



Stakeholders' Pressure on Carbon Neutrality. The Role of Environmental Leadership and Green Finance

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Received: 18 October 2025

Accepted: 13 February 2026

DOI: <https://doi.org/10.32479/ijefi.22408>

ABSTRACT

This study aims to examine the influence of stakeholders' pressure on carbon neutrality and the role of environmental leadership and green finance. Data were collected from 451 front-line employees from small and medium manufacturing firms through a judgmental sampling technique, using a Likert-scale questionnaire administered in face-to-face surveys. Hypothesis testing was conducted by means of PLS-SEM (Partial Least Squares-Structural Equation Modeling). The findings revealed that stakeholder pressure significantly influences carbon neutrality. Stakeholders also influence the adoption of green finance and the form of environmental leadership in a firm. Green finance and environmental leadership have a positive and significant impact on carbon emissions. The study discovered that green finance and environmental leadership mediate the relationship between stakeholder pressure and carbon neutrality. Finally, both green finance and environmental leadership serially mediate the relationship between stakeholders' pressure and carbon neutrality. This study shows how different kinds of stakeholders in Bangladesh respond to carbon neutrality and the beneficial effects of green financing and environmental leaders on carbon neutrality, which have not been covered by another research.

Keywords: Stakeholders' Pressure, Carbon Neutrality, Environmental Leadership, Green Finance

JEL Classifications: Q56

1. INTRODUCTION

Carbon emissions have increased at an alarming rate in the world. It brings a lot of negative consequences to Earth. A few recent repercussions of global warming on our living environment include the extinction of species, loss of biodiversity, ocean acidification, glacier retreat, melting of Arctic and Antarctic ice, sea level rise, insects, drought, floods, and wildfires. Since the manufacturing sector is the main producer of carbon emissions, its contribution will be especially important in the effort to cut carbon emissions, which will require cooperation from other sectors of the economy (Ul-Durar et al., 2023). Trade between countries has multiplied many times over as a result of technological advancements. Fossil fuels play a major role in the transportation of products required to maintain a steady supply of goods in global trade. The amount of greenhouse gases in the atmosphere is increased by the usage of fossil fuels. Fossil fuel consumption increases the amount of

greenhouse gases in the atmosphere, harming the ecosystem as a whole (Ali et al., 2023). The increased demand from stakeholders for corporate accountability for environmental impacts has led to a stronger drive for carbon neutrality. The demands imposed by regulatory frameworks are intensified. Globally, governments are enforcing more stringent emissions restrictions, which makes it necessary for enterprises to exhibit their dedication to carbon neutrality (Kumar et al., 2024). There is evidence in the literature that large organizational changes can result from stakeholder pressure. To achieve carbon neutrality, carbon emissions must be reduced to a level that leaves zero in the atmosphere and can be permanently absorbed and stored by nature and other carbon dioxide removal techniques. An international reaction is necessary to stabilize greenhouse gas emissions, mitigate the risks of climate change and poverty, and attain sustainable development because carbon emissions can not only harm the environment, but can also have a negative financial impact (Sun et al., 2022). Numerous

actions have been implemented worldwide, in both developed and developing nations, to decrease carbon emissions. A company trying to become net zero might attract investors and shareholders who are searching for businesses with sustainable long-term plans.

As the nation's economy continues to develop, the cost of this high-pollution growth is rising at an alarming rate. Thus, the country's continued growth and CO₂ emissions reduction depend on the shift to a low-carbon economic development model (Balsalobre-Lorente et al., 2018; Zhou et al., 2019). Reaching net-zero emissions is a goal shared by an expanding coalition of nations, cities, companies, and other organizations. More than 140 nations have established a net-zero objective, which accounts for over 88% of global emissions. These nations include the top polluters, China, the US, India, and the EU. The Paris Agreement calls for a maximum global warming of 1.5°C, and to achieve this goal, emissions must be cut by 45% by 2030 and reach net zero by 2050. The United Nations estimates that an annual investment of \$1.5 trillion in green finance is required to accomplish the objectives of the Paris Agreement. Approximately three-quarters of current greenhouse gas emissions originate from the energy sector, which also holds the key to mitigating the most severe consequences of climate change. Carbon emissions would be significantly reduced if energy from renewable sources, such as wind or solar, were to replace gas, oil, and coal-fired power plants, which emit pollution. Besides green finance, environmental leadership is required to reduce carbon emissions. Jabbour et al. (2019) stress the need to incorporate sustainability into business plans, pointing out that companies that have strong environmental leadership have a higher chance of being carbon neutral. Involving stakeholders is essential to environmental leadership. Achieving a low-carbon economy is especially crucial for emerging nations like Bangladesh, whose economies rely heavily on fossil fuels. Empirical investigations show that Bangladesh's carbon footprint estimates are increased by total energy consumption, the use of fossil fuels, and the use of natural gas (Murshed et al., 2021). During the Glasgow climate summit, Bangladesh reaffirmed its commitment to reducing carbon emissions by 89.47 million tons, or 21.85% of carbon dioxide, by 2030 as part of the worldwide effort to control emissions contributing to climate change (The Business Standard, 2021). Businesses' relationships with stakeholders become an important source of creative resources through innovative networks. Prior studies show that a large number of stakeholders exert pressure on businesses to finance green projects in order to reduce ecological risk (Indriastuti and Chariri, 2021).

Numerous studies have provided insight into how stakeholders may impact the adoption of ecological practices (Baah et al., 2021; Alt et al., 2015), ESG (environmental, social, and governance) performance and financial performance (Lee and Raschke, 2023), green export business strategy (Bıçakcıoğlu-Peynirci and Tanyeri, 2022), CSR commitment (Adomako and Tran, 2022), disclosure of environmental information (Sutantoputra, 2022), and environmental competitiveness (Seroka-Stolka and Fijorek, 2022).

Even the role of green finance and environmental leadership on the relationship between stakeholders' pressure and carbon neutrality is absent. Therefore, there is still a dearth of research on

the mediating role of green finance and environmental leadership between stakeholder pressure and carbon neutrality. It is important to investigate a basic research question: Can SHP achieve carbon neutrality at the corporate level by utilizing green financing and environmental leadership? Based on this inquiry, the following research questions (RQs) are intended to be examined in this study:

- RQ1. How does SHP affect carbon neutrality?
- RQ2: In what ways does SHP support companies looking to expand their use of green finance?
- RQ3: In what ways does SHP assist organizations in becoming leaders in the environmental field?
- RQ4: Is there a relationship between SHP and carbon neutrality that is mediated by green finance and environmental leadership?

The authors addressed the aforementioned RQs and hypotheses about stakeholders' pressure, green finance, environmental leadership, and carbon neutrality using partial least squares structural equation modelling (PLS-SEM).

