

## Examine the Mediating Impact of Sustainable Leadership between Board Diversity and Internal Control: Evidence from Nepal

### Yönetim Kurulu Çeşitliliği ile İç Denetim İlişkisinde Sürdürülebilir Liderliğin Aracılık Etkisinin İncelenmesi: Nepal Örneği

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#### Abstract

Industrialization of the global market has brought about an organized approach to managing an organization that has experienced significant expansion. This has given the company's leadership the insight to focus on sustainable growth and evolution while upholding control over internal procedures. Sustainability in leadership is an essential component of sustainable growth. To ensure sustainable development, board diversity has a significant effect on internal control and sustainable leadership. Consequently, the current study intended to investigate how sustainable leadership mediates the relationship between board diversity and the internal control prospect of Nepal. Using a self-administered questionnaire, the quantitative data was gathered from 162 respondents from different corporate enterprises. Partial least squares structural equation modeling (PLS-SEM) was used to analyze survey data. The findings indicate that internal control and board diversity are positively correlated. The result demonstrates that internal control is significantly impacted by sustainable leadership. The relationship between board diversity and internal control is mediated by sustainable leadership. According to the outcome, the purpose of accomplishing more ambitious future goals at an increased pace of sustainable growth is for business entities to concentrate on sustainable leadership.

**Keywords:** Board Diversity, Internal Control, Sustainable Leadership, Organizational Performance, Structural Equation Modeling (SEM).

**Jel Codes:** G3, G40, L210.

#### Öz

Küresel pazarın sanayileşmesi, önemli bir genişleme yaşayan bir organizasyonun yönetiminde örgütlü bir yaklaşımı beraberinde getirmiştir. Bu durum, liderlerin iç prosedürler üzerindeki denetimi sürdürürken sürdürülebilir büyümeye ve gelişime odaklanmalarının da gerekli olduğunu ortaya çıkarmıştır. Liderlikte sürdürülebilirlik, sürdürülebilir büyümenin önemli bir bileşenidir. Sürdürülebilir kalkınmayı sağlamak için yönetim kurulu çeşitliliğinin iç denetim ve sürdürülebilir liderlik üzerinde önemli bir etkisi vardır. Sonuç olarak, mevcut çalışma, yönetim kurulu çeşitliliği ile iç denetim ilişkisinde sürdürülebilir liderliğin aracılık etkisini Nepal örneği üzerinden incelemeyi amaçlamaktadır. Nicel veriler, kendi kendine uygulanan anket yöntemiyle, farklı kurumsal işletmelerden 162 katılımcıdan toplanmıştır. Anket verilerini analiz etmek için kısmi en küçük kareler yapısal eşitlik modellemesi (PLS-SEM) kullanılmıştır. Bulgular, iç denetim ve yönetim kurulu çeşitliliğinin pozitif yönde ilişkili olduğunu göstermektedir. Sonuçlar, sürdürülebilir liderliğin iç denetimi önemli ölçüde etkilediğini göstermektedir. Yönetim kurulu çeşitliliği ile iç denetim arasındaki ilişkide sürdürülebilir liderliğin aracılık etkisi vardır. Bu sonuçlar doğrultusunda, artan sürdürülebilir büyüme hızıyla daha iddialı gelecek hedeflerine ulaşmak isteyen işletmelerin amacı sürdürülebilir liderliğe odaklanmak olmalıdır.

**Anahtar Kelimeler:** Yönetim Kurulu Çeşitliliği, İç Denetim, Sürdürülebilir Liderlik, Örgütsel Performans, Yapısal Eşitlik Modellemesi (YEM).

