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Examining the role of environmental corporate social responsibility in building green corporate image and green competitive advantage



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Abstract

Green concern is making a profound impact on building green competitive advantage (GCA) across the globe. Apparel sector of Bangladesh is at crossroads regarding sustainability of firms. Green initiatives are thus required for ensuring the survival of apparel sector. The current study attempts to examine the interplay among environmental corporate social responsibility (ECSR) dimensions, green corporate image (GCI), and green competitive advantage of firms. To address the research topic, structural equation modeling approach has been adopted. Based on prior research findings, five hypotheses have been devised and finally evaluated by collecting data from 53 apparel firms enlisted with Dhaka Stock Exchange, Bangladesh. The study findings reveal that the ECSR dimensions have critical role to play over building GCI and GCA at the firm level. The study attempted to integrate ECSR, GCI, and GCA and contributes to the holistic understanding of the green anxieties of the business world. Understanding the critical role of ECSR, this study calls for proactive managerial actions regarding organizational sustainability.

Keywords: Environmental corporate social responsibility dimensions, Green corporate image, Green corporate advantage, Structural equation modeling

Introduction

Firms are increasingly recognizing the strategic benefits which stem from the integration of green concern in their corporate social responsibility (CSR) activities. Environmental CSR (ECSR) and Building green corporate image (GCI) and attaining green competitive advantage (GCA) have become major areas of concentration among the business scholars worldwide. Studies identified building green image as a tool to help firms enhance their green competitive capacity (Ambec & Lanoie, 2008; Porter & van der Linde, 1995). In this connection, it is observed that development of new environmentally sustainable products and business operations result in

Introducing green innovation referred to as the innovation that emphasize environmental waste reduction, prevention of pollution and implementation of

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higher level of efficiency in terms of resources investment, enhanced market, better corporate branding, higher sales, and eventually sustained competitive advantages (Fraj-Andrés, Martinez-Salinas, & Matute-Vallejo, 2009). It has been revealed by CSR research that green management has a pivotal role regarding establishing a firm's image in the core of the business. Green practices have been considered as one of the very salient ingredients that eventually determine green image and green competitiveness of the firm (Schwaiger, 2004; Sellitto & Hermann, 2019). Evaluation of the firm's image, its repute, and loyalty of customers are also affected substantially by green management of firms (Dutta, Umashankar, Choi, & Parsa, 2008).

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environmental management so as to ensure ecological wellbeing (Eiadat, Kelly, Roche, & Eyadat, 2008), which can increase key resource productivity substantially and would reduce costs related to the environment (Song & Yu, 2018). Besides, firms will be able to better manage the objections stemming from the government, international agencies, and society and thus can attain sustainable competitiveness (Calantone, Cavusgil, & Zhao, 2002). The emergence of environmentally sustained enterprises requires radical change in the philosophy of management of the organizations. In the new context, initiatives and strategies must go further than technical aspects. Dynamic and ecologically responsive norms, values, and behaviors are expected to form competitive capacity (Shrivastava, 1995). Hence, green culture might have the capacity to facilitate the progress towards sustainability. In this context, green culture is comprehended from the perspective of axiological attitude that describes green culture as the attitudinal elements, norms and values relating to environment (Ogiemwonyi, Harun, Alam, & Othman, 2020). In the organizational context, it is expected that the atmosphere of the firm is created in such a way that the actions of the firm uphold ecological norms and values (Baharov, 2000). In this connection, ECSR can be considered instrumental to attaining green competitive advantage (Welford, 1995).

The present study endeavors to concentrate on the apparel sector of Bangladesh which is involved in designing, producing, and selling of garments, footwear and related accessories. This sector has been selected to address the research topic because apparel industries are being considered immensely imperative part of the economy of Bangladesh over the last few decades. At present, the apparel industry is the largest export-earner with about 27.9 billion in the fiscal year 2019-20 Bangladesh Garments Manufacturers and Exporters Association (BGMEA) Sustainability Report, 2020). This sector has made significant contributions to the economy from international trade and commerce, employment generation, mitigation of poverty, and especially empowerment of the women. Thus, sustainable action plan i.e. establishing plans for developing new models of business to go beyond the economic concentration and to attempt to integrate ecological, societal, and economic values by means of the actions of the organization (Cheema, Afsar, & Javed, 2020; Joyce & Paquin, 2016), has become a necessity in order to ascertain future steady advancement of this sector. However, this accomplishment requires time-proven sustainable strategies. It has been found that almost 82% of the export revenue has been received from apparel and clothing sector of Bangladesh (Bangladesh Bureau of Statistics, 2019). Now, apparel industry in Bangladesh is at a crossroads (Martin & Economy, 2013) as Alam, Azim, and Alias (2017) also revealed that apparel factories of Bangladesh are facing massive challenges regarding compliance with regard to green sustainability. Inadequate Welfare schemes and environmental protection conditions are getting issues of concern to be met. Research findings also amply document that owners' attitude towards sustainability is not positive yet.

In this context, an exploration of the performance of apparel sector of Bangladesh seeks grave attention from the perspective of intensifying competition in relation to sustainability concern. This investigation is expected to provide considerable insight to the policy perspectives and academic interest as well. On this background, this research aims to examine the role of environmental CSR dimensions upon building green corporate image and green competitive advantage that are considered instrumental to the prospect of apparel sector. In contrast to the firms in developed nations, the willingness of Bangladeshi firms to mitigate emissions has not yet promised. Besides, the awareness regarding ecological protection is forming very slowly. Again, green image of the firm is considered very critical from the perspective of the movements of environmentalism and stricter international regulations regarding preservation of environment. In this context, attempts are required to examine the willingness of firms to build green image and whether this green image tends to contribute to green competitiveness or not. Therefore, this environmental concern needs to be explored to see the interplay among the variables concerned in this study.

