
Network prominence × SC partner CSR congruence			0.741*** (0.223)	
Network prominence <sup>2</sup> × SC partner CSR congruence			1.240*** (2.740)	
Network prominence × SC industry CSR congruence				7.690*** (1.360)
Network prominence <sup>2</sup> × SC industry CSR congruence				9.880*** (2.080)
Constant	4.012*** (0.753)	6.243*** (1.319)	2.099*** (0.557)	2.521*** (0.444)
<i>N</i>	1650	1650	1650	1650
Within <i>R</i> <sup>2</sup>	0.141	0.363	0.396	0.480
$\Delta R^2$	-	0.222	0.228	0.339
Wald <i>Chi</i> <sup>2</sup>	155.7***	879.58***	323.0***	125.4***

Note: All tests are two-tailed; Robust standard errors in parentheses; Year dummies included.

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

results indicate negative coefficients ( $\beta = -1.191$  and  $\beta = -10.58$ , respectively). While looking at model 2 and 4, the results indicate positive coefficients ( $\beta = 0.315$ ;  $\beta = 16.25$ ) using the sample groups below the turning points found in the eigenvector centrality and structural holes models, respectively.

Haans et al. (2016) further provide guidance in checking the moderating effect on curvilinear relationships which we summarized in Table 5 Step 6 and 7. When hypothesizing a flatten moderating effect, a positive and significant coefficient for the interaction term (i.e.,  $\beta_4$ ) should be found. This is supported by our results in

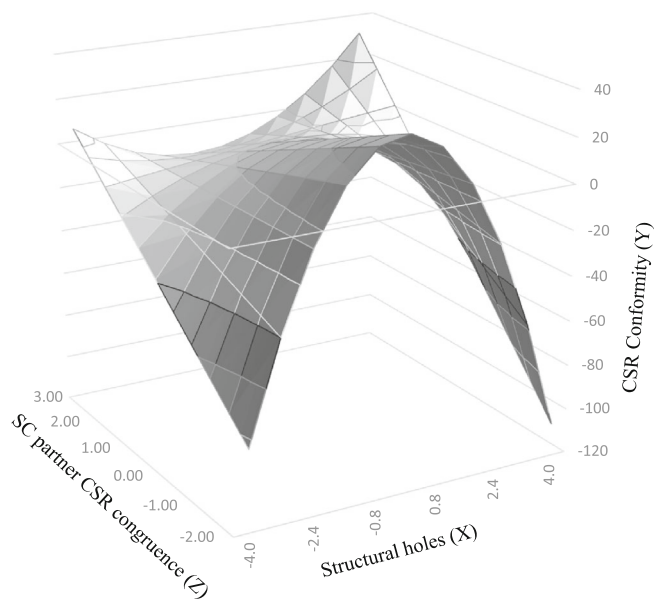


FIGURE 5 Robustness check-Structural holes and SC partner CSR interaction 3D plot.

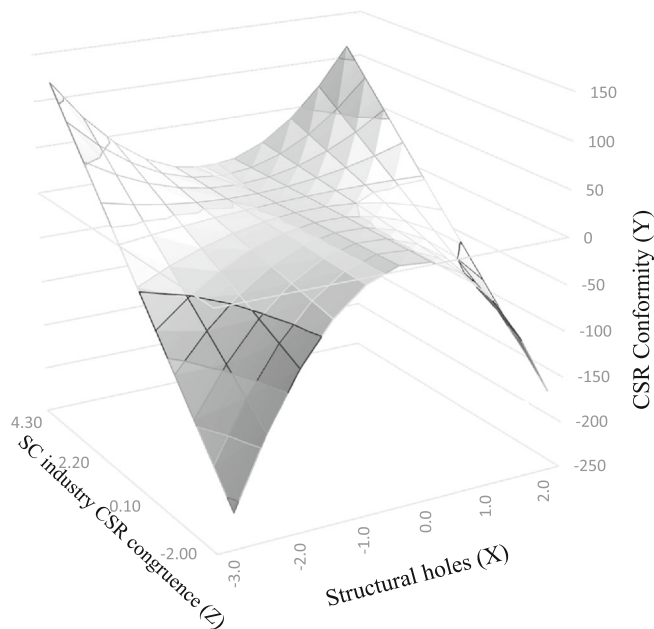


FIGURE 6 Robustness check-Structural holes and SC industry CSR interaction 3D plot.