2. THEORETICAL FOUNDATION AND LITERATURE REVIEW

2.1. Leadership Theory

Leadership is normally defined by the personalities, abilities, and behaviors of a leader (Horner, 1997). Blake et al. (1964) created a two-factor model of leadership behavior- "concern for output" and "concern for people." Throughout history, several forms of leadership have arisen, such as Transactional leadership. Transactional leadership is rooted in more conventional perspectives of employees and companies, and it entails the leader's positional authority to utilize followers to accomplish tasks (Forester and Clegg, 1991). However, transformational leadership looks for ways to inspire followers by meeting their higher order demands and involving them more completely in the work process (Bass, 1985). The world leaders declared 17 sustainable development goals in 2015. Business firms from then got immense pressure to implement these sustainable goals to ensure the firm's sustainability. Leaders in many firms use green and renewable energy for the production process, which substantially reduces carbon emissions through inspiring Sustainable Development Goal 07(Ensure access to affordable, reliable, sustainable and modern energy for all).

Therefore, leadership is required for formulating a strategy that uses green finance to limit the carbon emissions in the firm, which ensures business sustainability. Green leadership significantly impacted environmental policies, environmental responsibility, green self-efficacy, and green mindfulness (Kardoyo et al., 2020). According to Pan and Tian (2017), environmental leadership is the ability of organizational leadership structures to promote environmentally friendly behavior and carry out a sustainable development goal. Environmental leadership is crucial to protecting the environment because it encourages the use of biofuels or green energy in the logistics sector, enforces government regulations and green energy policies, and supports the green environment by creating environmental strategies

(Noorliza, 2020). The development of solar technology contributes to the reduction of carbon dioxide emissions (Sun et al., 2024). Environmental leaders, particularly top leaders, integrate a manufacturing process that reduces carbon emissions to improve product quality and satisfy many stakeholders in order to ensure the sustainability of the firm.

2.2. Stakeholder Theory

Stakeholder theory (ST) began as a theory that predicted organizational strategy (Phillips et al., 2003) and management decisions (Donaldson and Preston, 1995). According to ST, firms seek to provide a variety of advantages for various stakeholders, which include communities, civic societies, governments, shareholders, suppliers, employees, and customers (Freeman, 1984). Stakeholder theory describes the mutually beneficial connections that exist between businesses and their different stakeholders. Companies must consider the demands of their stakeholders (customers, employees, communities, authorities), and the next generation (Sun et al., 2024). By using stakeholders' theory, firms may be more strategic, create more value, and protect their sustainability and long-term success (Mahajan et al., 2023). Nowadays, businesses prioritize long-term sustainability. As a result, businesses make numerous strategic choices to ensure their long-term viability. Firms understand that including stakeholders in the reduction of carbon emissions is essential for business sustainability as part of strategic decision-making since it increases stakeholder satisfaction and fortifies the company's long-term viability. This strategy enhances a business's standing, fosters trust, and promotes teamwork, all of which increase the likelihood that environmental and commercial objectives will be met. It also asserts that businesses can succeed by taking stakeholders' interests into account (Donaldson and Preston, 1995). Stakeholder theory focuses on activities for Net Zero and carbon emission reduction, which are pertinent to the SME setting. In this attempt, the firm involves a variety of stakeholders, highlighting the necessity of inclusive, collaborative efforts to support small businesses in their transition to a sustainable, low-carbon future (Mensah et al., 2024).

2.3. Stakeholder Pressure

The increased demand from stakeholders for corporate accountability for environmental impacts has led to a stronger drive for carbon neutrality. The demand from investors has increased dramatically, especially from institutional investors. Consumers also play a vital role, as preferences evolve toward eco-friendly items, encouraging corporations to conform their practices to public expectations. The demands imposed by regulatory frameworks are intensified. Globally, governments are enforcing more stringent emissions restrictions, which make it necessary for enterprises to exhibit their dedication to carbon neutrality (Kumar et al., 2024). There is evidence in the literature that large organizational changes can result from stakeholder pressure. However, these tactics' efficacy varies, and some businesses struggle to strike a balance between the needs of their stakeholders and their potential to make money. Stakeholder pressure is bringing about a convergence that is changing how corporations approach carbon neutrality and encouraging creativity and responsibility in sustainability initiatives.

2.4. Environmental Leadership

Doppelt (2017) asserts that transformative leadership approaches are necessary for environmental leaders to inspire and encourage teams to work toward sustainability objectives. This strategy not only increases worker dedication but also stimulates creative approaches to lowering carbon emissions. Furthermore, Jabbour et al. (2019) stress the need to incorporate sustainability into business plans, pointing out that companies that have strong environmental leadership have a higher chance of being carbon neutral. Involving stakeholders is essential to environmental leadership. Dyer et al. (2011) assert that decision-makers who actively include stakeholders in their processes are better equipped to put carbon neutrality plans into action. Moreover, research indicates that to support environmental leadership, firms should foster a culture of sustainability. Effective environmental leadership toward the goal of carbon neutrality requires stakeholder participation and a supportive business culture.

2.5. Green Finance

The advancement of green finance can steadfastly support carbon neutrality (Qin et al., 2023). GF promotes the development of green technology and the restructuring of energy systems as a crucial means of meeting the Paris Agreement's carbon emission objectives, offering crucial financial support for low-carbon transitions (Wang et al., 2021). Reaching a balance between the amount of carbon released into the atmosphere and the amount of carbon absorbed is known as carbon neutrality. According to research, businesses that participate in green finance have a higher likelihood of implementing sustainable practices, which can improve their performance and reputation (Eccles et al., 2014). For larger carbon neutrality targets to be met, this change is essential. To efficiently mobilize capital towards carbon neutrality, the literature suggests that creative financial mechanisms and cooperation between the public and private sectors are necessary.

2.6. Carbon Neutrality

According to Chen et al. (2024), nations that have made investments in wind and solar energy have experienced a considerable decrease in their carbon footprints. Furthermore, advancements in energy efficiency have played a critical role in reducing overall emissions (Miller et al., 2024). Technologies for carbon capture and storage (CCS) have become essential for reducing emissions from industrial sources. Up to 90% of CO₂ emissions from power plants can be captured using CCS, according to studies (Nguyen et al., 2023). Reforestation and sustainable agriculture are two land use modifications that are particularly important for achieving carbon neutrality. Additionally, using sustainable farming methods can boost soil carbon storage and lower emissions (Kumar et al., 2022). Non-renewable energy sources such as coal, oil, and natural gas are significant contributors to CO₂ emissions (Alsedrah, 2024). Stakeholder theory highlights how important stakeholder involvement is to businesses' pledges (UNECE, 2022; Zhang et al., 2022) and choices to become carbon neutral (McGahan and Pongeluppe, 2023; Odziemkowska and Henisz, 2021). According to He et al. (2024) and K ok et al. (2016), a firm's resource-based view recognizes operational capabilities that are valuable, uncommon, unique, and challenging to replace both inside the company and throughout the supply chain structure

as possible sources of strategic value from carbon neutrality. The legitimacy theory clarifies the significance of standards, reporting, and indices that track a company's progress toward carbon neutrality by explaining how businesses position themselves to be more palatable and genuine to stakeholders (Ertimur et al., 2020; Velte et al., 2020). Based on the above literature review and theoretical background, the research framework (Figure 1) and the corresponding hypotheses were developed, and the test results are presented in Figure 2.