Even though the importance of building corporate image of the firm has become a great concern for the management practitioners considering prevention of natural environment, deep exploration of such impact received much less attention in the competitive literature (Bansal, 2005). Thus, it is a research urge of the time to explore how firms may enhance their green image and green competitiveness (Cronin, Smith, Gleim, Ramirez, & Martinez, 2011). Furthermore, although prior studies attempted to reveal the concept ECSR, green management, and environmental performance of firm (Chang, Yeh, & Li, 2020; Chuang & Huang, 2015; Chuang & Huang, 2018; Kao, Liu, Huang, & Chang, 2010; Lyon & Maxwell, 2008; Post, Rahman, & Rubow, 2011; Rahman & Post, 2012) no study offered, to the best of the knowledge of the researchers, an integrative framework in the area of environmental management comprising ECSR, green corporate image and green competitiveness. To fill the research gap mentioned above, this study seeks to address the following research questions:

How and to what extent do environmental corporate social responsibility dimensions affect corporate green image and green competitive advantage? How can an empirical integrative framework be devised to comprehend the interplay among ECSR dimensions, green corporate image, and green competitive advantage?

What policy guidelines can be formulated for the practitioners based on the empirical framework?

Rest of the paper is structured as follows. A brief description about the analytical framework has been given comprising major constructs and their interrelationships among them in section two. Methods and measurement of the constructs are delineated in the third section. Data analysis and discussion of results are described elaborately. Finally, the conclusion section is comprised of theoretical contribution, managerial contribution, and limitation of the study.

Analytical framework

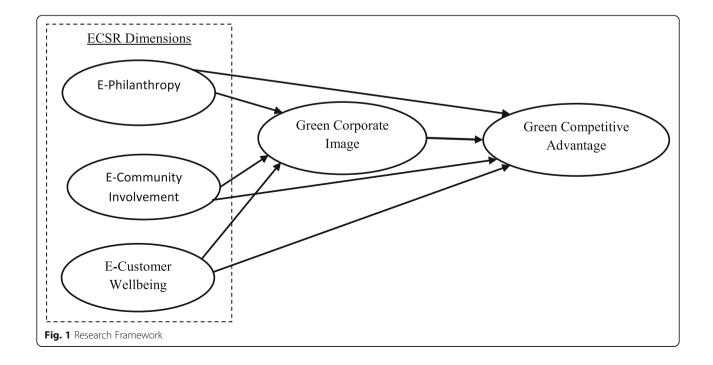
Environmentally pioneering firms can attain first mover capacity and consequently may charge comparatively higher prices for green products and achieve green competitiveness (Chuang & Huang, 2015). While designing the conceptual framework, three dimensions of ECSR such as environmental philanthropy (E-philanthropy) (Carroll, 1991; Liu & Zhou, 2009; Onlaor & Rotchanakitumnuai, 2010; Peloza & Shang, 2011), environmental community involvement (E-Community involvement) (Ailawadi, Luan, Neslin, & Taylor, 2011; Rahman, 2011; Sen, Bhattacharya, & Korschun, 2006; Uddin, Tarique, & Hassan, 2008), and environmental customer wellbeing (E-Customer Wellbeing) (Carroll, 1991; Cochran, 2007; Mina Okada & Mais, 2010) have been conceived to

influence green corporate image and green competitive advantage. Based on literature, for understanding the interplay among ECSR, green corporate image and green competitive advantage, the following research framework has been formulated (Fig. 1).

Literature review and hypothesis development Green competitive advantages

The concept of green competitive advantage has been described as the conditions of the firm that cannot be imitated by others under which the firm hold position regarding ecological management or sustainable innovation (Lin & Chen, 2017). Green capability is supposed to be dynamic in nature within the organization and in the business processes. This study holds that the dimensions of ECSR significantly influence green competitive advantage by means of ecological management. Establishing these green dynamic abilities are supposed to be reliable and permanent in the firms (Chen, 2008). Intelligent firms utilize ecological strategies for shaping their green competitiveness (Wang, Hu, Dai, & Burns, 2021). Firms can conduct green business processes as a responsibility which has the ability to form green image and effectively track sustainability in the organizations (Famiyeh, Adaku, Amoako-Gyampah, Asante-Darko, & Amoatey, 2018).

In order to develop sustainable competitive edge, firms have to engage themselves in innovative and green initiatives (Wysocki, 2021). Many studies reported the existence of positive association between business performance and environmental concerns in relation to



competitiveness (Galdeano-Gómez, Céspedes-Lorente, & Martínez-del-Río, 2008; López-Gamero, Claver-Cortés, & Molina-Azorín, 2008). Firms are getting more and more inclined to ECSR (Barin Cruz & Avila Pedrozo, 2009) and green management (GM) which is referred to as the organization wide course of action that applies inventiveness for achieving sustainability, reduction of waste, ensuring societal responsibility, and competitiveness through incessant learning initiatives by endorsing environmental goal and strategy which are in line with overall goal of the organization (Pane Haden, Oyler, & Humphreys, 2009). Thus ECSR together with GM are nowadays is required by contemporary business world (Chang et al., 2020). From the perspective of ECSR, GM is supposed to enhance firms' environmental performance by meeting various expectations of different stakeholders of the firm like community, customers etc. (Bengtsson, 2008; Jackson & Apostolakou, 2010). Jorge, Madueño, Martínez-Martínez, and Sancho (2015) addressed the connection between environmental reputation and competitive achievement of firms. The outcome of the investigation found that environmental presentation of firms have a supportive, straight, and substantial impact on competitive edge of firms. Harris and Crane (2002) conducted a study to examine the effect of greening of the organization. They argued that inclusion of ecological concerns in the culture is expected to exert green capability which would be difficult for the competitors to find and reproduce. Resources which are not completely imitable in practice would provide sustainable competitive advantage as well (Barney, 1991).

