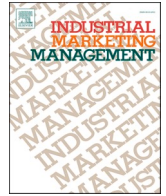


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The effect of corporate ethical responsibility on social and environmental performance: An empirical study

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ABSTRACT

In the field of business-to-business marketing, corporate ethical identity and corporate brand identity are crucial subjects for discussion. Business organizations function under social norms, and to establish an ethical identity, they must show corporate ethical responsibility, embrace ethical standards, and maintain open communication with suppliers. While an organization's reputation is impacted by the absence of an ethical identity, its financial success is unaffected. Extant literature has not thrown a spotlight on social and environmental performance which indicates that less focus has been given by academics than by practitioners. To fill the lacuna in the existing literature, this study examines the relationships between corporate ethical identity, corporate brand identity, social and environmental performance. The study uses a deductive research approach and develops hypotheses which are further tested using variance based structural equation modeling. The study offers a distinctive contribution to ethics theory and stakeholder theory by showing that developing an ethical identity requires more than just adhering to moral guidelines and upholding open communication. Companies must show that they are ethically responsible towards society. The study provides evidence of the influence corporate brand identity has on environmental and social performance. The findings can be useful in developing business-to-business marketing strategies.

1. Introduction

Ethics and business-to-business marketing go together and cannot be separated (Al-Khatib, Rawwas, Swaidan, & Rexeisen, 2005). This is because the volume and value of transactions are huge and multiple parties are involved in transactions. The definition of corporate identity proposed by Melewar (2003) is “the set of meanings by which a company allows itself to be known and through which it allows people to describe, remember and relate to it”. Relying on the notion of corporate identity, Berrone, Surroa, and Tribó (2007) defined corporate ethical identity (CEI) as “the set of behaviors, communications, and stances that are representative of an organization's ethical attitudes and beliefs”.

Berrone et al. (2007) pointed out that corporate scandals are rising (e.g. Enron, Worldcom, Adelphia). Ethical behavior can result in more

consumer loyalty and trust, better working relationships with suppliers and partners, and a better reputation in the community (Bag, Choi, Rahman, Srivastava, & Singh, 2022). However, firms face various challenges while doing business in developing countries. Due to the abundance of supply sources, B2B marketers frequently disregard the company's basic ethical principles in an effort to outperform rivals and wind up making costly errors (Bag et al., 2023). Bag et al. (2022) argued that during a crisis situation, the suppliers will supply material only to those customers who have shown ethical behavior and shared candid relationships with stakeholders. Therefore, B2B marketers need to focus on developing corporate ethical identity, which can be defined as “the set of behaviors, communications, and stances that are representative of an organization's ethical attitudes and beliefs” (Berrone et al., 2007, p 36). Various key ethical considerations in B2B marketing include

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transparency, fair competition, privacy, confidentiality and maintaining a respectful and professional relationship. Ethical considerations are essential to developing an ethical identity. The literature demonstrates that leadership, internal regulations, and communication tactics can all be used to build a company's ethical identity (Grojean, Resick, Dickson, & Smith, 2004; Powell, 2007). Some examples from industry include companies like General Electric (GE), who have made significant strides in clean energy and environmental protection. They are known for their commitment to reducing greenhouse gas emissions, developing energy-efficient innovations, and promoting renewable energy solutions. GE's Ecomagination program is a testament to their ethical approach to sustainability.¹ Secondly, Siemens' sustainability initiatives emphasize ethical practices and responsible business behavior. Thirdly, Cummins, a global manufacturer of engines and related technologies, has a strong commitment to sustainability and corporate responsibility.² Lastly, Mitsubishi Heavy Industries (MHI), a diversified manufacturing company, has a sustainability plan that includes reducing CO2 emissions and promoting renewable energy solutions. The company places great emphasis on ethical manufacturing practices in its operations.³

Literature has shown how corporate identity, corporate branding and reputation are linked (Abratt & Kleyn, 2012). The beliefs and concepts that a firm upholds in its operations and the behaviors and decision-making actions are constituent components of corporate ethical identity (Berrone et al., 2007). Corporate brand identity relates to "the informal, albeit power, bi-lateral contract (covenant/promise), between the organization/organizations behind the brand and its customers and other stakeholders" (Balmer, 2012, p.1065), and also encompasses the recognition created by aspects such as logo and imagery (Forudi, Melewar, & Gupta, 2014). Given that customers and other stakeholders are growing more conscious of environmental issues, they are more willing to support and believe in businesses that are dedicated to sustainability (Bag et al., 2022). Therefore, a business is more likely to do well in terms of the environment if it has a strong corporate ethical identity and prioritizes environmental sustainability. However, past researchers have not provided any empirical evidence focusing on to the relationship between corporate ethical identity, corporate brand identity and social/environmental performance in industrial firms.

Therefore, from an academic and managerial standpoint, it is crucial to pinpoint the antecedents of corporate ethical identity and furthermore, its consequences in industrial firms, for several reasons. Firstly, researchers can better understand how and why industrial firms operate ethically by identifying the elements that contribute to corporate ethical identity. This information can help clarify the fundamental causes and motivators of moral behavior in these businesses (Dutta, Katti, Phani, & Zhu, 2022). The second benefit is the ability to forecast and evaluate the ethical behavior of industrial firms using the antecedents of corporate ethical identity that have been defined (Stanaland, Lwin, & Murphy, 2011). For stakeholders, such as investors, clients, and suppliers, who wish to assess a company's adherence to ethical standards, this predictive capability might be useful. Thirdly, industrial firms may suffer reputational harm, legal troubles, and financial losses as a result of ethical missteps in the supply chain (SC) (García-Madariaga & Rodríguez-Rivera, 2017). Firms can reduce the chance of ethical violations by proactively addressing potential ethical hazards in their SCs by identifying the antecedents of corporate ethical identity. Fourthly, developing trust and cooperation in the SC requires a grasp of the elements that lead to open communication with suppliers and sub-suppliers⁴ (Wilhelm,

Blome, Wieck, & Xiao, 2016). Identifying these antecedents and linkages can assist businesses in building stronger, more open relationships with their suppliers, which can increase the efficiency and dependability of the SC. Last but not least, moral behavior might give an advantage in a market. Companies with a strong reputation for ethics may draw in more clients, investors, and top talent. Finding the roots of corporate ethical identity can help businesses stand out from the competition and acquire a competitive advantage (Dutta et al., 2022).

Hence, we aim to address two research questions.

RQ1. What are the antecedents of corporate ethical identity in industrial firms?

RQ2. What is the relationship between corporate ethical identity, corporate brand identity and social/environmental performance in industrial firms?

Answering these research questions is essential to understanding the factors that influence corporate ethical identity in industrial companies, which in turn can impact corporate brand identity and corporate social/environmental performance. This research is motivated by the need to promote ethical behavior in companies, meet stakeholder expectations, leverage corporate ethical identity as a strategic advantage, and contribute to responsible business practices and sustainability, which are increasingly important in today's business environment. The study further reviews ethics theory and stakeholder theory in order to develop the theoretical model.

According to virtue ethicists (e.g. Hartman, 1998) traditional ethical theories such as deontological ethics and consequentialism are excessively focused on rules and outcomes and do not offer enough direction for how to live a decent life. They contend that we should put more effort into developing virtues and become the kind of person who makes moral decisions naturally rather than focusing on following rules or achieving the best result. In a variety of contexts, including organizational settings, virtue ethics has been utilized to inform moral behavior and decision-making. For instance, virtue ethics in business can be utilized to encourage honesty, justice, and responsibility at work (McPherson, 2013). Such an approach is complementary to stakeholder theory, which emphasizes the idea that a firm has obligations to a variety of stakeholders, not simply its shareholders. McPherson (2013) argues that a virtue-based ethical approach ensures that due consideration is given to stakeholders, as they are not merely seen as a relationship to maintain for mutual advantage, but instead encourages a "constitutive view of human community in which our identities are bound up with those with whom we share in community, and our conception of our good is enlarged and extended in that we identify the good of the others with our own good" (p. 291). More simply, virtue ethics enables organizations to emphasize and develop the virtues that make stakeholders happy (Chun, 2017). We argue that B2B marketers need to demonstrate virtue ethics and pay attention to corporate ethical responsibility in order to create an ethical corporate brand identity, which will enhance the reputation of their business while also encouraging moral decision-making and ethical business practices conducive to sustainability.

An empirical research design was developed to collect data and perform the analysis to statistically validate the model. This study performs theory testing and empirically proves the relationships between antecedents of corporate ethical identity and final outcome i.e. social/environmental performance in industrial firms.

The rest of the sections are organized as follows. Section 2 presents the theoretical underpinning in which ethical theory and stakeholder theory are presented followed by model and hypotheses development. The research method is presented in Section 3, analysis in Section 4 followed by discussion in Section 5. The final section presents the conclusion and future research directions.

¹ <https://www.ge.com/news/press-releases/ge-launches-ecomagination-develop-environmental-technologies-company-wide-focus-0>

² <https://www.cummins.com/company/esg/social/corporate-responsibility>

³ chrome-extension://efaidnbmnnnlppcjjcglcfclfmkj/https://www.mhi.com/sustainability/pdf/management_en.pdf

⁴ Sub-suppliers refer to the suppliers that provide goods or services to a primary supplier within a supply chain.