Table 3 ( $\beta_4 = 0.233$ ,  $p < .05$ ;  $\beta_4 = 0.313$ ,  $p < .01$ ) and Table 4 ( $\beta_4 = 1.240$ ,  $p < .001$ ;  $\beta_4 = 7.690$ ,  $p < .001$ ). In addition, the moderating effects are presented in Figure 3–6, further supporting our theorizing. Taken together, steps 1–5 support our conclusion that there is an inverse U-shaped relationship between network prominence and CSR conformity and step 6–7 support our conclusion of the moderating roles of supply chain CSR norms.

TABLE 5 Robustness checks of the inverted U and moderating effect on the inverted U.

Robustness checks	Yes/No
1. $\beta_2$ should be significant and negative	✓
2. Left and right slopes should be sufficiently steep at both ends of the data range	✓
3. Turning point ( $-\beta_1/2\beta_2$ ) needs to be in the data range	✓
4. Cubic term is not significant	✓
5. Split sample base on the turning point; above the turning point sample should find a negative relationship between X and Y; below the turning point sample should find a positive relationship between X and Y	✓
6. (Moderation) positive and significant $\beta_4$ reflects flattening effect	✓
7. (Moderation) graph and visually compare the curvilinear relationships	✓

Note: When  $Y = \beta_0 + \beta_1X + \beta_2X^2 + \beta_3XZ + \beta_4X^2Z + \beta_5Z$ ; Adopted from Haans et al. (2016) and Lind and Mehlum (2010).

### 5.5.3 | Robustness check with alternative dependent variables—CSR engagement

Many of our arguments rely on the assumption that a change in the supply chain network will alter the external demands for a focal firm's CSR practices. To address this possibility, we conducted additional analysis focusing on the *CSR engagement* of a focal firm, measured as the focal firm total CSR engagement as reported in KLD and the *diversity of CSR engagement*, measured as the standard deviation of CSR strengths across the potential categories reported by KLD. Based upon our theorizing, we should expect that as the *total number of supply chain partners* increases, the focal firm CSR engagement and the diversity of focal firm CSR engagement will increase as well. In addition, we choose betweenness centrality as an alternative network prominence measure in this robustness check. Results of this analysis are provided in Appendix Table A2 and suggest that partner number is positively related to CSR diversity in Models 1 and 2 ( $\beta = .012$ ;  $p < .001$ ) and to CSR engagement in Models 3 and 4 (Model 3:  $\beta = .118$ ;  $p < 0.001$ ; Model 4:  $\beta = .124$ ,  $p < .001$ ). Another interesting finding in this robustness analysis is that more prominent firms tend to engage in more diverse CSR practices (Model 1:  $\beta = 0.026$ ;  $p = .000$ ) and in higher levels of CSR engagement as well (Model 3:  $\beta = 0.186$ ,  $p = .000$ ). This suggests that firms with greater position tend to push the boundaries of the industry CSR norm, as proposed in our theoretical argument and supporting some prior theorizing (cf. Aguilera et al., 2007).

DV: CSR conformity	Model 1	Model 2	Model 3	Model 4
	Above	Below	Above	Below
IMR	0.502 (0.324)	1.185 (3.869)	0.269 (0.608)	-0.426 (1.857)
Firm size	0.315 (0.275)	-11.070 (7.909)	0.304 (0.528)	-1.211 (2.251)
Market share	0.050 (0.049)	0.629 (0.345)	0.143 (0.107)	0.379* (0.180)
CSR asymmetry	0.081 (0.081)	0.395 (0.700)	0.411 (0.267)	0.088 (0.363)
Strategic conformity	-0.119 (0.111)	-1.716 (3.704)	-0.006 (0.187)	-0.396 (0.993)
ROA	0.487 (0.434)	10.840 (14.930)	0.121 (0.465)	3.900 (3.098)
SC partner CSR congruence	1.695*** (0.062)	1.013* (0.487)	6.781*** (0.339)	5.694*** (0.641)
SC industry CSR congruence	0.127 (0.075)	2.083** (0.681)	0.153 (0.093)	1.178*** (0.246)
Eigenvector centrality	-1.191* (0.522)	0.315 <sup>†</sup> (0.177)		
Structural holes			-10.580* (4.440)	16.250 (20.34)
Constant	1.1630 (0.6410)	12.350 (12.400)	6.663*** (1.036)	3.353 (3.030)
<i>N</i>	1330	320	909	741
<i>R</i> <sup>2</sup>	0.49	0.43	0.49	0.49

Note: Robust standard errors in parentheses; Year dummies included; Samples used in Models 1, 2 and Models 3, 4 are above and below the turning point of eigenvector centrality and structural holes, respectively.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ; <sup>†</sup> $p < .1$ .