ECSR

Rahman and Post (2012) contributed to the understanding of the concept ECSR comprehensively. ECSR is a multi-dimensional idea which relates to corporate governance, sustainability, and performance of the firm. The actual rationalization for studying the ecological dimensions of CSR is related to the fundamental notion of green business initiatives. Organizations which are comprised of ecological shields and sustainable procedures are supposed to follow dependable strategic orientation (Fernandes & Solimun, 2017). Green business organizations are supposed to follow the norms and principles regarding a balance of economic concern and societal parity and eventually ecological accountability (Alawattage & Fernando, 2017). Hence, ECSR is expected to contribute to building green corporate image and green competitive advantage which are two crucial constructs of the proposed study framework.

Based on the fundamental Caroll's model (1979), Rashid, Khalid, and Rahman (2015) identified three conceptual dimensions of ECSR: environmental philanthropy (E philanthropy), environmental

community involvement (E community involvement), and environmental customer wellbeing (E customer wellbeing). E philanthropy is described as the willingness of the firm to endorse the wellbeing of others in the form of providing monetary benefits for the betterment of the society. From the perspective of ECSR, use of pecuniary resources for upholding initiatives and awareness with regard to environment hav become popular among organizations (Yadav, Gupta, Rani, & Rawat, 2018); Peloza & Shang, 2011). E community involvement refers to implementing CSR activities with regard to safeguarding the environment through involving community as a whole (Ailawadi et al., 2011; Rahman, 2011). E customer wellbeing is described as creating and delivering finest prodand services, providing appropriate product information, developing and distributing safe and ecofriendly and not injurious products to the customers (Turker, 2009). These ECSR dimensions are cosidered as constructs for the study because ECSR is supposed to help develop and maintain green corporate image and green competitive advantage (Chuang & Huang, 2018).

Of late, the ECSR has got tremendous attention in the industry and in scholastic literature (Rahman & Post, 2012). Studies also found that ECSR has the substantial capacity to provide competitiveness to the firms (Rahman & Post, 2012). Sustainable competitiveness in operation can be achieved if ECSR is efficiently measured and implemented (Chuang & Huang, 2018). Thus, firms are increasingly putting impetus on long-standing attention for green initiatives in order to attain business competitiveness (Chuang & Huang, 2015). ECSR is expected to contribute to organizational sustainability markedly (Ugoani, 2019) which is defined as strengthening of social and economic systems considering the environmental issues with importance in business operations of the firms (The Chartered Institute of Personnel and Development in London, CIPD, 2012). This concept has been considered very critical in successful operations of the business without jeopardizing the stake of the future generation (Boudreau & Ramstad, 2005).

Generally unscrupulous and whimsical corporate interest and sheer arrogance of people in the society create various ecological upheavals (Banyte, Brazioniene, & Gadeikiene, 2010) which in turn may lead to ECSR as a compensating means on behalf of the firm. The corporate efforts include different forms of customer wellbeing (Jansson, Marell, & Nordlund, 2010; Pickett-Baker & Ozaki, 2008; Ramayah, Lee, & Mohamad, 2010), community involvement (Chiutsi, Mukoroverwa, Karigambe, & Mudzengi, 2011; Stronza & Gordillo, 2008; Weaver & Lawton, 2007), and various philanthropic activities, ecotourism, friendly workplace atmosphere (Nik Ramli, 2007) and these studies tended to provide the empirical ground for expanding firms' attitudes towards ECSR.

Green corporate image

Bathmanathan and Hironaka (2016) described green corporate image as sustainability for progress where firms carryout their regular business operations without disturbing the future generation. Firms try to build green corporate image with a view to gaining competitiveness and increase market share. Since people have become more concern about ecological issues than before, businesses are experiencing huge pressure from the society to establish green corporate image. Consequently, this pressure is pushing firms to engage in environmental protective activities (Saran & Shokouhyar, 2021). Widyastuti (2019) argued that strength and quality of green corporate image would have an impact on building green competitive advantage of the firm. They also added that to attain sustainability firms are to exert sufficient effort for establishing green corporate image. Green corporate image is considered as one the crucial catalyst for attaining green competitive advantage (Sellitto, Camfield, & Buzuku, 2020). Green corporate image together with innovation would provide substantial green competitive advantage to the firms (Fernando, Jabbour, & Wah, 2019). Thus, this study seeks to validate the association between green corporate image and green competitive advantage.

Association among E philanthropy, corporate green image, and green competitive advantage Porter and Kramer (2002) emphasized that firms have incorporated environmental philanthropy at the strategic level as a means for building economic and societal image at the same time to respond to the pressure from their stakeholders. Porter and Kramer (2002) argued that philanactivities are performed through active thropic collaboration with environmental groups and agencies. Often, these initiatives are considered as a means for achieving positive green image in the market and responding to environmental regulations. Liu, Wei, Huang, and Tsai (2017) argued that environmental philanthropy is reinforced by business dividends articulated in the form of ECSR. Firms' philanthropic contribution is a very salient attribute of environmental CSR (Brammer & Millington, 2008; Porter & Kramer, 2002).