2. Theoretical underpinning

2.1. Ethics theory

According to Brady and Hart (2007), ethics theory not only explains the scope of moral abilities but also the developmental possibility that individuals possess to learn ethical behaviors. They examine the relationship between formal ethical theories and developmental stages of psychology that give rise to moral obligations, values, and interests. Such an approach offers a more comprehensive view of the various ways that people might maturely evaluate what constitutes ethical behavior from a variety of perspectives, including utilitarian and virtue ethics approaches. According to Yazdani and Murad (2015), applying a blend of utility and virtue ethics improves ethical training and creates an ethical climate in organizations. Although Hartman and Beck-Dudley (1999) note that ethical evaluations in marketing have typically followed utilitarian approaches, they highlight the contribution of virtue ethics to understanding long-term relational exchanges.

In contrast, Place (2010) assesses how deontological concepts and the process of making moral decisions are used in public relations, and argues that public relations strategies help firms advance ethical behavior and communication. According to Place (2010), public relations professionals make moral decisions by depending on open communication and the support of decision-making guidelines. She contends that morally responsible corporate decisions strengthen stakeholder cooperation and moral obligation while also advancing the decision-making process.

2.2. Stakeholder theory

Although the strategy literature had begun to emphasize the importance of stakeholders - rather than simply shareholders - in the 1960s (Freeman, Harrison, Wicks, Parmar, & de Colle, 2010), the development of stakeholder theory is typically attributed to Freeman (1984), who defined a stakeholder as “any group or individual who can affect or is affected by the achievement of the activities of an organization” (p.46).

Stakeholder theory is a management and ethical concept that urges organizations to take into account the concerns and requirements of all individuals or groups impacted by their decisions, not limited to shareholders, during their decision-making processes (Freeman et al., 2010). It underscores the importance of identifying stakeholders, analyzing their interests, involving them in discussions, and effectively managing these relationships to promote a more inclusive and ethical business approach, with a focus on long-term sustainability. This approach differs from the traditional shareholder theory, which primarily prioritizes maximizing shareholder value. Stakeholder theory promotes ethical and socially responsible practices while recognizing the necessity of striking a balance between the interests of diverse stakeholders for an organization’s prosperity (Parmar et al., 2010).

The extant literature on stakeholder theory contends that commercial organizations should support communities rather than relying solely on the rule of law and morality (e.g. Stieb, 2009), although Walsh (2005) suggests that there is little in Freeman (1984) to support an argument in favor of corporate social responsibility, despite how stakeholder theory is often interpreted. In Freeman’s original work, the concept behind the stakeholder approach is to emphasize addressing the larger financial interests of shareholders (Cennamo, Berrone, & Gomez-Mejia, 2009), rather than “so-called ‘social responsibility’” issues (Freeman, 1984, p. 178). As stakeholder theory has continued to evolve, greater emphasis has been given to the prioritization of social performance in addition to financial performance (e.g. Philips, 2003), and thus the idea that the corporate structure should encourage respect, comprehension, and accommodation of stakeholders’ needs (Cennamo et al., 2009). Therefore, according to more recent developments in stakeholder theory, it is crucial from an ethical standpoint to involve

stakeholders in business decision-making (Cennamo et al., 2009). Stakeholder theory is concerned with how people perceive business accountability. It demonstrates how an organization may involve stakeholders while also demonstrating its commitment to practice and policy (Greenwood, 2007), and indicates that a corporate organization’s stakeholders become more accountable and responsible because of their involvement. Based on the performance of the stakeholders, the concept of corporate accountability and responsibility is developed (Greenwood, 2007). In order to improve corporate responsibility and address the complex relationship between corporate responsibility and corporate engagement, stakeholder engagement is essential (Greenwood, 2007), as in essence, stakeholders provide management instructions on what to do (Phillips, Berman, Elms, & Johnson-Cramer, 2010).

In B2B marketing, stakeholder theory highlights the significance of acknowledging and accommodating the varied concerns and requirements of all entities engaged, encompassing customers, suppliers, collaborators, and regulatory authorities. This strategy advocates for customer-focused practices, ethical procurement, responsible sourcing, the creation of lasting value, and transparent communication, ultimately resulting in reinforced relationships, an enhanced reputation, and sustained success within the B2B sector (Homburg, Stierl, & Bornemann, 2013; Lievens & Blažević, 2021).

There has been a range of work within the marketing literature which has taken a stakeholder perspective, although a relatively small group of stakeholders is often prioritized within this (Freeman et al., 2010). In this vein, Murphy et al. (2005) argue for a holistic view of measuring marketing performance, which encompasses the provision of long-term economic, social, and environmental value to a limited group of five key stakeholders including those within SC relationships such as customers and suppliers, alongside employees, shareholders, and the broader community. Additionally, there is a body of work which seeks to apply stakeholder theory to marketing-related aspects of ethics and social responsibility, and explores how marketing can be used to communicate corporate social responsibility (CSR) initiatives in order to garner stakeholder support (e.g. Maignan & Ferrell, 2004).

The hypotheses of this study presented below are based on Ethics theory and Stakeholder theory.

2.3. Hypotheses development

2.3.1. Corporate ethical responsibility and ethical standards implementation

Administrative policies within organizations are impacted by corporate ethical responsibility, and therefore organizations which demonstrate high levels of corporate ethical responsibility are more likely to implement and uphold ethical standards in their business (Wu, Kwan, Yim, Chiu, & He, 2015). Corporate ethical responsibility and ethical standards implementation are becoming a more major concern for customers in today’s globally interconnected environment (Fukukawa, Balmer, & Gray, 2007; Wong & Dhanesh, 2017). Well-known companies like Enron were exposed for their unethical and illegal operations, despite being a highly respected commercial company and a model of community involvement in Houston headquarters prior to the scandal (McLean & Elkind, 2003). Similarly, Google’s motto “Do no evil” seems uncomfortable in light of immoral agreements, most notably a deal to filter its search engine with the Republic of China’s government (Fukukawa et al., 2007). Hence we argue that:

H1. Corporate ethical responsibility has a positive effect on ethical standards implementation in the B2B supply chain.

2.3.2. Corporate ethical responsibility and candid relationships with suppliers and sub-suppliers

Verbos, Gerard, Forshey, Harding, and Miller (2007) posit that a shared organizational identity which prioritizes and embodies ethical considerations is the foundation of corporate ethical responsibility

(Verbos et al., 2007). Corporate ethical responsibility is a unique aspect of social identity and a social construct that allows for the integration of organizational context into the actions and emotions of individual members. As organizational identity is a facet of social identity, individuals are likely to prefer to identify with organizations which have a prestigious image, which Farooq, Payaud, Merunka, and Valette-Florence (2014) argue can be enhanced through ethical behavior and therefore a propensity to corporate ethical responsibility. As social identities and the attribution of group memberships are driven by an innate desire to fit in (Verbos et al., 2007), this can be satisfied by upholding meaningful, long-lasting ties. Thus, a feature of organizations which exhibit corporate ethical responsibility is the existence of candid relationships within the supply chain, following the definition of Bendixen and Abratt (2007) that a candid relationship “embraces the speedy resolution of problems, respect, transparency, clear communications and fair but firm negotiations” (p. 75).

Conversely, low ethical standards encourage stakeholders’ opportunity-seeking conduct. Lumineau and Oliveira (2020) discuss the existence of opportunism in SC relationships with supplier and sub-suppliers, and Brito and Miguel (2017) demonstrate the need for safeguards in supply chain relationships to control opportunism. While this may be done contractually, Brito and Miguel (2017) highlight that this can alternatively be managed through relationship dynamics, and argue relationships which lack clear communication and have reduced information sharing experience a greater threat of opportunism. Therefore, ethical standards which contribute to candid relationships with suppliers help to reduce the rate of opportunistic behavior. Hence,

H2. Corporate ethical responsibility has a positive effect on candid relationships with suppliers and sub-suppliers.

2.3.3. Ethical standards implementation in the supply chain and corporate ethical identity

According to Fotaki, Lioukas, and Voudouris (2020), organizational values play a crucial role in promoting open and honest interactions. They are also important because they can help individuals within firms to make better decisions as a result of having a framework to guide moral choices. The ethical standards shared by the organization’s members are supported by candid relationships (Fotaki et al., 2020). Ethical position theory is used to describe how culture affects consumers’ ethical attitudes and justifications because people from different cultures have distinct expectations, which are reflected in the disparate ethical standards of their societies (Forsyth, O’Boyle, & McDaniel, 2008). Previous research demonstrates that diverse cross-cultural ethical standards are inconsistent and that there are large disparities in ethical standards and behavior between nations (Paik, Lee, and Pak (2019). For example, the Korean government pushed to restructure enterprises, corporate duties, and business ethics in 1997 during the Asian financial crisis to enhance corporate governance (Paik et al., 2019). The Korean government systematically concentrated on developing ethical standards through developing new policies, regulations, and legislation based on ethical standards between 2003 and 2008. Due to intense pressure from these policies, Korean businesses, especially those operating in the international market, have been driven to develop ethical standards, ethical policies, and codes of ethics to operate their business under the accepted global standard of business ethics, which are largely driven by policies and philosophies which emerged in the context of US business ethics (Paik et al., 2019); who argue that global business ethics are beginning to coalesce around a global norm. This makes it easier for firms operating in diverse markets to establish a framework of ethical standards which are internationally acceptable. For example, Erwin (2011) used an international dataset of organizations using corporate codes of conduct to demonstrate that organizations using high-quality codes of conduct tend to have enhanced CSR performance. In particular, Erwin argues that “companies that devote specific human and capital resources to developing comprehensive codes of conduct

that are consistent with corporate values have a more significant impact on ethical behaviour within the organization” (p. 544). Thus, we argue that the implementation of ethical standards within a firm has an impact on the continued development of corporate ethical identity (Verbos et al., 2007).