3. HYPOTHESIS DEVELOPMENT

3.1. Stakeholders' Pressure and Carbon Neutrality

Carbon neutrality is the state of having net-zero emissions of carbon dioxide (CO₂), which is achieved by balancing CO₂ emissions and removals in order to prevent the atmospheric buildup of CO₂ that contributes to global warming. Managing the shift to a low-carbon economy presents opportunities and challenges for governments, corporations, and individuals. According to Freeman (1984), a stakeholder is any group or individual that has the potential to influence or be impacted by the accomplishment of the organization's goals. Stakeholder theory describes the mutually beneficial connections that exist between businesses and their different stakeholders. In response to different stakeholder pressures, businesses use carbon mitigation techniques to manage climate change-related risks and opportunities (Dhanda

et al., 2022). According to a study on the readiness of airline passengers by McLennan et al. (2014), travellers from the UK and Europe are more likely to contribute to carbon offset projects than those from Asia. In their investigation of the effects of various communication messages on travelers' propensity to pay for carbon neutrality (Ritchie et al., 2021), they discovered that they are more inclined to fund domestic carbon offset initiatives than global ones. In Australia, female passengers are more eager than male passengers to pay for carbon-neutral initiatives (Choi et al., 2018). Italian travelers' willingness to pay for carbon neutrality primarily depends on the kind and efficacy of the initiative they contribute to (Rotaris et al., 2020).

Yunus et al. (2020) investigates if the decision to implement carbon management techniques is influenced by perceived demands from stakeholders who have a high potential for cooperation and/or pose a threat to the firm's survival. When there was little legislative pressure, internal stakeholders such as shareholders and top management who had strong environmental values were essential to a proactive transition to carbon neutrality (Zhang et al., 2023). Previous research results show a favorable correlation between circular economy integration and stakeholder pressure, which helps supply chains achieve carbon neutrality (Garg et al., 2025). The government and academics are primarily responsible for advancing the low-carbon transition through technological innovation and policy (Jiao et al., 2025). A growing number of stakeholders are calling for concrete and transparent measures to reduce carbon emissions (Kumarasiri, 2017). Many academics affirm that a significant number of Businesses may face pressure from a variety of stakeholders, such as regulators, rivals, customers, suppliers, NGOs, the media, senior management, shareholders, workers, and others, to lower their carbon emissions (Jeswani et al., 2008; Delmas and Toffel, 2008, Yunus et al., 2020). Stakeholder pressure and, to a lesser extent, competitiveness

Figure 1: Research framework

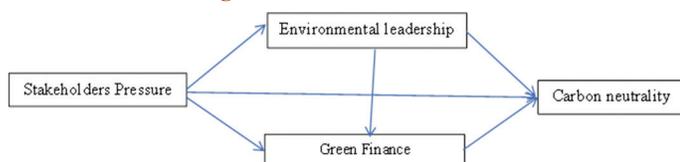
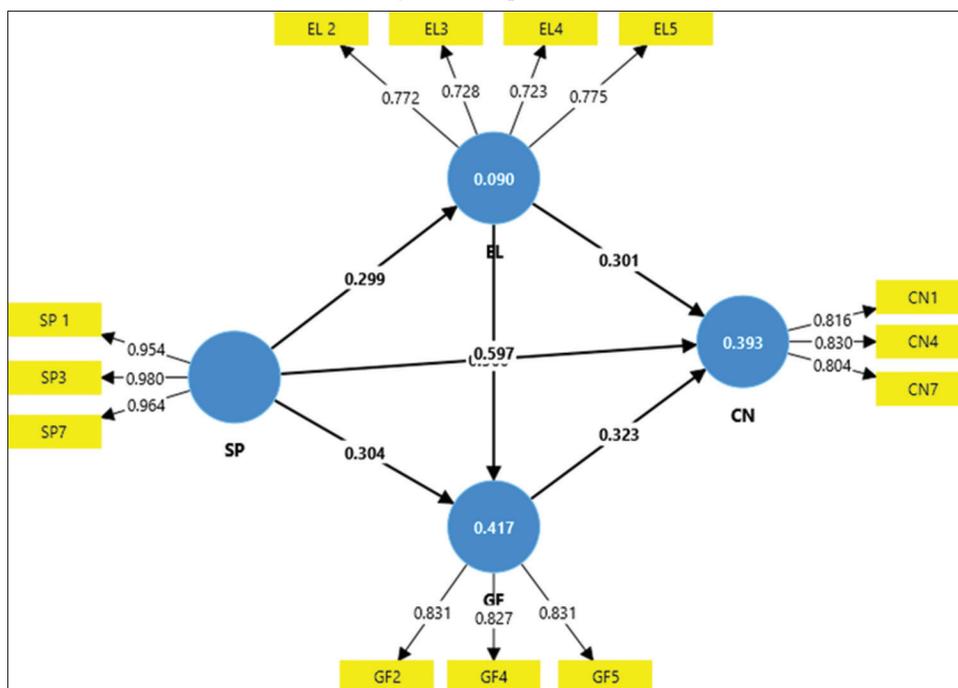


Figure 2: Output model



expectations are identified to be the main drivers of low-carbon operational practices (Böttcher and Müller, 2015). There is a positive relationship between stakeholders' pressure and low-carbon innovation (Jiang et al., 2020). From the above discussion we develop the following hypothesize:

H₁: There is a positive relationship between stakeholder pressure and carbon neutrality.

3.2. Stakeholder Pressure and Environmental Leadership

Environmental leadership is directing constructive change in the direction of a better future for the environment, frequently through persuasion and organization mobilization to attain ecological sustainability over the long term. It is also becoming more widely acknowledged as a strategic necessity for businesses in a world that prioritizes sustainability. Environmental leadership is heavily influenced by stakeholder pressure, which comes from a variety of sources, including governments, investors, consumers, workers, and non-governmental organizations. Stakeholder pressure is the term used to describe the requirements and standards that internal and external stakeholders place on environmental performance (Freeman, 1984; Mitchell et al., 1997). Studies indicate that stakeholder pressure, particularly from influential or important stakeholders, raises the possibility that businesses would implement environmental initiatives. According to Henriques and Sadosky (1999), investor and customer pressure had a big impact on businesses' adoption of environmental measures, which influences the formation of environmental leadership. The significance of managerial perception of stakeholder pressure in deciding between proactive and reactive environmental initiatives was highlighted by Aragón-Correa and Sharma, (2003). Effective environmental leaders are more aware of stakeholder expectations, recognize the importance of environmental protection, and are dedicated to organizational change. Examples of this include identifying waste-generating production processes, setting up environmental pollution monitoring systems, and raising employee environmental awareness (Sharma, 2000; Papagiannakis and Lioukas, 2012). The environmental leadership of top managers is frequently associated with a company's environmental response (Boiral et al., 2009). From the prior studies, it is expected that firms develop environmental leaders who will promptly respond to minimize negative environmental issues such as carbon emission in order to achieve organizational success to meet diverse stakeholders' pressure. From the above discussion, we can hypothesize the following:

H₂: There is a positive relationship between stakeholder pressure and environmental leadership.