## 6 | DISCUSSION

The issue of CSR engagement is multifaceted, requiring firms either to conform with industry standards to maintain legitimacy or deviate from them to compete (Pan et al., 2020; Zhang et al., 2020). However, despite its significance, the current literature on OSCM fails to address firm conformity to CSR norms. In addition, organizational conformity literature primarily regards CSR conformity as an industry-specific matter, disregarding the interdependent nature of firms and their supply chain partners, as noted by Borgatti and Li (2009). Drawing on middle-status conformity theory (Phillips & Zuckerman, 2001), this study argues that network prominence reflects firm status within the hierarchy and influences firm CSR conformity. Specifically, this study explores how network prominence shapes a firm's

response to the dilemma of conform for legitimacy versus deviating to differentiate itself to attract more supply chain partners.

The results show an inverse U-shaped relationship between network prominence and CSR conformity. Firms with low prominence in the supply chain network tend to deviate from industry CSR norms to differentiate themselves and attract the attention of supply chain partners, as they have relatively less to lose due to their inferior network status (i.e., little to lose). Conversely, high-prominence firms are not as reliant on supply chain partner approval and often hold a dominant position in the industry (i.e., little to fear) allowing them to deviate from industry CSR norms with less concern. Meanwhile, firms with moderate prominence tend to conform to industry CSR norms to maintain social legitimacy and stability not only for themselves but also for their supply

TABLE 6 Robustness checks using split samples.

chain partners. In addition, results show that supply chain CSR acts as an external norm that moderates this inverse U-shaped relationship, suggesting that focal firms can prioritize their own industry CSR norms if their supply chain partners share a compatible CSR standard.

## 6.1 | Theoretical contribution

Our research framework makes several contributions to the emerging literature on CSR practices, institutional norms, and supply chain literature. First, this study bridges the literature realms of organizational conformity and OSCM. The current CSR studies in OSCM primarily focus on firms' CSR engagement, disregarding conformity to industry norms as a strategic alternative. Conversely, organizational conformity literature indicates that CSR conformity is a tactic to attain in-group legitimacy (Pan et al., 2020; Zhang et al., 2020), but it fails short of considering that firms operate within a supply chain network. This research bridges these two strands of literature.

Furthermore, this study employs the middle-status conformity theory to offer valuable insights into CSR conformity in the supply chain. Specifically, it sheds light on the difficulties that firms encounter when deciding whether to conform to industry standards for legitimacy or deviate to distinguish themselves. Indeed, previous studies have primarily concentrated on internal norms, such as internal competition and decentralization (Greenwood et al., 2010). However, these studies neglected the fact that firms rely on their supply chain partners and must strive to retain their attention (i.e., the audience-actor analogy; Phillips & Zuckerman, 2001). Our study offers a network perspective on organizational conformity, revealing that firms encounter distinct challenges based on their level of network prominence. Low-prominence firms are compelled to deviate from industry norms to sustain resource flows from supply chain partners through distinctiveness. However, as network prominence increases, firms not only gain greater autonomy but also require conformity to their industry norms to ensure group protection.

Third, our study addresses the need to examine the impact of external stakeholders on a network level (Rowley, 1997, 2017). The stakeholders in this study are the for-profit supply chain partners who have contractual agreements and hold significant social and economic expectations for the focal company (Rowley, 2017). We depart from a relatively dyadic view of stakeholder by utilizing the collective supply chain partners' CSR behaviors that surrounds a focal firm. Our study specifically examined how the congruence of CSR standards among supply chain partners and their industries moderate the

relationship between a focal firm and its CSR performance. We discovered that when external CSR standards are aligned, it provides greater flexibility for the firm to focus on its own industry norms. Understanding the collective supply chain partner CSR behaviors is crucial for a realistic representation of the business environment in which the focal firm operates (Kim & Zhu, 2018; Koka & Prescott, 2008). It allows for a comprehensive assessment of CSR conformity by considering the behaviors of all supply chain partners rather than just individual buyers or suppliers (Beske & Seuring, 2014; Clarkson, 2016). This approach provides insights into the dynamics of the entire supply chain network and its impact on the focal firm's CSR conformity.