Firms are nobly motivated by environmental philanthropy where they find themselves as fundamental part of the society. (Jhawar & Gupta, 2017; Richardson & Lanis, 2007). To be good citizen, the organizations must feel indebted to the society for philanthropic activities beyond any direct gain, though the firm would harvest benefits out of these initiatives (Avi-Yonah, 2008; Williams, 2007). Besides, environmental philanthropy is supposed to increase the sense of ethics and eventually contribute to achieve green competitiveness. Most often, firms are engaged in environmental philanthropic

initiatives for alleviating negative image, gaining corporate trust, and enhancing reputation. It is recognized by Koehn and Ueng (2010) that firms can substantially distract public contemplation from adverse events by means of E philanthropic activities. Therefore, based on the literature the study proposes the following hypotheses:

 H_{1a} : E Philanthropy is positively associated with green corporate image of the firm.

 H_{1b} : E Philanthropy is positively associated with green competitive advantage of the firm.

Association among E- community involvement, green corporate image, and green competitive advantage Firms' community building activities through CSR activities contribute substantially toward creating the sense of identity and loyalty among customers (Nik Ramli & Nor Irwani, 2013). Even stronger influence of community involvement is identified if these activities have orientation toward the positive image of the firm. Generally, customers are supposed to endorse positively the interactive initiatives of the firms toward community and society building. In this regard firms are likely to engage in identifying the needs of the society and concentrate on community-firm identification (Fonseca & Ferro, 2015).

Timely efforts by the firms are important factors that form the basis for stakeholders' trust in corporate community involvement (CCI) initiatives (Baik & Park, 2019). In most of the cases, customer-firms identification serves as the credentials for CCI of the firm (Bhattacharya, Sen, & Korschun, 2008; Luo & Bhattacharya, 2006). Organizations are to line up their principles and values in accordance with the needs of the society and the environment (Garriga & Melé, 2004). It is the firm's responsibility to ascertain that the activities of the firm are aimed at the benefit of the society and the environment (Yekini & Jallow, 2012).

Yekini, Adelopo, and Adegbite (2017) identified CCI as an arrangement of corporate social initiative. Firms are to adjust their activities with the pressure of the ethical concern of the market in which they operate and seek green competitiveness by means of green image building. The salient aspects of corporate social initiatives for success are core competencies and corporate strategies in action. CCI is to be linked to the strategic route of the firm in case of successful implementation (Bek, Jones, & Pollitt, 2005). CCI is generally comprised of active involvement of employees and engagement of the firms are more directly linked to core aspects of the organization. The literature suggests that there is a positive relationship between E community involvement and green image of the firm. Hence, the following hypotheses are posited:

 H_{2a} : E Community involvement is positively associated with green corporate image of the firm.

 H_{2b} : E Community involvement is positively associated with green competitive advantage of the firm.

Association among E customer wellbeing, green corporate image, and green competitive advantage Customers perceive a positive image about the firm if they are induced by the environmental efforts of the firm which generally lead to repetitive patronage actions towards the company (Lee, Lee, & Cho, 2018; Trang, Lee, & Han, 2019). In the competitive market some of the firms take aggressive environmental efforts to ensure customer well-being as tool to retain and attract customers which eventually help build green image and green competitive advantage of the firm (Han, Yu, & Kim, 2019). Nowadays firms are increasingly implementing E-CSR to complement various brand loyalty game plans (Han, Chua, Ariza-Montes, & Untaru, 2020). If customers are convinced with the environmental concerns of the company, they most often evaluate the firm more positively by perceiving a connection between the firm and themselves (Fonseca & Ferro, 2015).

Environment friendly products required by the customers may directly or indirectly enhance environmental image and loyalty that may act as an instrument to building green image of the firm (Lin, Chen, & Huang, 2014). In this connection, environmentally sustainable business processes are to be engaged in the organization to respond to ecologically oriented consumption behavior of the customers (Geiger, Fischer, & Schrader, 2018). Studies have revealed that love, respect, and loyalty for brand can be obtained by establishing the sense among the customers about responsibility regarding ecological concern (Han et al., 2019). Rashid et al. (2015) argued that perception of the customers about the quality of the products (services) can be influenced substantially by ensuring environmental CSR. Previous studies reveal a positive association between E customer well-being, green image, and green competitive advantage of the firm. Therefore, the following hypotheses have been proposed:

 H_{3a} : E Customer well-being is positively associated with green corporate image of the firm.

 H_{3b} : E Customer well-being is positively associated with green competitive advantage of the firm.

Association between green image and green competitive advantage From the perspective of ECSR, green image of the firm is generally recognized as mental image or the perception the people held about the

organization's green concern (Widyastuti, 2019). This image is related to behavioral characteristics and effective communication in between the firm and its customers (Widyastuti, 2019). It is considered very crucial as it tends to describe how a particular firm is distinguished from other firms in the market and in effect this green image creates and preserves loyal customer in the long run which tends to provide substantial green competitiveness (Widyastuti et al., 2019); Chen, 2008; Widyastuti, 2019). Firm's green image has been defined by Chen (2010) from the perspective of brand equity as the collection of attitudes toward a particular brand in the mindset of customer which is hooked to ecological pledges and apprehensions.

Direct positive association has been recognized by Lee, Kim, and Kim (2018) between enhancement of green image of the firm and green practices. The outcome of the study revealed that ecological partnership with society is supposed to provide sustainable competitiveness in the firm. The study conducted by Chen (2008) established similar findings of the association between green image and green competitiveness. In this regard, green innovation would exert significant green image to the firm (Chen, 2010). Jain and Kaur (2004) argued that besides satisfying the ecological needs of the customers, green image has the capacity to augment green competitiveness of the firm substantially.