H3. Ethical standards implementation in the supply chain has a positive effect on corporate ethical identity.

2.3.4. Candid relationships with suppliers and sub-suppliers and corporate ethical identity

Kingshott, Sharma, Sima, and Wong (2020) explain the importance of candid relationships between buyers and suppliers, and pointed to the importance of trust in establishing such candid relationships between SC partners. Their study, which examines relationships between Australian buyers and Chinese suppliers, emphasizes the universality of social exchange-based relationship management practices, thus echoing the findings of Erwin (2011) that understandings of ethical behavior in firms are converging on a global norm. As care for stakeholders including suppliers and sub-suppliers is a component of corporate ethical identity (Dutta et al., 2022), these candid relationships are conducive to developing and sustaining corporate ethical identity, and the impact of supply chain relationships thus need to be taken into consideration when understanding corporate ethical identity (Powell, 2007).

Corporate identity demonstrates an organization’s individuality (Gray & Balmer, 1998), and accordingly the firm’s strategy, organizational structure, corporate culture, and philosophy are crucial elements of corporate ethical identity and these are informed by candid relationships with suppliers (Gray & Balmer, 1998). Hence,

H4. Candid relationships with suppliers and sub-suppliers has a positive effect on corporate ethical identity.

2.3.5. Corporate ethical identity and corporate marketing communications with stakeholders

A corporate name that is utilized in all external communication is a representation of a monolithic identity. This form of identity is common among small businesses. A monolithic identity is influenced by corporate social responsibility. The corporate ethical identity’s strategic and operational components have a big impact on corporate social responsibility which significantly affects the monolithic identity of a business (Chiarini & Vagnoni, 2017; Tourky, Kitchen, & Shaalan, 2020). A monolithic identity has also been presented by large corporations, such as Southwest Airlines, Honda, and Shell Oil (Gray & Balmer, 1998). Conversely, when an organization promotes several brands that are purposefully not associated with businesses in the public eye, it is known as branded identity (Gray & Balmer, 1998).

Regardless of whether the organization has a monolithic or branded identity, it can enhance its corporate ethical identity through effective and efficient corporate marketing communication, as it is vital that organizations communicate their corporate ethical identity to relevant stakeholders. Fostering and establishing effective and efficient communication among the stakeholders of the businesses is the primary function of corporate marketing communication (Mason & Leek, 2012). Consistent, unambiguous, and ongoing communication procedures are made possible by corporate marketing communication both inside and outside organizational boundaries (Porcu, del Barrio-Garcia, Alcántara-Pilar, & Crespo-Almendros, 2019). Corporate marketing communication is an interactive process that involves cross-functional planning and alignment of organizational, analytical, and communication processes. It enables ongoing, open communication that strengthens relationships between the stakeholders (Porcu et al., 2019). Hence,

H5. Corporate ethical identity has a positive effect on corporate marketing communications with stakeholders.

2.3.6. Moderating effect of big data analytical intelligence assimilation

Successful implementation of big data analytics makes it possible for enterprise-class architecture built on big data and other information system technologies to handle the flow of information and facilitate business operations (Liu, Feng, Lin, Wu, & Guo, 2020). Mikalef, Boura, Lekakos, and Krogstie (2019) applied fuzzy set qualitative comparative analysis method to show that big data analytics leads to enhanced performance and value of the business organization. Big data analytics assists in resolving the complexity of marketing communication and enhances the dynamic capability of the business organizations (Buhalis & Volchek, 2021). In order to demonstrate the strong correlations between big data analytics powered by artificial intelligence, environmental dynamism, and operational efficiency in the dynamic market, Dubey et al. (2020) built a model employing contingency theory and a dynamic capability view. Big data enhances the dynamic capability of the organization and assists management in a contingency situation. The availability and processing of the data affects the business firm's big data competence. The four Vs—velocity, volume, variety, and value—explain how big data, artificial intelligence, and operational efficiency are related (Dubey et al., 2020). Duan, Edwards, and Dwivedi (2019) tried to comprehend the difficulties faced by next-generation artificial intelligence-enabled decision-making systems. Their study covered the particular concerns related to the interaction and integration of artificial intelligence tools to assist human decision-makers. An ethical dilemma is being raised by rapidly developing artificial intelligence. As artificial intelligence is used in more expansive applications, including corporate marketing communications with a firm's stakeholders, legal and ethical issues start to pose serious problems (Duan et al., 2019). However, applications of artificial intelligence made possible by moral considerations strengthen bonds between stakeholders (Duan et al., 2019). We argue that the level of big data analytical intelligence assimilation will strengthen/weaken the effect between corporate ethical identity and corporate marketing communications with stakeholders:

H6. Big data analytical intelligence assimilation has a moderating effect on the path joining corporate ethical identity and corporate marketing communications with stakeholders.

2.3.7. Corporate ethical identity and corporate brand identity

Building brand identification and preserving message consistency are the goals of brand orientation (Balmer & Podnar, 2021). An organization needs a strong organizational culture and corporate brand identity to be considered brand-oriented. Brand identity assists in product recognition and demonstrates a link to its manufacturer thereby influencing consumer preferences (Iglesias & Ind, 2020). Brand orientation makes it easier to understand the symbolic significance of brands, and improves the firm's ability to build strong brands and their financial performance (Balmer & Podnar, 2021). Furthermore, corporate brand identity is a symbol of the strong ties that exist between businesses and their stakeholders and embodies the brand promise that can entice end users (Balmer & Podnar, 2021). Corporate brand identity must be associated with corporate ethical identity. High emphasis has been paid to corporate ethical identity, organizational identification, and branding in business ethics. A corporation can take on different personas and identities. According to a concept put forth by Verbos et al. (2007), an ethical corporate identity develops from genuine leadership that is rooted in morally capable attitudes, convictions, and behaviors. Authentic leaders with the power to persuade customers are those who champion ethical practices in good ethical business organizations (Verbos et al., 2007). A robust, supportive ethical climate is created through ethical organizational culture, which encourages ethical awareness and ethical identities among its members (Verbos et al., 2007), which in turn fosters the corporate brand identity. Hence,

H7. Corporate ethical identity has a positive effect on corporate brand identity.

2.3.8. Corporate marketing communications with stakeholders and corporate brand identity

Porcu, del Barrio-García, Kitchen, and Tourky (2020) analyze corporate marketing communication as a resource and factor influencing organizational performance. They implies that even if a business organization has effective and efficient resources and puts forth genuinely excellent performance, these resources can only be used to their full potential with effective and efficient corporate marketing communication (Porcu et al., 2020). Corporate marketing communications support organizational management in converting resources into competitive advantages (Porcu et al., 2020). There is a high expectation in corporate marketing communications that they should be seen as honest and morally upright instruments that should be in line with the goals of the business (Porcu et al., 2020). Accordingly, corporate marketing communication has a favorable effect on corporate brand identity and its communication processes. For example, Glozer and Morsing (2020) discuss the significance of corporate marketing communication on CSR communications and use. Hence,

H8. Corporate marketing communications with stakeholders has a positive effect on corporate brand identity.

2.3.9. Corporate brand identity and social performance

A corporate brand identity can be defined as the culmination of an organization's ideals in terms of the commitment these ideals lead it to make to its stakeholders (Balmer, 2012), and as such, the notion of corporate brand identity plays a crucial role in the process of creating a company's reputation. Corporate image, corporate culture, corporate identity, brand personality, and reputation are all components of the corporate brand identity (Gyrd-Jones, Merrilees, & Miller, 2013). For contemporary organizations, who have customer bases increasingly concerned about ethical issues (Chatzopoulou & de Kiewet, 2020) social performance is an essential component to maintain the longevity of the corporate brand identity.

Although social performance can often be more challenging to measure than environmental performance, as it frequently relies on more qualitative measures (Schönborn et al., 2019) communication of social performance can be an important component of corporate brand identity (Sánchez-Caparro, Soler-Vicén, & Gómez-Frías, 2022). Wood (1991) model of social performance which focuses on the "impacts and outcomes for society, stakeholders and the firm" (Wood, 2010, p.54) can be used to explain that organizations must adopt sustainable practices because both firms and the individual actors within them have moral obligations towards society at large (Wood, 1991). Accordingly, a firm may take particular actions or promote specific social causes because they are in line with the ethical values of its stakeholders, and as such, have an ethically focused corporate brand identity (Dutta et al., 2022). Hence,

H9. Corporate brand identity has a positive effect on social performance.