## 6.2 | Methodological contribution

Methodologically speaking, this study utilizes four different data sources to examine and control various factors that may impact a focal firm's decision to conform to CSR standards, including those related to the focal firm itself, its supply chain, and its top management. This approach goes beyond the typical use of two or three data sources in OSCM studies and takes advantage of the availability of archival data to provide a more comprehensive analysis. Furthermore, the robustness checks conducted on the inverse U-shaped relationship (presented in Table 5) provide valuable insights for future research on non-linear relationships. Overall, this study contributes to the existing literature by providing a more nuanced understanding of the various factors that influence a firm's CSR conformity decision, which helps firms, supply chain partners and policymakers make more informed decisions regarding CSR.

## 6.3 | Managerial contribution

Our research also suggests several implications for management practices. From a focal firm's perspective, our findings suggest that top management who are considering CSR conformity should actively manage the firm's network prominence within the supply chain network. Currently, managers and scholars are aware of the advantages and drawbacks generated by CEO social network (e.g., McDonald et al., 2008) and alliance partners (e.g., Ozmel et al., 2013). However, relatively little attention has been given to the impact of a firm's network prominence on its adherence to industry norms. Since CSR transcends individual firms and relies on collaborative efforts with partners, changes in network prominence not only influence a firm's autonomy but also

reshape its responsibility for ensuring supply chain stability through CSR engagement. As our findings demonstrate, firms with moderate levels of network prominence are compelled to conform to industry norms to maintain legitimacy, whereas low- and high-prominence firms have more leeway to deviate and compete. It is crucial for focal firms to recognize and navigate this dynamic to strike a balance between conformity and differentiation.

Furthermore, we suggest that focal firms should conduct a thorough assessment of their own CSR practices, industry norms, and the CSR initiatives of their supply chain partners. This evaluation will help identify areas where conformity to industry norms is essential and where differentiation can provide a competitive advantage. In addition, focal firms should stay informed about industry CSR best practices and benchmark against other firms. Learning from industry norms can provide valuable insights into finding the right balance between conformity and differentiation. More importantly, focal firms should be aware that the balance between conformity and differentiation may evolve over time due to changing industry trends, stakeholder demands, and regulatory developments. Focal firms should remain adaptable and agile in their CSR strategies to maintain a competitive edge while fulfilling their responsibility to society and the supply chain ecosystem.

Moreover, managing CSR conformity or deviation should be complemented by considering the CSR practices of supply chain partners. The alignment of CSR standards among supply chain partners establishes an external norm that has been demonstrated to reduce uncertainties and promote cooperative relationships, particularly considering rising consumer expectations, technological advancements, and evolving environmental factors. (Ghosh & John, 1999; Tokman et al., 2007). Since firms are embedded in a network, CSR practices of one firm in a supply chain can impact the overall reputation and legitimacy of the entire chain. When supply chain partners align their CSR practices, it creates an external norm that reduces uncertainties and fosters cooperation, leading to improved efficiency and effectiveness across the entire supply chain. Consequently, a focal firm can focus on adhering to its industry's CSR norms with the support of an aligned supply chain.

From a supply chain partner's perspective, our research sheds light on a critical challenge known as the "compete or deviate" dilemma, which focal firms face within the supply chain network. Instead of solely focusing on individual gain and competitiveness, we suggest that supply chain partners be aware of this challenge and recognize the mutual benefits that stem from supporting the CSR objectives and priorities of the focal firm. While

previous studies have suggested that supply chain partners may use resource flows to coerce a firm into engaging in CSR activities (e.g., Tate et al., 2010), our research suggests that this approach may not be effective when dealing with a focal firm that holds a high position in the supply chain. Instead, effective integration of CSR practices requires mutual understanding and adherence to respective CSR norms between supply chain partners and focal firms. By working collaboratively, they can jointly benefit from CSR practices and enhance the overall sustainability of the supply chain.

In addition, our findings on CSR conformity offer potential implications that encompass various businesses and sectors across the upstream and downstream supply chain. While our analysis mainly focuses on manufacturing firms and their supply chain partners, the dynamics of CSR conformity resonate with up and downstream stakeholders. For example, in the downstream supply chain, distributors and logistics companies often face crucial decisions regarding CSR initiatives, such as committing to zero emissions or reducing carbon footprints. Similarly, retailers grapple with CSR norms related to responsible sourcing, labor standards, social equity, gender balance, human rights, and good governance. Our study, rooted in the manufacturing context, provides a foundation to explore how CSR conformity findings might generalize to diverse sectors within the supply chain. This potential generalizability of our CSR conformity findings to various industries in the multitier supply chain network signifies a valuable expansion of our managerial contributions.