Firms are to ensure ecological communication among stakeholder to disclose the relevance of environmental concerns that the firm is serious about (Abimbola, Lim, Hillestad, Xie, & Haugland, 2010). This communication is considered instrumental to consolidate the collective association with society for creating positive green image (Nair & Menon, 2008). By exerting efforts for building green image, firms can enhance their green competencies and new market besides avoiding the worry of objections from various stakeholders. Barney (1991) and Li, Ngniatedema, and Chen (2017) claimed that in the literature of environmental management, corporate image has been considered very contributory to building green repute, attaining green competitiveness and achieving green performance of the organizations. Firms are expected to boost their ecological and social initiatives parallelly for building green image in the market and reputation among customers (Chen, 2008, 2010; Walker & Wan, 2012). Since, more and more firms are required to establish green management, firms would be establishing green corporate image and eventually green competitiveness (Bansal, 2005).

Both management and marketing studies recognized the weight of ecological pledge to the society. From long before, management of the firms started to relate business activities to environmental endeavors to strengthening the green image of the company which tends to form a valuable instrument to tackle the trouble stemming from the part of the society (Feola, 2015). Based on this backdrop the following hypothesis has been formulated:

H₄: E green image is positively associated with green competitiveness of the firm

Methodology and measurement

Data collection and the sample A self-administered questionnaire survey was carried out in July, 2019 on apparel factories of Bangladesh. The study used random sampling based on 53 apparel firms enlisted with Dhaka Stock Exchange. A total of 340 questionnaires were sent for collecting data. Mid and top-level management employees were selected as respondents since they are expected to possess knowledge about the concern for green management and authoritative power to take relevant operational and managerial decisions. Out of the sent questionnaires 302 questionnaires were returned and 268 were found to be useful for this empirical analysis with a successful response rate of 78.30%. Apparel industry has been selected for the research object because this sector is obliged to strictly handle their environmental waste to comply with environmental regulations.

Moreover, this sector is facing tremendous compliance issues from different foreign buyers. Therefore, there is a huge pressure on this sector both from home and abroad. So, this study is expected to contribute to the exploration of how green image can enhance green competitiveness of the apparel firms. Before the questionnaire is administered to the potential respondents, five experts in the field of study have been consulted for identifying ambiguous terms and ensuring content validity. Besides, to reduce common method variance (CMV) (Lindell & Whitney, 2001), different respondents for different constructs have been considered.

Definitions and measurements of the constructs All the items included in the questionnaire was measured by a five-point likert scale ranging from 1 to 5 denoting strong disagreement to strong agreement. The study utilized the following definitions and measurement of the constructs involved:

Environmental CSR ECSR is conceived as the responsibility of the firms to integrate the ecological concerns in the operations, products, waste management, recycling, reducing practices that would distress the future generation of the country and the world (Mazurkiewicz, 2004). Other views regarding ECSR are described as the ecologically compatible activities of the firms which

should embrace beyond the legal obligations in relation to wider good and co-opting adverse externalities (Lyon & Maxwell, 2008; Portney, 2008). The measurement for the dimensions of ECSR are adapted from the research work of Turker (2009):

E-philanthropy (**EPHI**) EPHI 1:The firm contributes to the projects promoting the well-being of the society.

EPHI 2: The firm invests into the projects for the future generations.

EPHI 3: The firm contributes to support other nongovernmental agencies working in troublesome areas.

E-community involvement (ECOM) ECOM 1: The firm takes part in the initiatives for promoting and improving the natural environment.

ECOM 2: The firm aims at sustainable growth of the society for future generations.

ECOM 3: The firm inspires employees for participating in societal activities voluntarily.

ECOM 4: The firm operationalizes distinct schemes for mitigating the negative effects upon ecology.

E-customer wellbeing (ECUS) ECUS 1: The firm shows respects to the rights of customers and legal aspects.

ECUS 2: The firm discloses complete and precise information regarding products for the customers.

Table 1 Demographic data of the respondents

	Frequency	Percentage
Gender		
Male	221	82.7
Female	47	17.3
Age		
35–39	19	7
40–44	153	57
45–49	40	15
50-54	35	13
55–59	13	5
60 and above	8	3
Years of experience		
5–10	212	79
More than 10 years	56	21
Education		
Graduate	29	11
Postgraduate	239	89
Employment status		
Employed	249	93
Self-employed	19	7

ECUS 3: The firm considers customer satisfaction as a very high priority.

Green corporate image (GCI) Based on the definition of green corporate image provided by Chang and Fong (2010), this study operationalized the term as the perceptions established based on the interplay among customer, firm, community, and personnel of the organization which are connected to the ecological pledges and apprehensions for environment. Based on the research by Walters (1978) and Chen (2008) the measures of green corporate image have been adapted from the work of Chang and Fong (2010).

GCI 1: The firm produces trustworthy and steady green products.

GCI 2: The firm has the capability of satisfying green requirements of customers.

GCI 3: The firm possesses satisfactory ecological repute.

GCI 4: The firm has outstanding performance regarding green management and environmental innovation.

Green competitive advantage (GCA) According to Lin and Chen (2017) green competitive advantage has been

defined as the critical aspects of the firms for enhancing attainment of sustainable progress. Based on the work of Lin and Chen (2017), the measures of green competitive advantage involve four items:

GCA 1: The firm has low-cost competitive advantage regarding green management in comparison with major competitors.

GCA 2: The firm offers better quality green products in comparison with major competitors.

GCA 3: The firm invests more money in environmental research and development and green innovation than the competitors.