3.3. Stakeholders' Pressure and Green Finance

Green finance (GF), sometimes referred to as sustainable finance or environmental finance, is the practice of banks using credit to support sustainable development and funding sustainable business initiatives (Kolk and Pinkse, 2010). GF is the term used to describe the allocation of funds to assist environmentally friendly projects and programs, like energy efficiency, renewable energy, and sustainable transportation (Soundarrajan and Vivek, 2016; Liu et al., 2022). According to Richardson (2009), GF facilitates the mobilization of funds to assist the shift to a low-carbon economy

and to fund initiatives that advance environmental sustainability. Stakeholders today demand sustainable practices from businesses in addition to their primary goal of making a profit. Green finance is a helpful tool for addressing environmental concerns and promoting sustainable development (Wang et al., 2019). Green credit, environmental reputation, and virtual CSR are ways that stakeholder pressure improves environmental performance (Shahzad et al., 2024). Green finance is significantly shaped by governments and regulatory agencies through laws, incentives, and transparency standards. Businesses are compelled to implement green finance practices due to consumer demand for sustainable goods and services as well as non-governmental organizations' (NGOs') advocacy. Firms allocate green finance to produce green products in order to improve environmental performance and carbon performance to meet a wide range of stakeholders' demands. Regulatory stakeholder and organizational stakeholder pressures positively and significantly influenced the adoption of green production practices (Baah et al., 2021). Previous literature shows the important relationship between stakeholders' pressure and green finance. Hence, we hypothesize:

H₃: There is a positive relationship between Stakeholders' pressure and green finance.

3.4. Environmental Leadership and Carbon Neutrality

The importance of environmental leadership in reaching carbon neutrality is becoming more widely acknowledged. Efficient leadership is crucial for directing and executing sustainable practices as organizations and countries work to lower greenhouse gas emissions and slow down climate change. Bass (1985) developed transformational leadership, which emphasizes leaders who encourage and inspire followers to go above and beyond. Transformational leaders inspire dedication to carbon neutrality targets by articulating a compelling vision for sustainability in the context of environmental leadership. Leaders who show a dedication to environmental objectives encourage staff members to take up pro-environmental practices, which help the company reach its carbon neutrality goals (Zhang et al., 2023). Environmental leaders are essential to strategic decision-making processes that match carbon neutrality goals with organizational objectives. To promote cooperation and support for carbon neutrality programs, environmental leaders interact with a range of stakeholders, such as staff members, clients, and legislators. This involvement is essential for fostering agreement and promoting group efforts to achieve sustainability objectives (Böttcher and Müller, 2015). Environmental leaders are essential to strategic decision-making processes that match carbon neutrality goals with organizational objectives. Leaders make sure that carbon reduction becomes a fundamental aspect of corporate operations by incorporating sustainability into business plans (Jiang et al., 2020). Stronger environmental leaders make it easier for businesses to spot external low-carbon challenges and market possibilities. They can also assist businesses in strategically allocating internal resources and skills to support their low-carbon innovation goals (Egri and Herman, 2000). So, evidence from previous studies shows that environmental leaders have a great role in minimizing carbon emissions. Therefore, we can assume:

H₄: There is a positive relationship between environmental leadership and carbon neutrality.

3.5. Green Finance and Carbon Neutrality

The term “green finance” describes financial methods that support and encourage investments that have a positive impact on the environment, such as lower emissions, increased energy efficiency, and improved sustainability practices (Debrah et al., 2022). The financing barrier for high-pollution and high-emission activities is raised by green finance. Moreover, it offers low-interest rates to low-carbon enterprises to satisfy their funding requirements, which promotes the quick expansion of these sectors (Gu and He, 2012). CO₂ emissions can be decreased by using renewable energy, adopting fintech, and increasing green finance practices (Alsedrah, 2024). Green finance is crucial for lowering carbon dioxide emissions and fostering economic growth (Sadiq et al., 2022; Guo et al., 2020). The impact of green finance on carbon emission intensity is nonlinear; while it can successfully lower carbon emission intensity in the early stages, its efficacy diminishes until it fails or even has negative consequences (Liu et al., 2025). GF enhances energy systems, promotes technological innovation, and optimizes industrial structures to indirectly reduce carbon emissions (Huang et al., 2021; Yu et al., 2021; Chen and Chen, 2021). Green finance (GFIN) and green technological innovation have a substantial yet adverse effect on CO₂ emissions (Sharif et al., 2022). So, the research findings of the relationship between green finance and carbon neutrality are inconclusive. Hence, we raise the following hypothesis:

H₅: There is a positive relationship between green finance and carbon neutrality.

3.6. Environmental Leadership and Green Finance

Green finance encompasses financial products and investments that support climate resilience and environmental protection, whereas environmental leadership refers to leadership practices and tactics meant to advance environmental sustainability. Environmental leadership is frequently based on transformational leadership philosophy, which prioritizes creativity, vision, and dedication to long-term objectives (Egri and Herman, 2000). Green finance, which has its roots in institutional and stakeholder theory, aims to match financial practices with environmental objectives by promoting accountability, transparency, and conformity to environmental, social, and governance (ESG) norms (Weber and Feltmate, 2016). Environmental leaders greatly influence organizations' financial direction. They affect choices such as issuing green bonds, embracing ESG investments, and allocating funds to sustainable infrastructure or renewable energy initiatives. Businesses with excellent environmental leadership are more likely to sponsor eco-innovations with green finance instruments (Tang and Zhang, 2020). Environmental leaders can reduce internal resistance to implementing green finance practices by cultivating organizational cultures that embrace sustainability. Environmental leaders make sure their companies follow the changing rules governing green funding. When environmental leadership is present at the executive level, green finance projects are more successful. Previous studies show there is some relationship between environmental leadership and green finance. Therefore, we produce the following hypothesis:

H₆: There is a positive relationship between green finance and carbon neutrality.