From a policymaker's perspective, our results underscore the dynamic, multidimensional nature of CSR issues. Policymakers should take the supply chain perspective into account when formulating industry-specific regulations for CSR. For example, the Environmental Protection Agency (EPA) "faces significant challenges in accomplishing its mission in FYs 2020" due to difficulties in identifying and resolving top management challenges (EPA, 2020, p. 3). By considering CSR conformity, supply chain CSR norms, and interfirm network as key challenges, policymakers can develop more comprehensive and effective CSR regulations that promote sustainability throughout the supply chain. Table 7 provides a concise overview of our managerial findings and suggests potential action items.

## 6.4 | Limitation and future research

Our research has several limitations that present valuable opportunities for future research. First, we focused only on U.S. firms, while the consequences of strategic balance

TABLE 7 Summary of managerial findings.

Actors	Managerial findings	Action items
Focal firm	Network prominence plays an important role in firm CSR conformity strategy	<ul style="list-style-type: none"> <li>– Benchmark industry CSR norm and balance CSR conformity and deviation</li> <li>– Stay adaptable in CSR strategies</li> <li>– Actively manage and leverage network prominence within the supply chain network</li> </ul>
Supply chain partner	Supply chain CSR norms and the congruence of these norms matter	<ul style="list-style-type: none"> <li>– Understand and prioritize the focal firm's core CSR needs over self-interested CSR agendas</li> <li>– Establish mutual understanding and adhere to respective CSR norms for effective CSR integration through supply chain</li> <li>– Apply the understanding of firm conformity to the upstream and downstream supply chain scenarios</li> </ul>
Policy maker	The consideration of supply chain perspective when formulating industry-specific CSR regulations is needed	<ul style="list-style-type: none"> <li>– Consider the supply chain perspective when formulating industry-specific CSR regulations</li> <li>– Address CSR conformity, supply chain CSR norms, and interfirm cooperation as key challenges of CSR implementation</li> </ul>

in CSR may have a global impact. Thus, future research can explore CSR issues in different countries or cultural settings. For example, Japanese automobile manufacturers are known to have close relationships with their supply chain partners (Richardson, 1993); therefore, CSR conformity may be different than U.S. companies. Second, given that our research involves and leverages network analysis of supply chains, it is suitable to focus on network-related variables and supply chain partner CSR

practices. However, future extensions may benefit from considering other antecedents such as material dependence on a major customer to capture the influence of supply chain dependence and power dynamics on firm CSR conformity decisions in depth. Finally, the strategic implications of network prominence for interfirm competition, innovation development, and firm performance deserve further investigation. We recommend that future research should focus on the importance of network prominence in greater depth.

## 7 | CONCLUSION

Existing research on organizational conformity has acknowledged that firms encounter difficulties in balancing legitimacy and distinctiveness in the face of CSR norms. Additionally, recent studies in supply chain management have emphasized the significance of adopting a network perspective to understand a firm and its strategies better. Expanding upon this foundation and building on middle-status conformity theory (Phillips & Zuckerman, 2001), our paper advances novelty by integrating the notion of CSR conformity and investigating the relationship between firm network prominence and CSR conformity. Moreover, the study emphasizes the significance of maintaining supply chain CSR congruence in this context. The findings of this research offer several implications for the field of OSCM and contribute to a more nuanced understanding of the challenges firms encounter when actively embracing CSR practices—an area that the OSCM literature has not extensively addressed. By revealing the inverse U-shaped relationship between network prominence and CSR conformity, the study provides insights into how firms' network status influences their approach to CSR norms.

This research also serves as a steppingstone for further exploration of CSR and supply chain networks. The insights gained from this study can inspire future research in these areas, facilitating a deeper understanding of the complexities and dynamics that shape CSR practices within supply chain networks. In conclusion, the network prominence framework and the findings presented in this study contribute to the growing body of knowledge on CSR engagement and supply chain dynamics. The study reinforces the importance of considering a firm's network prominence and supply chain CSR congruence in their CSR strategies. We hope that this research inspires scholars and practitioners to delve further into the topics of CSR and interfirm networks, leading to more effective and sustainable CSR practices in the future.