GCA 4: The firm has greater capability than competitors regarding green management.

Findings

With a view to understanding the demographics of the respondents, a list of relevant information has been obtained from the questionnaire. Table 1 lists descriptive statistics of the respondents. Among the respondents 83% of them are male and 17.3% are found female. Every respondent had at least 5 years of experience at the managerial position of the organization.

Table 2 Scale summarv

Scale items	Item loading	Cronbach's alpha	Composite reliability
E-Philanthropy		0.872	0.872
EPHI1	0.841		
EPHI2	0.842		
EPHI3	0.816		
E-Community Involvement		0.931	0.932
ECOM1	0.839		
ECOM2	0.917		
ECOM3	0.904		
ECOM4	0.855		
E-Customer Wellbeing		0.892	0.893
ECUS1	0.814		
ECUS2	0.842		
ECUS3	0.915		
Green corporate image		0.918	0.920
GCI1	0.778		
GCI2	0.880		
GCI3	0.888		
GCI4	0.897		
Green competitive advantage		0.835	0.835
GCA1	0.729		
GCA2	0.803		
GCA3	0.695		
GCA4	0.762		

Table 3 Measures of convergent validity and discriminant validity

,							
	CR	AVE	ECUS	ECOM	EPHI	GCI	GCA
ECUS	0.893	0.736	0.858				
ECOM	0.932	0.773	0.481	0.879			
EPHI	0.872	0.694	0.250	0.253	0.833		
GCI	0.920	0.743	0.418	0.548	0.249	0.862	
GCA	0.835	0.560	0.194	0.360	0.470	0.353	0.748

Among the respondents, 21% were having experience for more than 10 years. Eighty-nine percent of the respondents had post-graduation degree while only 11% of them were having just graduation degree. The analysis also shows that 7% are in the age bracket of 35–39; 57% are in the interval of 40–44; about 15% are aged between 45 and 49 years; 13% belong to age group of 50–54; 5% of the respondents are in the range of 55–59; and 3% are of 60 or more years of age. According to employment status, 93% of the respondents are employed and only 7% are self-employed.

Measurement model

This study employed the approach of structural equation modelling with Analysis of a Moment Structures (AMOS) 23 while testing the measurement model beforehand examining the structural model as recommended by Anderson and Gerbing (1988) and Sethi and King (1994). The measures of reliability and validity were applied to test adequacy of individual items and related composites (Beatty & Ferrell, 1998). The reliability of each construct has been tested by means of Cronbach's Alpha (Santos, 1999). To test the convergent validity of the measures concerned, significance of the factor loadings (Anderson & Gerbing, 1988) and the corresponding composite reliability (CR) have been examined. Besides, average variance extracted (AVE) was compared to squared correlations amid the latent variables for ascertaining discriminant validity (Fornell & Larcker, 1981). The indicator variables addressed are presented in Table 2.

It has been revealed from the estimates regarding CR that all the values were greater than the minimum threshold of 0.70. The evaluation of the convergent validity shows that all of the factor loadings are found to be significant and the values of the CR of each latent construct are greater than the threshold value of 0.70.

Discriminant validity of the measurement model is evaluated by Fornell and Larcher's criterion (1981). The measurement model is supposed to pass the discriminant validity test if the AVE is more than the correlations between the corresponding measure and all other measures. According to the results depicted in Table 3 every squared root of AVE is found to exceed the values on off-diagonal position in corresponding row and column. Elements in bold font exhibit squared roots of AVE. The results signify that the required criterion for establishing discriminant validity is adequately met (Table 3).

It has been revealed in the Table 4 that all the fit indices are safely within the cut-off values (Root mean square error of approximation (RMSEA) < .05, comparative fit index (CFI) > 0.95, standardized root mean square residual (stdRMR) < 0.05, goodness-of-fit index (GFI) > 0.90, normed fit index (NFI) > 0.95 and Tucker-Lewis index (TLI) > 0.95), incremental index of fit (IFI) > 0.90, relative fit index (RFI) > 0.90 (Bentler & Bonett, 1980; Hu, Bentler, & Hoyle, 1995; Bollen, 1986).

Structural equation model

The fit indices showed good fit of the structural model: $\chi^2 = 194.572$ (p = 0.000), df = 125, CMIN/df = 1.557, RMSEA = 0.046, CFI = 0.979, stdRMR = 0.026 GFI = 0.930, NFI = 0.953, and TLI = 0.974. It is found that all the fit indices satisfactorily met threshold criteria. The data analysis validates all the hypotheses devised to examine the research topic. Figure 2 reveals the final model with corresponding path coefficients along with the level of significance regarding each of them (Table 5).

It is found that E-Philanthropy ($\beta = 0.186$, t-value = 3.321), E-Community Involvement ($\beta = 0.547$, t =6.216), and E-Customer Wellbeing ($\beta = 0.233$, t =2.741) has positive impact on green corporate image with statistical significance at least at .05 level supporting H_{1a} , H_{2a} , and H_{3a} . The data analysis also provides evidence for supporting H_{1b}, H_{2b}, and H_{3b}. E-philanthropy $(\beta = 0.35,$ *t-*value =5.453),community involvement ($\beta = 0.24$, *t*-value = 2.564), and E-customer wellbeing ($\beta = 0.29$, t-value =3.247) have positive impact on attaining green competitive advantage. Finally, it is supported that corporate green image (β = .27, t-value =2.28) has positive influence on environmentally sustainable competitive advantage.