3.7. Environmental Leadership Mediates the Relationship between Stakeholder Pressure and Carbon Neutrality

Stakeholder pressures have been found to influence the adoption of low-carbon operating practices (Böttcher and Müller, 2015) and measures for reducing greenhouse gas emissions (Cadez et al., 2019). Environmentally specific transformational leadership influences employees' voluntary pro-environmental behavior both directly and indirectly (Robertson and Carleton, 2018), which helps to reduce carbon emissions. The environmental transformational leadership of senior management affects a food service franchising company's internal and external environmental attitude. Additionally, the two forms of environmental orientation enhance the company's eco and market performance (Kim and Stepchenkova, 2018). There was a positive correlation between transformational leadership and environmentally conscious conduct (Soni, 2023), but research shows different results, such as the effects of ecologically conscious and environmentally ignorant consumers on the production of carbon emissions do not differ much (Tabi, 2013). Diverse stakeholders possess varying levels of understanding regarding carbon neutrality. Low-carbon behavior among inhabitants was influenced by situational circumstances, personal norms, social norms, low-carbon awareness, and low-carbon knowledge (Chen and Li, 2019). The important part is that leadership and values from top management play in promoting environmental commitment (Jang et al., 2017), which improves carbon performance (Hou et al., 2022). From the literature, it is found that there is some relationship between stakeholders' pressure and carbon neutrality. In addition, environmental leadership has some association with stakeholders and carbon neutrality. Therefore, we hypothesize the following:

H₇: Environmental leadership mediates the relationship between stakeholder pressure and carbon neutrality.

3.8. Green Finance Mediates the Relationship between Stakeholder Pressure and Carbon Neutrality

Green finance encompasses a variety of financial technologies, community-based green funds, fiscal policy, green central banking, carbon market instruments, green bonds, and green banks (Lee, 2020). Green finance is also an organized financial activity designed to guarantee a more favorable environmental consequence. A green financing approach to renewable energy can improve overall emission reduction (Sun et al., 2022). To mitigate climate change and reduce carbon emissions, green finance is a crucial and effective tool that has been incorporated into the process of becoming carbon neutral and has become a legislative priority for many nations (Xue et al., 2023). Promoting clean energy projects through the use of renewable energy, enforcing eco-regulations, and employing green finance significantly lowers carbon emissions and increases a country's ability to achieve carbon neutrality (Zhou et al., 2024). Stakeholders include local community organizations and international communities affected by the ongoing deterioration of the environment brought on by human activity. To mitigate environmental degradation and meet diverse stakeholders' demands, firms use green finance in their business operations (Arunachalam, 2024). Stakeholders pressure on firms to use green finance for reducing carbon emissions (Jin et al., 2023), to achieve sustainability performance (Xie, 2024).

Table 1: Measurement model

Constructs	Items	Factor loading	Cronbach's alpha	rho_A	Average variance extracted	Composite reality
Stakeholder pressure	SP1	0.953	0.964	0.991	0.933	0.977
	SP3	0.980				
	SP7	0.964				
Carbon neutrality	CN1	0.808	0.751	0.762	0.667	0.857
	CN4	0.851				
	CN7	0.789				
Green finance	GF2	0.831	0.774	0.777	0.688	0.869
	GF4	0.827				
	GF5	0.831				
Environmental leadership	EL2	0.772	0.747	0.768	0.562	0.837
	EL3	0.727				
	EL4	0.722				
	EL5	0.776				

Table 2: Fornell-Larcker criterion

Construct	CN	EL	GF	SP
CN	0.732			
EL	0.519	0.725		
GF	0.566	0.612	0.830	
SP	0.503	0.298	0.306	0.966

Table 3: Heterotrait-Monotrait ratio (HTMT) matrix

Construct	CN	EL	GF	SP
CN				
EL	0.655			
GF	0.749	0.745		
SP	0.612	0.329	0.345	

So, from the above literature, it is understood that there is some relationship among stakeholders' pressure, green finance and carbon neutrality. Therefore, we propose the following hypothesis: H₈: Green finance mediates the relationship between stakeholders' pressure and carbon neutrality.

3.9. Environmental Leadership and Green Finance Serially Mediate the Relationship between Stakeholders' Pressure and Carbon Neutrality

Green finance mediates the relationship between banks' sustainability performance and employee, top-management, operational, and policy-related practices (Kumar et al., 2024). Green finance encourages carbon emission efficiency by improving industrial structures and advancing technology (Zhang et al., 2022). Employees' environmental consciousness was favorably correlated with leadership, which may further encourage low-carbon behavior. At the same time, employees' environmental indifference, which can lessen their low-carbon behavior, was adversely correlated with responsible leadership (Zhang et al., 2023). Employees may be influenced by responsible leadership beliefs through witnessing leaders' conscientious actions, and as a result, they may exhibit a greater level of environmental consciousness and considerable care for environmental issues (Han et al., 2019). Increased environmental consciousness may therefore lead to a greater sense of environmental responsibility among staff members and encourage them to engage in more environmentally friendly, low-carbon, or pro-environmental behaviors (Afsar et al., 2020; Abbas et al., 2022; Zhang et al., 2022). Green finance makes carbon neutrality much more effective (Liu et al., 2024).

Green finance helps businesses fulfill the demands of a variety of stakeholders (Islam et al., 2023) and improve their carbon performance. Stakeholders (government, employee, NGO, competitor, customer) pressure on firm continuously to achieve carbon neutrality for sustainable performance. To meet this expectations firms Promoting clean energy efforts through the use of renewable energy, enforcing eco-regulations, and employing green finance significantly lowers carbon emissions and increases a country's ability to achieve carbon neutrality (Zhou et al., 2024). From the previous studies it is expected that both environmental leadership and green finance influence stakeholders to take initiative for carbon management. Therefore, we propose the following hypothesis:

H₉: Environmental leadership and green finance serially mediate the relationship between stakeholders' pressure and carbon neutrality.

4. RESEARCH METHODOLOGY

4.1. Research Design

The current research sample includes the owners and managers of a manufacturing company in Bangladesh. There were two reasons for our focus on this sample. The industry is very competitive because of specialized services and single ownership (Blumberg, 2001); to achieve this, manufacturing businesses should foster environmental awareness among their staff. The ongoing interaction among managers, owners, and consumers underscores the significance of managers' verbal and nonverbal actions for clients' comprehension of environmental matters and sustainable development objectives. It is thus reasonable to choose managers and owners from the manufacturing company for the present study. We employed judgmental sampling, a non-probability method where researchers select samples based on predetermined criteria (Blumberg, 2001). Across various locations, we surveyed 450 owners and managers from 300 manufacturing firms in Khulna Division, Bangladesh. Prior to conducting the study, we secured informed consent from all respondents. The manufacturing association coordinated the data collection and distributed questionnaires to all companies involved. Across 300 manufacturing companies, 500 sets of questionnaires were distributed. The collection of data occurred between January and June 2025. Of the 500 surveys distributed, 450 were deemed valid. Our response rate of 90% significantly exceeded the 33.3% reported in a prior study by Rubel et al.