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## ENDNOTES

- <sup>1</sup> It is worth noting that firms can deviate from the industry CSR norm (i.e., average CSR levels within the industry) either by having higher or lower CSR levels than the industry average. In line with the prevailing literature on organizational conformity, we do not make a distinction between the direction of deviation in CSR activity from industry norms in this paper, because the theoretical framework of deviation with direction is based on the industry aspirational literature instead of the organizational conformity concept.
- <sup>2</sup> FactSet Revere data begins in year 2003 and KLD data ends in year 2013 which determines our observation period of 2003 to 2013 (i.e., the measurement of total CSR strengths ends in 2013; see Flammer, 2018 as an example). Given our dependent variable of CSR conformity, we focused on a sample timeframe that allowed for consistent and continued measurement of CSR strengths and thus do not go beyond 2013 when CSR measurements began to be altered in the KLD database.
- <sup>3</sup> The net CSR values were used in the main analysis. In addition, we also replicated our analyses using CSR strength only, following the rational presented in Chen and Ho (2019). The results remain consistent with the main model. We thank the anonymous reviewer for this suggestion.
- <sup>4</sup> Refer to the [online appendix](#) for a step-by-step demonstration of the eigenvector centrality manual calculation.

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### SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

**How to cite this article:** Falcone, E. C., & Ridge, J. W. (2024). An investigation of corporate social responsibility conformity: The roles of network prominence and supply chain partners. *Journal of Operations Management*, 70(4), 600–629. <https://doi.org/10.1002/joom.1302>

## APPENDIX 1

TABLE A1 Sample selection and first stage results.

Dependent variable:	CSR conformity	Network prominence
	Sample selection	2SLS First stage
HHI	4.460*** (0.510)	
Industry sales growth	-4.790*** (0.620)	
CEO network prominence		0.069*** (0.017)
C2C		0.293* (0.119)
Inverse mill's ratio		0.165 (0.139)
Firm size	0.415*** (0.067)	0.018 (0.023)
Market share	0.367 (2.073)	0.000 (0.000)
CSR asymmetry	-0.882*** (0.062)	0.712 (1.306)
Strategic conformity	0.015 (0.060)	0.014 (0.062)
ROA	-0.114*** (0.021)	0.263 (0.215)
SC partner CSR congruence	0.447 (0.329)	-0.507*** (0.027)
SC industry CSR congruence	0.022 (0.060)	-0.625 (0.064)
Constant	8.110*** (0.571)	- -
<i>N</i>	25,192	1650

\* $p < .05$ ; \*\*\* $p < .001$ .

**TABLE A2** Robustness check using alternative dependent variable—focal firm CSR engagement.

DV:	CSR diversity		CSR engagement	
	(1)	(2)	(3)	(4)
Inverse Mill's ratio	0.160 (0.167)	0.136 (0.239)	1.356 (0.053)	1.230 (0.083)
CEO network prominence	0.028 (0.058)	0.026 (0.085)	0.209 (0.029)	0.215 (0.019)
Firm size	0.152 (0.000)	0.145 (0.000)	1.198 (0.000)	1.113 (0.000)
Market share	0.001 (0.803)	0.001 (0.746)	−0.011 (0.457)	−0.008 (0.585)
Cash-to-cash cycle	0.000 (0.370)	0.000 (0.323)	−0.000 (0.792)	−0.000 (0.787)
Strategic conformity	−0.001 (0.876)	−0.000 (0.963)	−0.021 (0.457)	−0.019 (0.478)
ROA	−0.167 (0.016)	−0.147 (0.026)	−1.470 (0.005)	−1.231 (0.008)
Network prominence	0.026 (0.000)	−0.001 (0.976)	0.186 (0.000)	−0.040 (0.751)
Network prominence <sup>2</sup>		0.002 (0.201)		0.014 (0.189)
Partner number	0.012 (0.000)	0.012 (0.000)	0.118 (0.000)	0.124 (0.000)
Partner diversity	0.000 (0.892)	0.000 (0.927)	0.004 (0.874)	0.008 (0.773)
Constant	−1.177 (0.000)	−0.913 (0.000)	−10.484 (0.000)	−7.483 (0.000)
$\chi^2$	323.26	327.41	287.56	285.94

Note: *p*-values reported in parentheses.