2.3.10. Corporate brand identity and environmental performance

A strong brand is vital to ensuring the longevity of an organization's competitive advantage (Balmer & Gray, 2003). As with social performance, environmental performance is key in the eyes of many contemporary consumers (Chatzopoulou & de Kiewet, 2020), and therefore corporate brand identity is associated with environmental performance. Stakeholders increasingly require organizations to adopt policies that reduce environmental damage and pollution (Agyabeng-Mensah, Afum, & Ahenkorah, 2020). Where brand identity is not meaningfully underpinned by a corporate ethical identity which respects the environment, the psychological contract implied by brand identity is broken and may have serious implications for the firm. For example, Balmer, Powell, and Greyser (2011) discuss how the brand identity promoted by BP since the early 2000s was one which emphasized environmental and green credentials on the basis of work done by

the firm in relation to renewable sources of energy. They demonstrate how such a brand was incongruous with the lived reality of the organization, with its environmental positioning reflecting an aspiration, rather than reality. This incongruity was thrown into sharp relief following the Deepwater Horizon disaster in 2010. Hence, a sincere corporate brand identity based on ethical values will have a positive effect on environmental performance. Therefore, we posit:

H10. Corporate brand identity has a positive effect on environmental performance.

The theoretical framework can be seen in Fig. 1.

3. Research method

We used positivism as our research philosophy in this study. This empirical study tested the proposed theoretical framework via a survey-based approach for data collection as per the guidelines of Flynn, Sakakibara, Schroeder, Bates, and Flynn (1990). We used perceptual measures in this study since we are focusing on measuring corporate ethical responsibility, ethical standards, candid relationships, corporate ethical identity, big data analytical intelligence, corporate communication, corporate brand identity, social performance and environmental performance which are essentially functions of behavioral and firm's norms. Therefore, it is important to use perceptual measures in this study.

The research was conducted among B2B firms located in India. India has emerged as the main economy with the highest rate of growth in the world and is predicted to rank among the top three economic powers within the next 10 to 15 years.⁵

3.1. Instrument development

We used a structured questionnaire for the pilot survey and the main survey. In this study, the latent constructs are: corporate ethical responsibility, ethical standards, candid relationships, corporate ethical identity, big data analytical intelligence, corporate communication, corporate brand identity, social performance and environmental performance. These unobservable or latent constructs are defined in conceptual terms but cannot be measured directly or without error (Hair, Black, Babin, & Anderson, 2019). We have defined each construct in Table 1.

We adapted scales from published literature. The latent construct ethical standards implementation in the SC (ESD) has 7 indicators (Fritz, Arnett, & Conkel, 1999), corporate ethical responsibility (CER) has 5 indicators (Carroll, 1991; Carter & Jennings, 2004; Eltantawy, Fox, & Giunipero, 2009; L'etang, 1995), candid relationships with suppliers and sub-suppliers (CAR) has 7 indicators (Bendixen & Abratt, 2007), corporate ethical identity (CEI) has 2 indicators (Lloyd-Hazlett & Foster, 2017), big data analytical intelligence (BDAIA) has 3 indicators (Zhang, Wang, Cui, & Han, 2020), corporate communication with stakeholders (CMC) has 3 indicators (Porcu, Del Barrio-García, & Kitchen, 2017), corporate brand identity (CBI) has 3 indicators (Coleman, De Chernatony, & Christodoulides, 2011), social performance (SOP) has 5 indicators (Mitnick, 1993; Mitnick, 2000) and environmental performance (ENV) has 5 indicators (Yu & Ramanathan, 2016).

We controlled for firm age and firm size in this study. Similar variables were used previously in the study of Bag, Gupta, Kumar, and Sivarajah (2021).

To ensure that the items in the questionnaire are relevant in the context of the study we invited five senior professors from the Indian Institute of Management to provide critical input on the content of the questionnaire. Based on the discussion with these five senior professors, the items were reworded and adapted to fit the context of the present

study (B2B marketing in India). The operationalization of construct details is presented in Appendix A.

To gauge attitudes, opinions, or perceptions, survey researchers frequently employ a rating scale known as a Likert scale. A number of statements or questions are often included on the scale, along with a range of possible responses, from extremely positive to extremely negative, or from strongly agree to strongly disagree. The responses are typically numbered, e.g. 1–5 or 1–7, and the numbers indicate how much the respondent agrees with or thinks highly of the statement. We used a Likert scale constructed as: 1 (Strongly Disagree) to 5 (Strongly Agree). The final questionnaire was targeted for single respondents. Although such a questionnaire has several limitations as indicated by Ketokivi and Schroeder (2004); we share the view of Flynn et al. (1990) and Boyer and Swink (2008) that the utilization of perceptual measures should not be dismissed as inherently flawed (Dubey et al., 2023). However, we took precautions to control and minimize common method variance as per the guidelines of MacKenzie and Podsakoff (2012). For instance, we selected samples carefully to avoid applying unnecessary cognitive efforts while filling out questionnaires. Secondly, we used temporal separation by collecting data at different points in time and we maintained confidentiality of respondents who participated in the survey.

3.2. Sampling strategy and data collection

The sample used for this study includes industrial firms who are members of the Indian Industries Association (IIA). The samples were randomly selected from the IIA database. The pilot survey was performed in November 2022 and the model was checked with 40 completed questionnaires. After seeing satisfying results, we proceeded with the final survey between December 2022 and February 2023, targeting industrial firms. We emailed the questionnaire (Google Form) online link to senior managers working in industrial firms in India. We then contacted the senior managers by telephone and further discussed the purpose of this study. We aimed to also build a good relationship with them and talked about the possibility of industry-academia collaboration going forward, as in India it can be challenging to collect responses without developing a good rapport with the potential respondents (Dubey et al., 2023). We received 89 responses within 30 days of sending the initial request and received 113 completed questionnaires after follow-ups through email and telephonic calls. We received a total of 202 completed questionnaires. We checked the minimum sample size requirement using the inverse square root method and the results indicated that we satisfied the criterion. The demographic profile of respondents is shown in Table 2.

3.3. Non-response bias test

Email surveys are criticized for nonresponse bias. There is a chance that target respondents who responded vary substantially from those who did not respond, in which case it is not easy to say how the total sample would have answered. Therefore, we aimed to reduce non-response bias during the survey and keep it below 30% as per the guidelines of Armstrong and Overton (1977). We also compared the early versus late respondents - due to the fact that the responses of non-respondents required the most prompting and effort, we assume that late responders are most similar to non-respondents.

Since we received the responses in two phases, i.e. 89 (early responses) and 113 (late responses), we performed the Leven's homogeneity of variance test and found that *p* values are not significant which indicates that the early and late responses are homogenous in nature. Following this check, we proceeded to data analysis.

4. Data analysis

Multivariate techniques are used to improve the explanatory ability

⁵ <https://www.ibef.org/economy/indian-economy-overview>

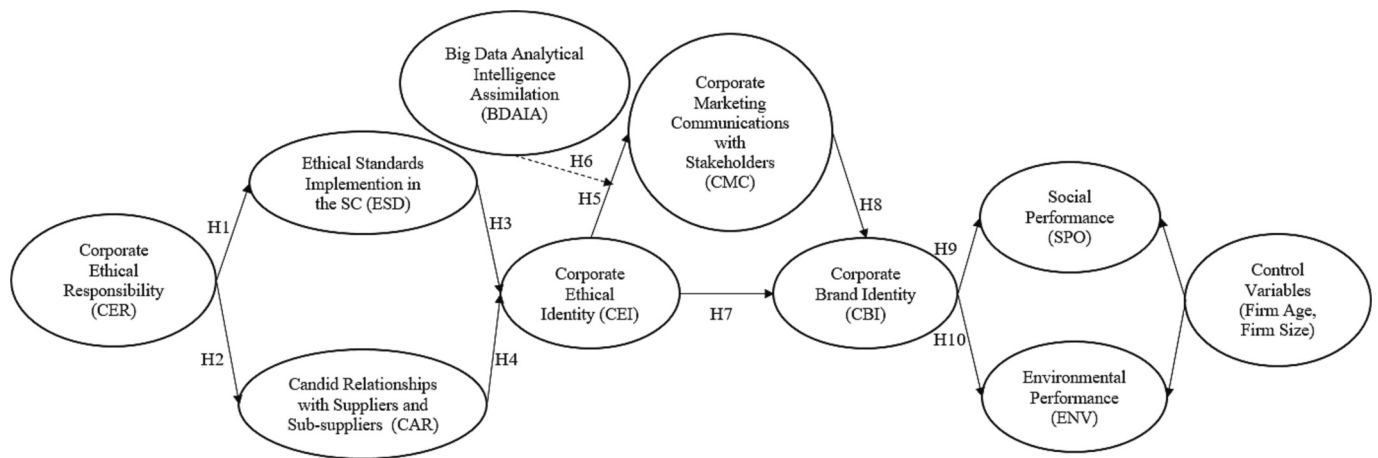


Fig. 1. Theoretical framework (Source: Authors' own compilation).

of the researcher. Exploratory analysis, multivariate analysis of variance and multiple regression are effective techniques for addressing a broad range of research questions. However, they suffer from one common limitation, i.e. they focus on individual relationships (Hair et al., 2019). In our study, the research question seeks to answer the question: how does corporate ethical responsibility combine with other variables to affect social and environmental performance? In order to test the entire model with one technique that considers all possible information, we used structural equation modeling (SEM). SEM can assist a researcher in simultaneously examining multiple and interrelated dependence relationships (Hair et al., 2019). We used WarpPLS version 8.0 software to analyze the data. This software provides a unique combination of the PLS algorithms and factor-based PLS algorithms for SEM (Dubey et al., 2023; Kock, 2021). Factor-based PLS algorithms generate estimates of both true composites and factors, fully accounting for measurement error (Dubey et al., 2023; Kock, 2021).