Table 4: Direct hypothesis

Hypothesis	Hypothesized path	β -value	t-value	P-value	Decision
H ₁	SP -> CN	0.369	8.991	0.000	Supported
H ₂	SP -> EL	0.300	6.149	0.000	Supported
H ₃	SP -> GF	0.125	3.035	0.002	Supported
H ₄	EL -> CN	0.174	3.549	0.000	Supported
H ₅	GF -> CN	0.396	7.467	0.000	Supported
H ₆	EL -> GF	0.597	18.895	0.000	Supported

The study found that 70% of participants were male, while 30% were female.

4.2. Survey Measures

A five-point Likert scale ranged from 1 (strongly disagree) to 5 (strongly agree). These dimensions' scale validity was between 0.77 and 0.91, with items meeting the acceptability threshold of 0.7 (Hair et al., 2019). The assessment items employed in this investigation were detailed and tailored based on earlier studies. We used 30 items from commonly utilized scales to assess exogenous, endogenous, and mediator components. We utilized the well-regarded scale developed by Zhang and Yang to assess stakeholder pressure across four dimensions. For this study, seven Stakeholder pressure questions and eight Carbon neutrality questions. Eight for environmental leadership, seven for green finance.

4.3. Data Analysis

A complicated model with several dependent variables was evaluated using Structural Equation Modeling (SEM) (Arefin et al., 2019). SEM comprises Covariance-Based (CB-SEM) and Partial Least Squares (PLS-SEM) varieties. CB-SEM assesses the fit of observed variables through a covariance matrix. At the same time, PLS-SEM employs estimate to maximize explained variances for both dependent and independent variables (Wang et al., 2003). PLS-SEM evaluates the impact of exogenous variables on endogenous variables. The structural relationships and confirmatory factor analysis (CFA) were investigated using SMART PLS4 software (Wang et al., 2003).

5. MEASUREMENT MODEL ASSESSMENT

5.1. Validity and Reliability of the Constructs

The measurement model's construct reliability, convergent validity, and discriminant validity were evaluated in this study using confirmatory factor analysis. The heterotrait-monotrait (HTMT) ratio and the Fornell-Larcker criterion were used to evaluate the discriminant validity of the model, while average variance extracted (AVE) and factor loadings were used to evaluate its convergent validity. To evaluate the construct reliability of the model, Cronbach's alpha, ρ_A , and composite reliability (CR) were used. The following table (Table) shows the thresholds for assessing the model's validity and reliability (Hair et al., 2019). Suggest that each indicator has Cronbach's alpha, ρ_A , and CR scores >0.70 and AVE and factor loading values >0.50 and 0.70, respectively. Cronbach's alpha, ρ_A , CR, AVE, and factor loading all met the requirements (Table 1). The condition is satisfied by the maximum and lowest factor loading values, which are 0.964 and 0.722, respectively. Cronbach's Alpha has maximum and minimum

values of 0.964 and 0.747, respectively, satisfying the requirements. However, the lowest value of ρ_A is 0.762, and the maximum value of ρ_A is 0.991, which satisfies the criterion. In our investigation, the average variance extracted has a maximum value of 0.977 and a minimum value of 0.837, which are higher than the norm.

5.2. Discriminant Validity

This investigation used the HTMT threshold value of ≤ 0.85 , as suggested by Henseler et al., 2015. All HTMT values fell below the cutoff value. According to the Fornell-Larcker criterion, the diagonal values (square root of AVE) must be greater than the off-diagonal values (correlations between variables). The data presented in the table fulfil this criterion, demonstrating excellent discriminant validity.

5.3. Direct Hypothesis Result

This section summarizes the outcomes of the structural model evaluation using Partial Least Squares Structural Equation Modeling (PLS-SEM). The analysis assesses the hypothesized relationships among stakeholder pressure (SP), environmental leadership (EL), green finance (GF), and carbon neutrality (CN). The path coefficients (β -values), t-values, and P-values were derived from the bootstrapping procedure to test the significance of each hypothesized path (Table 4).

The path from stakeholder pressure to environmental leadership is significant ($\beta = 0.300$, $t = 6.149$, $P < 0.001$). This indicates that greater stakeholder pressure positively influences environmental leadership development within organizations.

H₂ is also supported, which means the relationship between stakeholder pressure and green finance is positive and significant ($\beta = 0.125$, $t = 3.035$, $P = 0.002$), suggesting that external stakeholder demands can enhance awareness or adoption of green finance mechanisms.

H₃ is also supported, which means environmental leadership shows a significant positive effect on achieving carbon neutrality ($\beta = 0.174$, $t = 3.549$, $P < 0.001$), implying that leaders with strong environmental commitments are instrumental in carbon reduction strategies. Green finance has a strong and significant positive impact on carbon neutrality ($\beta = 0.396$, $t = 7.467$, $P < 0.001$), which means H₄ is supported. This highlights the critical role of financial instruments and policies tailored toward sustainability in achieving carbon neutrality goals. H₅ is also supported, meaning environmental leadership significantly influences green finance ($\beta = 0.597$, $t = 18.895$, $P < 0.001$). This is the strongest path in the model, underscoring that leadership with environmental orientation is a key driver in promoting green financial practices.

All five hypothesized relationships are statistically significant, supporting the structural model's validity. The findings emphasize the interconnected role of stakeholder pressure and environmental leadership in promoting green finance, which, in turn, significantly contributes to achieving carbon neutrality. Environmental leadership serves as a central construct, directly influencing both green finance and carbon neutrality, and also mediating the effect of stakeholder pressure on green financial outcomes.

The results in Table 5 show that the model demonstrates moderate to strong explanatory power for key endogenous constructs, particularly Green Finance and Carbon Neutrality. The predictive relevance (Q^2) values indicate that the model has practical forecasting capabilities. In terms of effect size: Environmental Leadership → Green Finance is the strongest relationship (Large effect). Green Finance → Carbon Neutrality has a meaningful (Medium) effect. Other relationships demonstrate small to medium contributions, highlighting their supportive but secondary roles in the model. These findings emphasize the central role of Environmental Leadership and Green Finance in achieving carbon neutrality under stakeholder pressure.

5.4. Report on Path Coefficient Results: Mediation Analysis

This finding presents the outcomes of the mediation analysis examining the indirect effects between key constructs in the model (Table 6). The analysis was conducted using path coefficients (β -values), t-values, and P-values derived from bootstrapping procedures. All hypotheses under investigation were supported at the 0.05 significance level.