Table 4 Goodness-of-fit indices

χ^2	CMIN/df	df	Absolute fit measure		Incremental fit measures	Parsimo	nious fit m	neasures	
			RMR	RMSEA	NFI	IFI	CFI	TLI	RFI
194.6 (p = 0.0)	1.56	125	0.026	0.046	0.95	0.979	0.98	0.97	0.930

Discussions

Good fit for the research model and evidence for all the hypotheses have been obtained. Hypotheses H1a and H1b have been supported based on data analysis. E Philanthropy positively influences green corporate image and green competitive advantage in the context of Bangladesh. E Philanthropy is popular among the ECSR forms in the context of apparel sector of Bangladesh because it is directly related to monetary contribution by the firm to the society. Kim, Yin, & Lee (2020) also documented similar findings and claim that E Philanthropy can substantially contribute to building green corporate image and providing green competitive advantage. In the same line, Ramutsindela (2009) argued that firms can avail the opportunities for understanding the association among environmental agencies, various stakeholder groups, and the settings based on which the associations are created and maintained. These associations are considered crucial for explaining the attributes of environmental philanthropy and the implication of the attributes for environmental philanthropy in the context of building green corporate image and green competitive advantage. Environmental philanthropy and businesses are considered complementary to each other.

The hypotheses H_{2a} and H_{2b} of having positive impact of E-community involvement on green corporate image and green competitiveness have been validated by data analysis. The positive association between E Community involvement and corporate green image and green competitive advantage was found because, among the respondents, E community involvement is considered as one the critical means of communication between the organization and the society. Different stakeholders of the community find E community involvement in

different societal activity as a bonding between the business community and the society which is found to be conducive to building green corporate image and attaining green corporate advantage (Lakin & Scheubel, 2017). Firms engaged in corporate community involvement with the objective of improving societal and environmental settings by means of contributing to all types of resources can achieve green corporate image and green competitiveness (LaFrance & Lehmann, 2005). It is often argued that corporate community involvement is supposed to ensure green reputation and benefits to the community while engaging in CCI. Firms should also take initiatives to gauge the community engagement aimed at holistic development of the environment and society (Yekini et al. (2017).

Hypotheses H3a and H3b are also supported based on the estimated results. Based on the responses of the study respondents, it is evident that E customer wellbeing is a critical factor to building corporate image and eventually it helps attain green competitive advantages. This is because retention of customer with satisfaction may be possible if the customers keep in mind that organizational endeavors are concentrated around environmental customer well-being (Kim, Chua, Lee, Boo, & Han, 2016). Moreover, clients of the apparel sector are now very concerned with environmental compliances. In this connection, it has been confirmed by empirical evidence that customers tend to be inclined to display positive attitude with the firm when the firms are perceived socially and environmentally responsible by the customers (Hong, Yang, & Rim, 2010) which eventually leads to enhanced green corporate image and green competitiveness. Another study supplements the previous research mentioning that customers become

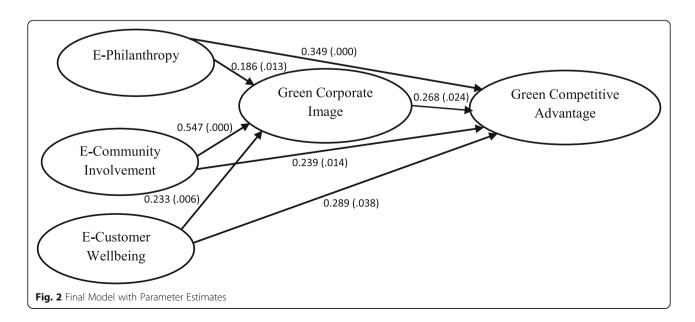


Table 5 Results of the proposed model

Hypotheses	t-values	<i>p</i> -value	Supported
H_{1a} : E Philanthropy is positively associated with green corporate image of the firm.	0.186	0.013	Yes
H_{1b} : E Philanthropy is positively associated with green competitive advantage of the firm.	0.349	0.000	Yes
H_{2a} : E Community involvement is positively associated with green corporate image of the firm.	0.547	0.000	Yes
H_{2b} : E Community involvement is positively associated with green competitive advantage of the firm.	0.239	.014	Yes
H_{3a} : E Customer well-being is positively associated with green corporate image of the firm.	0.233	0.006	Yes
H_{3b} : E Customer well-being is positively associated with green competitive advantage of the firm.	0.289	0.038	Yes
H ₄ : E Green image is positively associated with green competitiveness of the firm.	0.268	0.024	Yes

supportive and cordial to those firms which engage themselves in environmental corporate social responsibilities (Du, Bhattacharya, & Sen, 2007). When the firms are identified as green concern, the customers get emotionally committed to the firm and its products as well (Du et al., 2007). Moreover, the perception of the customers regarding green CSR tends to contribute to the sense of green image of the firm (Lichtenstein, Drumwright, & Braig, 2004). Building positive GCI among the customers of the firm is supposed to be inevitable to compensate adverse ecological externalities (Russo & Fouts, 1997; Walker & Wan, 2012). Saha and Darnton (2005) argued that creating and maintaining ecological communication among the stakeholders are useful for enhancing firm's GCI.