4.1. Measurement model assessment

Previously, we completed the model specification, gathered required data and further decided technique for estimation. Next, in order to make sure that the results of the SEM analysis are based on high-quality data, the examination of the measurement model in SEM included analyzing the validity and reliability of the indicators used to measure a construct. The measurement model validity relies on fit validity and construct validity (Hair et al., 2019, p. 635).

The goal of PLS is to identify the latent variables (components) that maximize the covariance between the dependent variable and the independent variables, not to fit a particular model to the data. Nonetheless, we checked classic model fit and quality indices and found the results satisfactory (see Table 3). We have calculated Tenenhaus Goodness of Fit (GoF) and found a large GoF (Kock, 2021).

The validity was assessed and the values are presented in Table 4. It can be seen that the values surpass the threshold level for loadings, scale composite reliability (SCR) and average variance extracted (AVE) (i.e., $\lambda_i \geq 0.5$; $SCR \geq 0.7$; $AVE \geq 0.5$) (Fornell & Larcker, 1981). Hence, we can say that the constructs satisfy the convergent validity criteria.

Following the guidelines of Flynn, Schroeder, and Sakakibara (1994) we assessed unidimensionality to show if the items indeed represent a construct. It is essential that the constructs are associated with the right set of indicators and that the items are loaded on a single construct (see Table 5).

The discriminant validity assessment is done in line with Fornell and Larcker (1981) criteria and the results are presented in Table 6. The square root of the average variance extracted (AVE) of a construct must be bigger than the correlation between that construct and any other

construct, according to the Fornell-Larcker criterion, for a construct to have discriminant validity. The square root of AVE's are shown in the diagonals (in bold) and they are higher than the row and column values which satisfies discriminant validity.

We also performed common method bias (CMB) test due to the fact that it occurs when all constructs are measured using the same data collection technique, leading the measures to be correlated with one another even when there is no theoretical relationship between them. As a result, the correlations between the constructs may be overestimated, which could inflate the study's findings. We have used various procedural measures to control and minimize CMB as per guidelines of Podsakoff, MacKenzie, Lee, and Podsakoff (2003). We used Harman's single factor test to check the degree of CMB and found that the single factor accounts for <50% (i.e. 29%) of the total variance which shows that CMB is not a concern for us in this study.

Lastly, we checked if there are endogeneity problems and checked the NLBCDR value and found it to be 0.95 which indicates that 95% of the path related instances follow as proposed in the theoretical model and the likelihood of reversed hypothesized direction of causality is very weak (Kock, 2021).

4.2. Structural model

We have presented the full structural model in Fig. 2. Hypotheses testing results are presented in Table 7. The beta coefficients (β) and corresponding p -values are presented and remarks are also provided in Table 7.

The tested model indicates that H1 (CER \rightarrow ESD) is supported ($\beta = 0.61$, $p < 0.01$). H2 (CER \rightarrow CAR) is supported ($\beta = 0.90$, $p < 0.01$). The path coefficient indicates that CER is a strong determinant of CAR.

H3 (ESD \rightarrow CEI) is supported ($\beta = 0.14$, $p = 0.02$) is supported. H4 (CAR \rightarrow CEI) is supported ($\beta = 0.62$, $p < 0.01$). The path coefficient indicates that CAR is a strong determinant of CEI. H5 (CEI \rightarrow CMC) is supported ($\beta = 0.71$, $p < 0.01$) is supported. H6 (CEI*BDAIA \rightarrow CMC) is supported ($\beta = 0.22$, $p < 0.01$) is supported. H7 (CEI \rightarrow CBI) is supported ($\beta = 0.22$, $p < 0.01$) is supported. H8 (CMC \rightarrow CBI) is supported ($\beta = 0.72$, $p < 0.01$) is supported. H9 (CBI \rightarrow SPO) is supported ($\beta = 0.72$, $p < 0.01$) is supported. H10 (CBI \rightarrow ENV) is supported ($\beta = 0.71$, $p < 0.01$) is supported. The path coefficient indicates that CBI is a strong determinant of SPO and ENV. The control variables did not show any significant effect.

5. Discussion

From an academic and managerial standpoint, it is crucial to pinpoint the antecedents of corporate ethical identity and its

Table 1
Defining the latent constructs (Source: Authors' own compilation).

Defining the Latent Constructs	
Corporate Ethical Responsibility (CER)	<p>The idea of a business being accountable for the ethical implications of its decisions and actions is known as corporate ethical responsibility (CER). This covers a business' responsibilities to the environment, as well as to its shareholders, employees, clients, and the larger community. CER can include a wide range of topics, including protecting personal information, environmental sustainability, and treating employees fairly. It shares many similarities with corporate social responsibility (CSR), a more general phrase that encompasses ethical obligation in addition to other duties to stakeholders and the community.</p> <p>The ideas and procedures that businesses employ to make sure that their partners and suppliers uphold morally and socially responsible standards are referred to as "ethical standards in supply chains." Fair labour practices, environmental sustainability, and adherence to local rules and regulations can all be included in this. Companies can take a number of actions to encourage moral behavior in their supply chains, including auditing suppliers on a regular basis, enforcing supplier codes of conduct, and offering suppliers support and training to help them become more ethical. The SA8000, BSCI, SEDEX, and other international standards for ethical supply chain management are only a few examples. These guidelines are intended to assist businesses in making sure that their suppliers adhere to a set of moral and social responsibility requirements. Companies should maintain open communication with their suppliers and sub-suppliers because it helps to ensure that they are aware of any concerns or issues that may occur in the supply chain. This may involve challenges with quality control, supply delays, or ethical dilemmas. Businesses may work together to solve these problems and find solutions by being honest and upfront with their suppliers.</p> <p>This is the process of gathering, evaluating, and integrating vast amounts of data from diverse sources in order to gain knowledge and make wise judgements. To gain useful insights from the data entails using cutting-edge technologies such as machine learning and artificial intelligence.</p> <p>The ideals and tenets that define an organization's ethical culture and direct its decision-making are referred to as its corporate ethical identity. It is the company's ethical standing and how other parties, including clients, shareholders, staff members, and the general public, see it. The strategies and tactics that businesses employ to engage and communicate with their many stakeholders. Customers, shareholders, employees, suppliers, and the larger community can all be included in this. Building and maintaining strong relationships with stakeholders is the major objective of corporate marketing communications. This is done in order to raise awareness of the company's goods and services and, eventually, promote commercial growth. Corporate brand identity describes the components of a company's brand and how the general public perceives it. A company's</p>
Ethical Standards in Supply Chains (ESD)	
Candid Relationships with Suppliers and Sub-suppliers (CAR)	
Big Data Analytical Intelligence Assimilation (BDAIA)	
Corporate Ethical Identity (CEI)	
Corporate Marketing Communications with Stakeholders (CMC)	
Corporate Brand Identity (CBI)	

Table 1 (continued)

Defining the Latent Constructs	
Social Performance (SOP)	<p>name, logo, tagline, goal statement, and other visual components like colours and images can all be categorised under this. The company's beliefs and commitment to stakeholders like customers, employees, and others are also part of the corporate brand identity. The objective of a corporate brand identity is to develop a unified, recognizable image that sets the company apart from its rivals and facilitates the development of relationships with its stakeholders. A company's social performance is measured by how it affects society and the environment, both favourably and unfavourably. It entails a business' adherence to moral, legal, and social norms as well as its effects on the communities where it conducts business. A company's environmental performance is measured by how it affects the environment, both favourably and unfavourably. It covers a business's compliance with environmental laws and rules, as well as its initiatives to lessen its environmental impact and advance sustainability.</p>
Environmental Performance (ENV)	

Table 2
Sample details (Source: Authors' own compilation).

Demographic details	Description	Numbers (n = 202)	Percentage
Age Group	31–40	103	50.99%
	41–50	54	26.73%
	51–60	30	14.85%
Educational Qualifications	Above 60	15	7.43%
	Postgraduate	128	63.37%
	Graduate	43	21.29%
	Diploma	31	15.35%
No of Employees in the Organization	Class 12	0	0.00%
	Small enterprises (10–49)	0	0.00%
	Medium enterprises (50–249)	2	0.99%
Age of the Organization (Years)	Large enterprises (Above 250)	200	99.01%
	Above 20	153	75.74%
	10 to 20	35	17.33%
Nature of Business Activities	<10	14	6.93%
	Engineering component and supplies	86	42.57%
	Industrial rubber product manufacturers	104	51.49%
	Industrial chemical producers	12	5.94%

consequences in industrial firms for several reasons. Firstly, researchers can better understand how and why industrial firms operate ethically by identifying the elements that contribute to corporate ethical identity. This information can help clarify the fundamental causes and motivators of moral behavior in these businesses. The second benefit is the ability to forecast and evaluate the ethical behavior of industrial firms using the antecedents of corporate ethical identity that have been defined. For stakeholders, such as investors, clients, and regulators, who wish to assess a company's adherence to ethical standards, this predictive capability might be useful. Thirdly, industrial firms may suffer reputational harm, legal troubles, and financial losses as a result of ethical missteps in the supply chain. Firms can reduce the chance of ethical violations by proactively addressing potential ethical hazards in their supply chains by identifying the antecedents of corporate ethical identity. Fourthly, developing trust and cooperation in the supply chain requires a grasp of the elements that lead to open communication with

Table 3
Model fit and quality indices (Source: WarpPLS software output).