H_7 is supported, meaning the indirect effect of Stakeholder Pressure (SP) on Carbon Neutrality (CN) through Green Finance (GF) is statistically significant ($\beta = 0.050, P = 0.014$). This suggests that green finance partially mediates the influence of stakeholder

Table 5: Coefficient of determination (R2), the strength of the effect (f2), and predictive relevance Q2

Relationships	R2	Adjusted R2	Q2	f2	Effect size
Effect of CN	0.275	0.27	0.142		
EL -> CN				0.025	Small
GF -> CN				0.129	medium
Effect of EL	0.09	0.088	0.083		
SP -> EL				0.099	Large
EL -> CN				0.025	Small
EL -> GF				0.557	Large
Effect of GF	0.417	0.415	0.088		
SP -> GF				0.025	Small
EL -> GF				0.557	Large

Table 6: Indirect hypothesis

Hypothesis	Hypothesized path	β -value	t-value	P-value	Decision
H7	SP -> GF -> CN	0.050	2.454	0.014	Supported
H8	SP -> EL -> CN	0.052	2.786	0.005	Supported
H9	SP -> EL -> GF -> CN	0.071	4.650	0.000	Supported
H10	SP -> EL -> GF	0.179	5.779	0.000	Supported
H11	EL -> GF -> CN	0.236	7.298	0.000	Supported

pressure on achieving carbon neutrality. The path from SP to CN via Environmental Leadership (EL) is also significant ($\beta = 0.052, P = 0.005$), indicating that environmental leadership acts as a mediator in this relationship, which means H8 is supported. H9 (SP → EL → GF → CN): This serial mediation path shows the strongest and most significant indirect effect ($\beta = 0.071, P < 0.001$). It implies that stakeholder pressure enhances environmental leadership, promoting green finance and improving carbon neutrality outcomes. H10 is also supported, reflecting a significant mediation effect that is observed ($\beta = 0.179, P < 0.001$), suggesting that environmental leadership is a crucial channel through which stakeholder pressure boosts green finance adoption. H_{11} , indicating the mediation pathway from EL to CN through GF, is highly significant ($\beta = 0.236, P < 0.001$), underscoring the critical role of green finance in translating environmental leadership into tangible carbon neutrality achievements.

All five indirect hypotheses (H_7 - H_{11}) are statistically supported, confirming the mediating roles of Environmental Leadership and Green Finance in the relationship between Stakeholder Pressure and Carbon Neutrality. These results reinforce the importance of leadership and financial mechanisms in environmental strategy and policy implementation, especially in response to external stakeholder pressures.

6. DISCUSSION

This study investigates the direct and indirect effects of SHP on carbon neutrality through environmental leadership and green finance. First, the results show that SHP positively affects carbon neutrality. Stakeholders pressure the firms to incorporate effective measurements in their business operations that reduce carbon emissions. Recently, businesses have been using renewable energy, increasing energy efficiency, reducing their reliance on fossil fuels, promoting energy-efficient technologies, and adopting a circular economy approach that emphasizes waste recycling, material reuse, and consumption reduction. All of these practices have significantly reduced carbon emissions. This research finding is consistent with the previous studies. For example, stakeholders (creditors, the media, and regulators) have a substantial impact on carbon management strategies adoption and the firms' inclination to implement compensation and reduction initiatives (Yunus et al., 2020). However, Sarkar et al. (2018) found that the growth of CO2 emissions was found to be higher than the growth of GDP and energy consumption in Bangladesh.

Additionally, we found that SHP positively impacts the adoption of environmental leadership, which validates our second hypothesis (H2). It indicates that environmental leadership in organizations is greatly influenced by stakeholder pressure, which pushes them to implement sustainability programs and greener practices. Strongly environmentally conscious leaders can encourage staff members to adopt eco-friendly behaviors and integrate sustainability into the company's overall strategy. Environmental leadership is positively correlated with both financial and environmental success, the two aspects of corporate performance (Su et al., 2020), which meet the diverse stakeholders' demands. This result is also consistent with the previous study (Henriques and Sadorsky, 1999).

Our data show that SHP significantly impacts green finance, which confirms our third hypothesis. In addition to its environmental benefits, green finance promotes climate adaptation and equality in access to energy. For stakeholders, green finance is essential because it supports sustainable growth and long-term economic prosperity by coordinating financial flows with social and environmental objectives. It increases the competitive edge of businesses and financial institutions, reduces environmental hazards, and encourages investments that are ecologically conscientious. Bangladesh Bank introduced and directed all listed banks to provide green finance for mitigating environmental degradation and making the business firm sustainable, which meets the stakeholders' demand (Bank, 2011). Moreover, this result is supported by the previous studies (Choudhury et al., 2013).

Our fourth hypothesis shows a positive relationship between environmental leadership and carbon neutrality. It indicates that Environmental leadership is a set of values that managers, staff, organizations, and legislators have in order to achieve environmental sustainability (Shrivastava, 1994). In order to drive positive changes for organizations and the environment, environmental leadership is essential for the adoption and implementation of green technologies. Green technology innovation significantly reduces carbon emissions (Shan et al., 2021). Moreover, previous research results support this relationship (Jiang et al., 2020).

The relationship between green finance and carbon neutrality shows a positive association. Green financing is essential for cutting carbon emissions because it directs funds toward sustainable projects and provides incentives for companies to use eco-friendly procedures. It accomplishes this by encouraging energy efficiency, sponsoring green initiatives, and providing incentives for green innovation. In order to lower carbon neutrality, the central bank of Bangladesh, Bangladesh Bank, instructed listed banks to provide green finance, specifically for renewable energy projects, clean water supply projects, wastewater treatment plants, solid and hazardous waste disposal plants, bio-gas plants, and bio-fertilizer plants (Bank, 2011). However, previous research results validate our hypothesis (Hooda and Yadav, 2023).

Our sixth hypothesis shows a positive relationship between environmental leadership and green finance. Strong leadership sets specific environmental objectives, lays out plans to meet them, and develops the legal framework that supports green investments. This entails creating incentives for renewable energy projects, advancing carbon pricing schemes, and creating green bond criteria. Many organizations have gone green as a result of environmental leadership. The execution of a sustainability policy, pollution control measures, industrial ecology promotion, training initiatives, and other environmental activities have all been linked to the function of environmental leadership (Boiral et al., 2009). Green process and product innovation performance are significantly improved by environmental leadership (He et al., 2023). Environmental leaders advocate for a value system that is consistent with green investment, which prioritizes environmental protection. The focus of environmental leaders is mostly on investments related to resource efficiency, environmental

conservation, and pollution control, purchasing environmental equipment, and research and development of green technology (Sun et al., 2024).

Environmental leadership significantly mediates the relationship between stakeholder pressure and carbon neutrality, which confirms our seventh hypothesis. Stakeholder demand and real carbon neutrality results are more closely aligned when environmental leadership is present. Environmental leaders may efficiently mobilize internal resources and cultivate a sustainable culture within the firm by converting stakeholder concerns into tangible action plans. This guarantees that stakeholder pressure is actively integrated into the company's operating procedures and decision-making processes rather than being passively addressed, which eventually results in more successful carbon reduction initiatives. According to the empirical findings, environmental leadership and the low-carbon innovation approach are correlated. Additionally, it was discovered that stakeholder and institutional pressure positively connect with the businesses' low-carbon innovation approach (Jiang et al., 2020).