Empirical evidence of the study revealed that positive association between green image and green competitive advantage has been validated by data analysis (H4). In the context Bangladesh, apparel manufacturers are getting more and more inclined to green compliance which is reflected by the opinion of the respondents. Organizations are now showing forward-thinking gesture and posture toward building green corporate image which in turn provide substantial green competitive (Moravcikova, Krizanova, Kliestikova, & Rypakova, 2017). Green image of the firms is said to be the outcome of the green awareness of the members of the organizations and green perception of the society which eventually contribute to enhancement of green competitiveness. Sustainable green performance of the firms would be expected from the firms possessing strong green image (Burnham, Frels, & Mahajan, 2003; Dick & Basu, 1994). Established long term green image may enable the firms to balance the development and ecological well-being. It helps firms establish green competitiveness by means of green innovation, decreasing compliance cost, sustainable upgradation of the firm. It has been revealed by the research that social acceptance is one of the major aspects that enable the firm to attain, protect, and maintain sustainable green competitive capability. Green image of the organization can conenvironmental encounters the as opportunity which in turn enhance green competitiveness Chang and Chen (2013).

Conclusion

Considering the contemporary demand of being green, modern organizations are nowadays trying to build green corporate image to enhance green competitive advantage through environmental corporate social responsibilities. Therefore, it is crucial to comprehend the determinants of green corporate image and green competitive advantage to attain competitive edge in the market. This study attempted to devise a research framework to examine the influence of ECSR dimensions on green corporate image and green competitive advantage. The results of the data analysis not only help build corporate image and enhance green competitive advantage but also contribute to the existing literature. Aragón-Correa and Sharma (2003) argued that firms should devise strategies for the transition from conventional to highly proactive advanced ecological gesture that are supposed to shield and preserve ecology and consequently uphold the image and competitiveness of the firm (Adomako, Ning, & Adu-Ameyaw, 2021). The results of the present study reveal that green corporate image has been instrumental to modern business settings regarding attaining sustainable competitiveness in the organization. In this connection, ECSR can play a crucial role in building both green corporate image and green competitiveness. The main managerial implications and theoretical contributions are mentioned below:

Theoretical contribution

Nowadays the corporate culture is often understood from the perspective of ecological legitimacy of organizations which is based on the acceptability of ecological sensitivity of the stakeholders (Hunter & Bansal, 2007). There are several theoretical contributions of this study. Firstly, the present study attempted to contribute to the burgeoning ecological literature by integrating three interrelated concepts – environmental CSR, green corporate image, and green competitive advantage while understanding their interplay among them in the context of today's grave concern for safeguarding environment. Secondly, this study has sought to draw environmental insight in the context of a developing country like

Bangladesh where examination of willingness of implementing ECSR requires attention of the business scholars for devising appropriate strategies. Thirdly, the results of this study strengthen some of the past studies relating to green corporate image and green competitive advantage. Besides, this study examines the interplay among the concept of ECSR, green corporate image and green competitive advantage which is nowadays considered very crucial in the new context of environmental changes.

Managerial implication

The results of this study are expected to help management of the organization with regard to the environmental concerns in a number of ways. Firstly, in the present business settings of Bangladesh, even though major brands already shifted operations in the direction of establishing environment-friendly business processes, currently they are encountering the challenges of coping with customer cynicism regarding firms' green actions (Kumar & Christodoulopoulou, 2014). Thus, this study provides significant insight while understanding the interplay among ECSR, GCI, and GCA. The effects of ECSR dimensions upon green corporate image and green competitiveness would suggest new business scenario which seek novel set of green strategies for coping with the environmental challenges (Kumar, 2014). Secondly, to build green corporate image and green competitiveness, proactive green strategies relating to ECSR are required (Walker & Wan, 2012). The perception about corporate image is described as the interplay among firms, their members, clients, and the society as a whole (Saeednia & Valahzaghard, 2012) which in effect, creates the capability of positioning the firms in the mind of customers (Leblanc & Nguyen, 1997). Thirdly, with dominant ecological awareness of customers and associated environmental principles, companies are to undertake green marketing initiatives to satisfy green market into various customer bases for building green corporate image. It is also recommended by the study that managers are to enhance firms' ecological legitimacy by exerting initiatives regarding upholding green image of the firm (Amores-Salvadó, Martín-de Castro, & Navas-López, 2014).

Limitation and future research direction

Although the results of the study are expected to contribute to the existing burgeoning literature, some limitations need to be addressed while construing the outcomes. Firstly, the data collected are from a single industry, thus, carful attempts are expected while generalizing the results to other business arena. The research framework and the indicator variables were set in the context of Bangladesh, thus, caution is to be taken while

applying the framework in other countries. Secondly, the measurement model and the structural model are evaluated based on 268 observations which is although a good sample size, does not meet the perfectly ideal requirements of sample size. Future studies could use this research framework in other domains of businesses. Future research may include other dimensions of ECSR for examining the impact of ECSR upon green corporate image and green competitive advantage of the firms.

Abbreviations

GCA: Green competitive advantage; GCI: Green corporate image; ECSR: Environmental corporate social responsibility; CSR: Corporate social responsibility; BGMEA: Bangladesh Garments Manufacturers and Exporters Association; BBS: Bangladesh Bureau of Statistics; E-philanthropy: Environmental philanthropy; E-Community involvement: Environmental community involvement; E-Customer Wellbeing: Environmental customer wellbeing; GM: Green management; CIPD: Chartered Institute of Personnel and Development in London; CCI: Corporate community involvement; CMV: Common method variance; EPHI: E-Philanthropy; ECOM: E-Community Involvement; ECUS: E-Customer Wellbeing; CR: Composite reliability; AMOS: Analysis of a moment structures; AVE: Average variance extracted; RMSEA: Root mean square error of approximation; CFI: Comparative fit index; stdRMR: Standardized root mean square residual; GFI: Goodness-of-fit index; NFI: Normed fit index; TLI: Tucker-Lewis index; IFI: Incremental index of fit; RFI: Relative fit index

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Competing interests

The author(s) declare(s) that they have no competing interests.

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