Model fit and quality indices	Values	Remarks
Average path coefficient (APC)	0.558, $p < 0.001$	Significant
Average R-squared (ARS)	0.610, $p < 0.001$	Significant
Average adjusted R-squared (AARS)	0.607, $p < 0.001$	Significant
Average block VIF (AVIF)	2.087, acceptable if ≤ 5 , ideally ≤ 3.3	Within normal limits
Average full collinearity VIF (AFVIF)	5, acceptable if ≤ 5 , ideally ≤ 3.3	Within normal limits
Tenenhaus GoF (GoF)	0.526, small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36	Large GoF
Simpson's paradox ratio (SPR)	1.000, acceptable if ≥ 0.7 , ideally = 1	Okay
R-squared contribution ratio (RSCR)	1.000, acceptable if ≥ 0.9 , ideally = 1	Okay
Statistical suppression ratio (SSR)	1.000, acceptable if ≥ 0.7	Okay
Nonlinear bivariate causality direction ratio (NLBCDR)	0.950, acceptable if ≥ 0.7	Okay

Table 4
Convergent validity results ($N = 202$) (Source: WarpPLS software output).

Construct	Indicators	Loadings	SCR	AVE		
Ethical Standards Implementation in the Supply Chain (ESD)	ESD1	0.89	0.87	0.52		
	ESD2	0.99				
	ESD3	0.51				
	ESD4	0.69				
	ESD5	0.70				
	ESD6	0.57				
	ESD7	0.53				
Corporate Ethical Responsibility (CER)	CER1	0.76	0.83	0.50		
	CER2	0.69				
	CER3	0.68				
	CER4	0.73				
	CER5	0.66				
	CAR1	0.75				
	CAR2	0.77				
Candid Relationships with Suppliers and Sub-suppliers (CAR)	CAR3	0.76	0.90	0.59		
	CAR4	0.66				
	CAR5	0.75				
	CAR6	0.68				
	CAR7	0.97				
	CEI1	0.70			0.71	0.56
	CEI2	0.79				
Big data analytical intelligence assimilation (BDAIA)	BDAIA1	0.73	0.75	0.51		
	BDAIA2	0.70				
	BDAIA3	0.72				
Corporate Marketing Communications with Stakeholders (CMC)	CMC1	0.70	0.76	0.52		
	CMC2	0.73				
	CMC3	0.73				
	CB11	0.76				
Corporate Brand Identity (CBI)	CB12	0.69	0.74	0.50		
	CB13	0.66				
	SPO1	0.62				
	SPO2	0.72				
	SPO3	0.75				
Social Performance (SOP)	SPO4	0.77	0.83	0.51		
	SPO5	0.71				
	ENV1	0.79				
	ENV2	0.77				
	ENV3	0.76				
Environmental Performance (ENV)	ENV4	0.77	0.86	0.56		
	ENV5	0.64				

suppliers and sub-suppliers. Finding these antecedents can assist businesses in building stronger, more open relationships with their suppliers, which can increase the efficiency and dependability of the supply chain. Last but not least, moral behavior might give an advantage in a market. Companies with a strong reputation for ethics may draw in more clients, investors, and top talent. Finding the roots of corporate ethical identity can help businesses stand out from the competition and acquire a

competitive advantage.

We compared the findings with past studies and highlighted the unique contributions below.

Fukukawa et al. (2007) identified the process of ethical identity management and formation which is known as ethical practices within organizations. They identified the internal and external factors to promote corporate social responsibility within the organizations. However, they did not address the ethical standards that must exist within corporations in order to improve environmental performance. The scope of organizations' ethical responsibility is expanded by this study. In order to raise the standard for ethics within a business, this study examines the significance of corporate ethical responsibility. The relationship between corporate ethical responsibility and the application of ethical standards was established using the ethical theory. Hence, H1 is accepted.

Verbos et al. (2007) identified five elements—socialization, attraction-selection-attrition, decision-making, organizational learning, and reward systems—for building corporate ethics within firms. Within organizations, these elements foster ethical consciousness and a pleasant environment. Lumineau and Oliveira (2020) talked about stakeholders' opportunistic behavior. They identified the informant's cost-benefit dilemma, the not-out-there problem, and the social desirability problem as the three empirical obstacles to opportunistic behavior in organizations. The interaction between the organization's stakeholders is improved by ethical responsibility. Stakeholder theory was used in this study to illustrate the importance of corporate social responsibility for transparent relationships. Stakeholder theory makes sure that the objectives of suppliers and sub-suppliers reflect those of the company. It demonstrates how establishing a candid relationship between suppliers and sub-suppliers depends on corporate ethical responsibility. Hence H2 is accepted.

The impact of enacted moral and practical principles on corporate governance is evaluated by Fotaki et al. (2020). They concluded that solid core ethical values are the essential components of effective and efficient corporate governance. In their 2019 study, Paik et al. examine the association between ethical philosophy and moral judgement. They examined the ethical choices and thought processes of Korean managers in a variety of national contexts. Paik et al. (2019) found that while making ethical decisions, Korean managers rely more on the rule of utilitarianism. This study extends the scope of the ethical perspective, and goes into more detail about the value of business ethical identity. The ethical theory is employed to ascertain the criticism of the execution of ethical standards. According to this study, developing an organization's corporate ethical identity requires high ethical standards. Hence H3 is accepted.

Kingshott et al. (2020) undertook a study to comprehend the B2B relationship within the context of the east-west supply chain by considering the dynamics of these relationships. In order to better understand how Australian buyers' companies foster their relationships with Chinese suppliers, Kingshott et al. (2020) applied social exchange theory. The significance of the interaction between suppliers and sub-suppliers, however, was not covered. Stakeholder theory is utilized in this study to demonstrate why suppliers and sub-suppliers together must collaborate to develop corporate ethical identity. They concluded that a company can stand out from its rivals by having a strong corporate ethical identity. They expanded the application of stakeholder theory and proposed that a candid relationship between suppliers and sub-suppliers is necessary for corporate ethical identity. Hence H4 is accepted.

The relationship between corporate identity and corporate social responsibility was discovered by Tourky et al. (2020). To ascertain their focus on the essential components of corporate identity, they conducted interviews with senior executives of eminent UK-based businesses. Iglesias, Landgraf, Ind, Markovic, and Koporcic (2020) used a case-based methodology to study the co-creation of corporate brand identities in five small and medium B2B firms. In their study, Iglesias et al. (2020)

Table 5
Unidimensionality (Source: WarpPLS software output).

	ESD	CER	CAR	CEI	BDAIA	CMC	CBI	SPO	ENV	SE	P value
ESD1	0.89									0.06	<0.001
ESD2	0.99									0.06	<0.001
ESD3	0.51									0.06	<0.001
ESD4	0.69									0.06	<0.001
ESD5	0.70									0.06	<0.001
ESD6	0.57									0.06	<0.001
ESD7	0.53									0.06	<0.001
CER1		0.76								0.06	<0.001
CER2		0.69								0.06	<0.001
CER3		0.68								0.06	<0.001
CER4		0.73								0.06	<0.001
CER5		0.66								0.06	<0.001
CAR1			0.75							0.06	<0.001
CAR2			0.77							0.06	<0.001
CAR3			0.76							0.06	<0.001
CAR4			0.66							0.06	<0.001
CAR5			0.75							0.06	<0.001
CAR6			0.68							0.06	<0.001
CAR7			0.97							0.06	<0.001
CEI1				0.70						0.06	<0.001
CEI2				0.79						0.06	<0.001
BDAIA1					0.73					0.06	<0.001
BDAIA2					0.70					0.06	<0.001
BDAIA3					0.72					0.06	<0.001
CMC1						0.70				0.07	0.002
CMC2						0.73				0.07	<0.001
CMC3						0.73				0.07	<0.001
CBI1							0.76			0.07	<0.001
CBI2							0.69			0.07	<0.001
CBI3							0.66			0.07	<0.001
SPO1								0.62		0.06	<0.001
SPO2								0.72		0.06	<0.001
SPO3								0.75		0.06	<0.001
SPO4								0.77		0.06	<0.001
SPO5								0.71		0.06	<0.001
ENV1									0.79	0.06	<0.001
ENV2									0.77	0.06	<0.001
ENV3									0.76	0.06	<0.001
ENV4									0.77	0.06	<0.001
ENV5									0.64	0.06	<0.001

Table 6
Discriminant validity test (Source: WarpPLS software output).