Our research results show that green finance significantly mediates the relationship between stakeholder pressure and carbon neutrality. Green finance directly aids in the achievement of carbon neutrality through its emphasis on carbon reduction and environmental preservation (Xie, 2024). Internal stakeholders (Shareholders and top management) and external stakeholders (Customers and competitors) played critical roles in a proactive move to carbon neutrality when there was limited regulatory pressure (Zhang et al., 2023). Stakeholders persuade businesses to employ green finance in order to maintain environmental sustainability (Shahzad et al., 2024), which reduces carbon emissions (Lee and Hussain, 2022). So green finance acts as a fuel to reduce carbon emissions and meet the diverse stakeholders' demand, which validates our hypothesis.

Finally, serial mediation of environmental leadership and green finance makes an association between stakeholders' pressure and carbon neutrality, which fulfils the researcher's expectation and confirms the ninth hypothesis. Both environmental leadership and green finance play a pivotal role in reducing carbon emissions in the business firm, which satisfies the wide range of stakeholders. In order to reduce carbon emissions, green finance and environmental leadership are essential since they direct funds toward sustainable initiatives and encourage eco-friendly practices. Environmental leadership can encourage companies to embrace cleaner technology and practices, which will ultimately lower the carbon footprint of the global economy. Green finance, such as investing in renewable energy, can also hasten industrial decarbonization.

7. CONCLUSION AND IMPLICATIONS

The study aims to empirically assess a new model that considers environmental leadership, carbon neutrality, green finance, and stakeholder pressure. Stakeholder demand for carbon neutrality is acknowledged at the outset of the study. Second, Stakeholder pressure-driven environmental leadership and green finance practices have a favorable effect on carbon neutrality. Finally, implementing environmental leadership and green finance

techniques strengthens the connection between stakeholder pressure and carbon neutrality. As a consequence, it gave pertinent parties management and theoretical understanding.

7.1. Theoretical Implications

First, the results of the study help to integrate the theoretical lenses of leadership theory (Horner, 1997) and stakeholder theory (Freeman, 2010) to explain carbon emission reduction-related concerns of the SME sector in the context of causes and effects of adopting stakeholder pressure, green finance and environmental leadership. Stakeholder theory looks for answers to the questions of the firm's purpose and its obligations to its stakeholders (Freeman, 2010), while leadership theory requires the firm to form appropriate leaders, such as an environmental leader (Horner, 1997), who can direct, motivate employees to attain sustainable goals by minimizing carbon emissions. The results of this study indicate that stakeholder pressure through the adoption of green finance and environmental leadership indirectly promotes net zero emission of the SME firms which is relevant to carbon management and carbon-related business performance. Therefore, by providing relevance to the businesses' stakeholders, the results of our study imply that enterprises might jointly incorporate leadership and stakeholders' theory for unique net-zero emission-based competitive advantage.

Secondly, the study's results contribute to the body of knowledge on stakeholders' pressure, carbon neutrality, environmental leadership and green practices of the firm. Our study contributes to the body of research showing that stakeholders are pressuring companies to adopt green finance (Arunachalam, 2024), especially for the development of renewable energy sources that reduce carbon emissions (Sun et al., 2022). Our study showed the positive result between stakeholders' pressure and carbon neutrality, which is consistent with previous studies (Guo et al., 2024), which indicate that those firms emphasise stakeholders' expectations that appropriately address the stakeholders' theory. Moreover, our research findings, which are corroborated by earlier studies, enhance the understanding of environmental leadership. Environmental leadership significantly improves the performance of green process and green product innovations (green technology and renewable energy) (He et al., 2023) that reduce carbon dioxide emissions (Shan et al., 2021).

Finally, the results of the study clarify the existing literature on the impact of green finance on carbon neutrality and the role that green finance plays as a mediator in the relationship between carbon neutrality and stakeholder demand. Additionally, we add to the little body of research on environmental leadership as a precondition for carbon neutrality. Environmental leaders may blend seemingly contradictory company visions and believe in the new ecological paradigm. Leaders are essential in recognizing and resolving environmental problems. The influence of top leaders is frequently the source of managers' and employees' worries regarding environmental management behavior. Environmental leaders will aggressively consider and implement corporate green practices to improve carbon performance and generate green products that better satisfy the needs of consumers as a result of the pressure from stakeholders' environmental expectations and

demands. To put it another way, managers who exhibit strong environmental leadership will view environmental concerns as opportunities that could impact an organization's reforming course. Consequently, there will be a greater investment in environmental protection innovation. Hence, environmental leadership is essential to allocate green finance for the development of green products that substantially reduce carbon emissions.

7.2. Managerial Implications

The results of this study have a lot of practical applications. The findings offer important new insights into how organizational and community stakeholders encourage businesses to reduce carbon emissions through efficient measurement. According to our research, managers and leaders should take stakeholders' expectations into account when developing strategies in order to satisfy their demands and include them as collaborators in the value-generation processes of their companies. Managers and leaders must also build and apply stakeholder integration competencies in order to better understand and manage their expectations about carbon neutrality because it is essential for sustainable businesses as it exhibits a commitment to mitigating climate change, improves brand reputation, and promotes a more sustainable business environment. Second, managers and leaders must invest a significant amount of green finance in creating green products and related services since they significantly contribute to minimize harm to the environment, conserving natural resources, and promoting sustainability, which eventually meets the stakeholders' demand.

In Bangladesh, the Bangladesh Bank (Central Bank of Bangladesh) directed the listed banks to provide green finance, particularly for renewable energy, which enhances carbon performance. Managers can take green loans for purchasing green equipment, technology for business operations, which significantly reduces carbon emissions. It creates a positive image among stakeholders towards the business firm that enhances market share. Additionally, managers utilize green financing to create green products- which are frequently manufactured from renewable or recycled materials- reduce waste, lower carbon footprints, and conserve resources, all of which eventually help the economy and the environment.

To reduce carbon emissions, managers may develop an environmental leader within the firm. Environmental leadership is essential for reducing carbon emissions because it promotes sustainable practices, organizational reforms, and policy improvements regarding environmental performance. A solid environmental record can draw in partners, investors, and consumers, increasing a company's worth and competitive edge.

7.3. Limitations and Future Research Directions

As previously said, our approach has many applications, but it is not without limitations. First, stakeholder demands, green financing, environmental leadership, and carbon neutrality should first be compared for differences in their direct and indirect effects. It is recommended that future scholars use our methodology to compare financial and manufacturing businesses. The limitations of quantitative research are inherent. We propose that future studies

should combine quantitative and qualitative research methods to make up for the drawbacks of each methodology and generate trustworthy results with theoretical and practical consequences. Lastly, this study was restricted to Bangladesh, which has a single economy, which could make generalization difficult. Future studies could compare the results to those from other study models in various nations and industries to see if they remain the same or change. However, the results offer a number of significant implications for researchers and organizations regarding the effect of stakeholders' pressure on carbon neutrality, with the role of green finance and environmental leaders in small and medium firms in emerging economies, even with the aforementioned limitations of the study.

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