	ESD	CER	CAR	CEI	BDAIA	CMC	CBI	SPO	ENV
ESD	0.72								
CER	0.60	0.71							
CAR	0.64	0.67	0.77						
CEI	0.46	0.64	0.58	0.75					
BDAIA	0.62	0.67	0.72	0.63	0.71				
CMC	0.54	0.63	0.69	0.66	0.67	0.72			
CBI	0.65	0.70	0.59	0.64	0.65	0.70	0.71		
SPO	0.64	0.69	0.70	0.54	0.62	0.66	0.70	0.71	
ENV	0.55	0.62	0.66	0.57	0.69	0.68	0.70	0.65	0.75

found that the co-creation of corporate brand identities is an ongoing dynamic process in which internal and external stakeholders participate in four interwoven stages, including contesting, internalizing, explaining, and communicating. However, they did not address the significance of stakeholder marketing communications in establishing a solid corporate ethical identity. The purpose of this study is to demonstrate the relevance of marketing communications with stakeholders by extending applications of stakeholder theory. This study presents the argument that all stakeholders involved in the business should collaborate to develop a distinctive and powerful corporate brand identity. The study contends that in order for a business to develop its corporate brand identity, it must effectively communicate to its stakeholders. Hence H5 is accepted.

A mixed method approach was used by Mikalef et al. (2019) to

analyze 175 senior managers from Greek companies and identify the pattern of factors related to big data analytics that contributed to high performance. One of the identified factors was an ethical problem. They made use of complexity theory to argue that building trust requires consideration of the big data ethical issue. According to Buhalis and Volchek (2021), big data-driven analytics is crucial for addressing the complexity of marketing communication. Our study investigates how using big data might improve the connection between a company's ethical brand and its marketing communications. The ability to analyze big data would make artificial intelligence a more potent instrument for building a strong corporate identity. This study has found that in order to increase the visibility of corporate brand identity, marketing communication with stakeholders must be founded on ethical ideals. The relationship between corporate brand identity and corporate

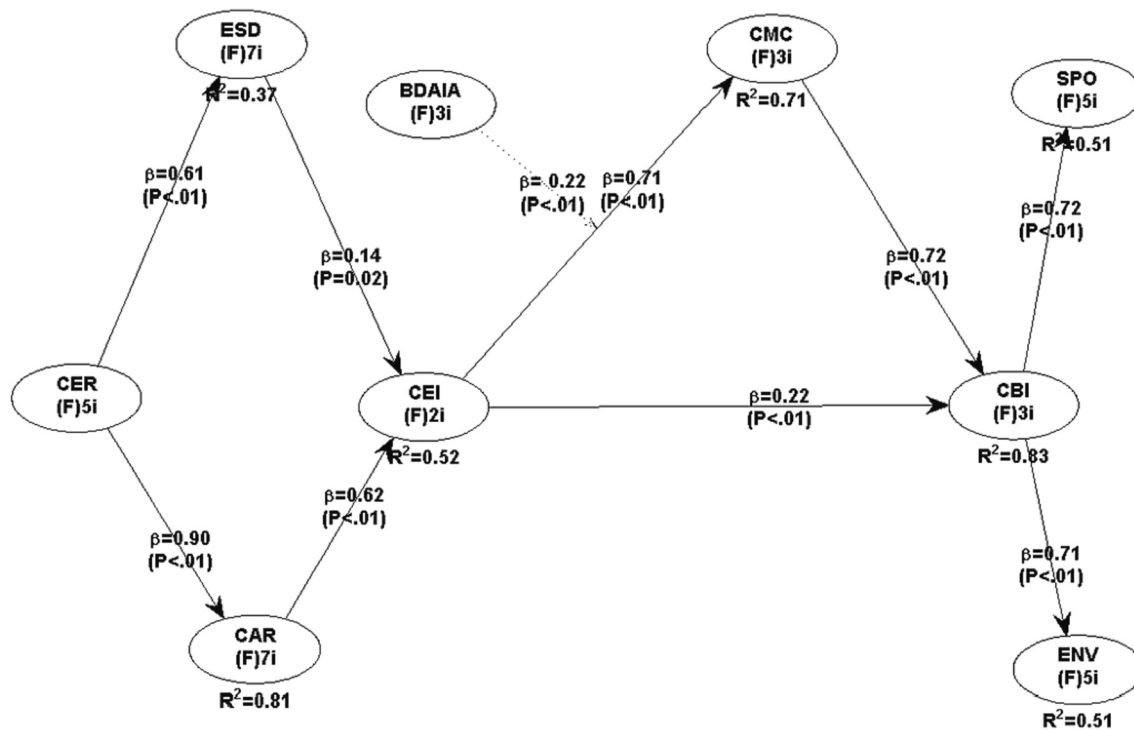


Fig. 2. Tested model (Source: WarpPLS software output).

Table 7
Hypotheses testing results (Source: Authors' own compilation).

Hypotheses	Explanatory	Outcome	β	p-value	Remarks (Hypotheses supported/not supported)
H1	CER	ESD	0.61	<0.01	supported
H2	CER	CAR	0.90	<0.01	supported
H3	ESD	CEI	0.14	0.02	supported
H4	CAR	CEI	0.62	<0.01	supported
H5	CEI	CMC	0.71	<0.01	supported
H6	CEI*BDAIA	CMC	0.22	<0.01	supported
H7	CEI	CBI	0.22	<0.01	supported
H8	CMC	CBI	0.72	<0.01	supported
H9	CBI	SPO	0.72	<0.01	supported
H10	CBI	ENV	0.71	<0.01	supported

marketing communication can be assimilated by big data. Hence H6 is accepted.

Balmer and Podnar (2021) concluded that corporate identity is necessary for corporate brand orientation. They claimed that in order to have a strong corporate brand orientation, the corporate brand must be dynamically connected with the company identity. Iglesias and Ind (2020) discussed the significance of corporate brand image from a firm-centric point of view. They asserted that all stakeholders are accountable for developing the corporate brand image. This study discusses the importance of an ethical standard to maintain and manage the relationship between suppliers and sub-suppliers. Ethical theory is used to explain the importance of ethical standards for enhancing the value of corporate brand identity. This study concludes that there must be an ethical standard of an organization which must be followed by the suppliers and sub-suppliers to establish a unique and strong corporate brand identity. Hence H7 is accepted.

Porcu et al. (2020) investigate the relationship between marketing communication, company culture, and brand performance. They demonstrate that collaborative culture has an advantageous effect on brand performance using the resource-based view theory. Their research

revealed that marketing communication increases the strength of brand competitive advantages. In order to demonstrate the significance of marketing communication in the context of corporate social responsibility, Glozer and Morsing (2020) established an analytical model. Stakeholders were further employed in our study to demonstrate the critical role they play in developing business corporate identity. Stakeholders play a large part in corporate marketing communication. The study showed that corporate marketing communication contributes significantly to the development of corporate brand identity. Hence H8 is accepted.

According to Gyrd-Jones et al. (2013), business organizations should assess the value of their brand in terms of how to generate value for a variety of stakeholders. In order to co-create brands, they proposed the concept of good communication and interaction among the stakeholders. Wood (2010) evaluated earlier research on corporate social performance and made a recommendation about the significance of stakeholders in achieving the objective of corporate social responsibility. However, she avoided discussing corporate brand identity. This study covered the value of corporate brand identity and how it may be developed with the assistance of all stakeholders. The study's findings support the notion that stakeholders' social performance strengthens the corporate brand identity. According to stakeholder theory, corporate brand identity can be achieved through the social performance of the stakeholders. Hence H9 is accepted.

The nature and significance of business brands are examined by Balmer and Gray (2003). They demonstrated using the resource-based perspective that a corporate brand is an important resource for any firm that gives an entity a long-lasting competitive advantage. They concluded that employees are essential to the development and maintenance of the corporate brand. The significance of company branding and environmental performance is further addressed in this study. Our study broadens the application of ethical theory and concludes that improving environmental performance is crucial for strengthening an organization's brand identity. According to this study, stakeholder cooperation has a considerable beneficial effect on corporate brand identity and further improve environmental performance. Hence H10 is accepted.

In order to gain legitimacy and enhance the perspective of the stakeholders, [Torelli, Balluchi, and Lazzini \(2020\)](#) talked about the significance of information and communication. According to their analysis, differing degrees of greenwashing significantly affect how stakeholders perceive an organization. They go into further detail about the value of communication tactics in reducing the effects of greenwashing in relation to the particular organization and decision-making process. According to [Palazzo and Basu \(2007\)](#), the idea of corporate branding is evolving from benefit-driven product branding to value-driven corporate branding. However, they didn't go into detail on how corporate branding with a focus on values develops the idea of corporate ethical identity. According to our study, corporate ethical branding assists in the establishment of a distinctive brand in the eyes of the public. This study demonstrated the relationship between corporate brand identity and ethical identity.

5.1. Theoretical implications

Our study starts with identifying the key elements that are involved in the model. Secondly, we used Ethics theory and Stakeholder theory as theoretical lenses to explain the mechanism of enhancing the social performance and environmental performance of B2B firms. This study shows how corporate ethical responsibility can indirectly influence the social performance and environmental performance of B2B firms. The beta coefficients of indirect and moderating paths show the importance (strength) of each variable on other endogenous variables in the theoretical model.

Findings show that corporate ethical responsibility has a positive effect on ethical standards implementation in the B2B supply chain. Secondly, corporate ethical responsibility has a positive effect on candid relationships with suppliers and sub-suppliers. Thirdly, ethical standards implementation in the SC has a positive effect on corporate ethical identity. Fourthly, candid relationships with suppliers and sub-suppliers has a positive effect on corporate ethical identity.

Fifth, corporate ethical identity has a positive effect on corporate marketing communications with stakeholders. Sixth, big data analytical intelligence assimilation has a moderating effect on the path joining corporate ethical identity and corporate marketing communications with stakeholders. Seventh, corporate ethical identity has a positive effect on corporate brand identity.

Eight, corporate marketing communications with stakeholders has a positive effect on corporate brand identity. Ninth, corporate brand identity has a positive effect on social performance. Lastly, corporate brand identity has a positive effect on environmental performance.

These findings contribute to a more comprehensive understanding of the interplay between ethics, identity, and communication in companies, shed light on their influence on performance, and highlight the importance of ethics in contemporary business strategies. The implications for theory and practice are presented below.

5.2. Practical implications

The key managerial implications of our study are as follows.

Firstly, a focus on ethical standards implementation in the supply chains:

This can be achieved by establishing ethical guidelines and a clear code of behavior to which suppliers should adhere. Also, managers must always be vigilant for any ethical problems in the supply chain, and take proactive steps to rectify them. Managers need to work with other stakeholders, such as clients and NGOs, to promote ethical and sustainable business practices all the way along the supply chain.

Secondly, a focus on maintaining candid relationships with suppliers and sub-suppliers:

Managers need to create channels of open and transparent contact with suppliers and sub-suppliers to encourage them to openly express information and concerns. It is essential to encourage a climate of

understanding and respect between people, valuing the contributions that suppliers and sub-suppliers make to the success of the business and the supply chain.

Thirdly, a focus on developing corporate ethical identity:

Managers must explicitly identify and convey to staff members, suppliers, sub-suppliers, and other stakeholders, the company's values, mission, and ethical standards. Managers must be receptive to suggestions and criticism and be ready to adapt as necessary to maintain the company's ethical reputation.

Fourthly, to improve corporate marketing communications with stakeholders:

To effectively reach various stakeholder groups, managers must employ a variety of communication techniques, including videos, infographics, and social media. Managers must always be aware of changes in the communication landscape, such as emerging technology, trends, or laws, and adjust as necessary.

Finally, a focus on enhancing corporate brand identity to improve social and environmental performance:

Spreading the word about the business's dedication to ethical and sustainable practices can boost stakeholders' trust and loyalty. Furthermore, managers need to attract and retain clients who are interested in ethical and sustainable business operations, which can boost sales and profitability. Managers need to encourage employees, suppliers and sub-suppliers to be open and responsible for the firm's performance in terms of social and environmental issues.

6. Conclusion

The current study aims to seek an answer to two questions: RQ1: What are the antecedents of corporate ethical identity in industrial firms? And RQ2: What is the relationship between corporate ethical identity, corporate brand identity and social/environmental performance in industrial firms? We developed the theoretical model by integrating Ethics theory and Stakeholder theory, and tested the model using 202 samples from industrial firms operating in India. The hypotheses testing was done using variance-based SEM, following which the study has extended the knowledge base by pointing out that corporate ethical responsibility indirectly influences corporate ethical identity which in turn improves corporate brand identity. Ultimately it leads to improvement in social and environmental performance.

The limitations of this study include the use of cross-sectional data rather than panel data. Future research can involve panel data to test the model. Future researchers can also examine the moderating effect of national culture on ethical standards implementation and candid relationships with suppliers. Furthermore, how technology can be used to improve ethical practices and communication strategies while reducing potential ethical hazards connected with data use can be further explored, as could the role of big data and analytics in ethical decision-making and communication inside organizations. Additionally, based on corporate ethical identity, an exploration of how firms can engage stakeholders effectively through a variety of channels and techniques would further contribute to the literature. Future academics could examine these areas to see how they affect stakeholder relationships and overall corporate reputation.

CRediT authorship contribution statement

Surajit Bag: Conceptualization, Formal analysis, Validation, Visualization, Methodology, Software, Writing – original draft, Software. **Gautam Srivastava:** Data curation, Writing – original draft. **Shivam Gupta:** Project administration, Resources, Supervision, Writing – review & editing. **Uthayasankar Sivarajah:** Project administration, Resources, Supervision. **Natalie Victoria Wilmot:** Resources, Supervision, Visualization, Writing – review & editing.

Data availability

Data will be made available on request.

Appendix A. Operationalization of constructs (Source: Authors' own compilation)

Construct	Item No	Items	Source
Ethical Standards Implementation in the SC (ESD)	ESD1	I am aware that [the organization] has a hotline for reporting potential Code of Business Conduct or violations of law.	Fritz et al. (1999)
	ESD2	I would recognize violations of the company's Code of Business Conduct if I saw them.	
	ESD3	When a problem in compliance is recognized, [the organization] does everything in its power to resolve the problem.	
	ESD4	[The organization's] efforts to increase compliance with the company's Code of Business Conduct have led to an improvement in compliance.	
	ESD5	Senior [organizational] corporate and business unit management serve as good models of ethical conduct.	
	ESD6	Through his/her behavior, my manager/supervisor sets a good example of following the Code of Business Conduct.	
	ESD7	My manager/supervisor expects me to follow the Code of Business Conduct.	
Corporate Ethical Responsibility (CER)	CER1	I am very knowledgeable of my firm's ethical policies.	Carroll (1991); L'etang (1995); Carter and Jennings (2004); Eltantawy et al. (2009)
	CER2	I am in compliance with my firm's ethical policies.	
	CER3	I am aware that [the organization] provides a safe working environment	
	CER4	I am aware that [the organization] follow fair working practices	
	CER5	I am aware that [the organization] provides compensation for any environmental damage in the locality	
Candid Relationships with Suppliers and Sub-suppliers (CAR)	CAR1	A loyal and enduring relationship with suppliers of products and services is important to the organization.	Bendixen and Abratt [2007]
	CAR2	When there is a problem or a query our suppliers know it will be sorted out quickly.	
	CAR3	When there is a problem or a query our suppliers know whom to contact.	
	CAR4	[The organization] treats its suppliers with respect.	
	CAR5	[The organization] is concerned with the long-term health/sustainability of the supply chain.	
	CAR6	[The organization] is highly regarded as far as business ethics is concerned.	
	CAR7	Suppliers can trust [The organization]; once a commitment has been made they will ensure that it is honoured.	
Corporate Ethical Identity (CEI)	CEI1	[The organization] think of itself as an entity who is concerned about ethical issues.	Lloyd-Hazlett and Foster (2017)
	CEI2	The stakeholders perceive [The organization] as an ethical organization.	
Big data Analytical Intelligence Assimilation (BDAIA)	BDAIA1	BDAI is used as an important tool in the marketing department.	(Zhang et al. (2020)
	BDAIA2	BDAI is employed for making ethical decisions in every major functional area.	
	BDAIA3	BDAI is utilized in developing corporate communications.	
Corporate Marketing Communications with Stakeholders (CMC)	CMC1	My company promotes the creation of special programs to facilitate stakeholders' inquiries and complaints about our brands, products and the company itself.	Porcu et al. (2017)
	CMC2	My company gathers stakeholders' information that is collected or generated via different sources from all divisions or departments into a unified database that is configured to be useful and easily accessible to all the organizational levels.	
	CMC3	My company considers that the relationship between the company and its stakeholders must be reciprocal to establish a trust-based and ongoing dialogue.	
Corporate Brand Identity (CBI)	CBI1	Our organization treats each employee as an essential part of the organization.	Coleman et al. (2011)
	CBI2	Our organization responds to our client's needs.	
	CBI3	The corporate visual identity is helpful in making our organization recognizable.	
Social Performance (SOP)	SPO1	[The organization] has enhanced qualities of the firm's guidance component, which include assessments of mission statements, codes of conduct, board or top executive directives.	Mitnick (1993); Mitnick (2000)
	SPO2	[The organization's] system inputs, e.g. numerical hiring and retention goals for minorities.	
	SPO3	the firm's production processes, e.g. recruitment, hiring and retention practices for minorities.	
	SPO4	[The organization's] outputs (or activity performance), e.g. the number of minorities recruited, hired and retained within given time periods.	
	SPO5	[The organization] takes good care of the society (e.g. adopted local villages).	
Environmental Performance (ENV)	ENV1	My company has achieved important environment-related certifications (e.g. ISO 14000)	Yu and Ramanathan (2016)
	ENV2	My company has regularly achieved targets imposed on energy conservation, recycling or waste reductions	
	ENV3	Our organization has decreased the fee for waste discharge	
	ENV4	Due to its environment friendly practices, my company has saved significant amount of money in the past (not including the achievements in terms of energy conservation, recycling or waste reduction)	
	ENV5	On an average, overall environmental performance of my company has improved in the past five years	

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