**Jel Kodları:** G3, G40, L210.

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## 1. INTRODUCTION

After the global market's industrialization, an organized management style was introduced for an organization that has seen substantial ongoing expansion and growth. This has provided the leadership of the business with the awareness they need to concentrate on prospective development and growth while maintaining control over their internal operations to get their enterprises closer to their aspiration ultimate goals and to achieve them more swiftly. They come to the brief but rigorous conclusion that maintaining control over internal processes and bringing diversity on board are the only ways to achieve sustainable growth. To do so, sustainable leadership is a crucial element of sustainable growth. Board diversity has a major impact on internal control and sustainable leadership, which is necessary for ensuring sustainable development. This insight has encouraged a steady increase in socially and environmentally conscious behavior. Activities that possibly allow organizations the chance to give back to their larger stakeholder groups and consequently affect organizational outcomes include board diversity increases. The inclusion of a range of diverse viewpoints and experiences on a company's board members is known as board diversity. When making choices, board diversity is more likely to consider broader perspectives, which helps improve the company's results (Kumar et al., 2023). Making sure that a company's board of directors represents the diversity of its stakeholders—including its clients, staff, and the areas in which it operates—is known as board diversity. Gender, race, ethnicity, age, sexual orientation, disability, financial status, and other aspects can all be considered forms of variety. Although the idea of a diverse board has been for a while, it has only recently become prevalent (Taylor et al., 2019). This is partly because an increasing amount of research demonstrates the advantages of board diversity for businesses. A study by (Hunt et al., 2015) states that, organizations with more diverse boards have higher performance than those with less diverse boards in terms of economic performance. The study also discovered a link between improved risk management and control mechanisms better shown in diverse boards. A study (Gallego-Álvarez et al., 2010) discovered that businesses with more diverse boards did better than their counterparts in terms of both financial and non-financial measures. Regulatory agencies, stockholders, institutional investors, and other parties have all put pressure on this issue (Maher and Andersson, 2000).

Any firm can benefit from having a diverse board for several reasons, including better financial performance, increased innovation, better risk management, enhanced reputation, and better decision-making. Apart from these advantages, diversity on the board is crucial as it guarantees that the board represents the well-being of the company's shareholders (Hunt et al., 2015). Customers, staff members, and the communities in which the business works are all included in this. The board can better comprehend and address the requirements of the company's stakeholders when it is made up of representatives from each group. Businesses can diversify their talent pool by hiring and training diverse personnel for leadership roles, establishing board nominating committees that are tasked with finding and recruiting diverse candidates, and enacting diversity policies (Gallego-Álvarez et al., 2010). After reviewing (Harjoto et al., 2015) study, this research concludes that there is a positive correlation between board diversity and corporate social responsibility (CSR) and greater CSR performance. Research by (Bolourian et al., 2021), this study concludes that there is a positive correlation between improved corporate governance standards and a diverse board.

A study by (Ali et al., 2021) proposed that board diversity significantly and favorably affects Chinese companies' performance. A research (Abdelbadie and Salama, 2019) discovers a correlation between reduced corporate risk and a diverse board.

As per the agency theory, the board director monitors the company's administration and ensures those shareholders' interests are safeguarded. A diverse board has a higher chance of monitoring management and stopping fraud and other transgression. This is because board diversity is more liable to possess the knowledge and expertise required to recognize and comprehend complex risks and refute management claims. Managers—agents—and shareholders—principals—have competing interests. While managers are free to follow their interests, shareholders want them to make choices that optimize their value (Jensen and Meckling, 2019).

Diversity on the board may help to condense this conflict of interest. A varied board is more inclined to question the status quo and provide direct challenges to the management. By using this, managers may be able to make optimal decisions for shareholders (Pucheta-Martínez et al., 2018). A system of rules and guidelines known as internal control is put in place to guard against fraud and other mistakes and ensure the company's resources are being used appropriately. The board's effectiveness in supervising the company's inner control system is higher when the board is diverse (Hunt et al., 2015). Directors with various backgrounds are more likely to possess the knowledge and expertise needed to recognize and comprehend complex hazards. Directors with various backgrounds are more inclined to question management's claims and hold them responsible for putting in place efficient internal control measures (Stackowiak, 2019). When making choices about internal control, diverse directors are more likely to comprehend and consider the needs of all of the company's stakeholders, including its auditors. Diverse directors are more likely to approach internal control creatively and deliberately. In general, agency theory indicates that having a diverse board of directors can result in improved internal control (Stackowiak, 2019). Businesses with more diverse boards are more likely to have a set of guidelines and regulations in place that protect the company's assets and prevent fraud and other mistakes.

Diverse perspectives on the board can enhance internal control in several ways. A varied board has a higher chance of spotting and reducing international operations concerns like inducement and corruption. A diverse board can better recognize and reduce risks related to social and environmental issues, like hazards to worker safety and climate change (Hunt et al., 2015). A varied board is better able to recognize and reduce risks related to data privacy and cyber security. It is more likely that a diverse board will supervise the company's internal control system in a manner that safeguards the interests of all parties concerned, including the community, suppliers, consumers, shareholders, and staff (Hunt et al., 2015).

Numerous studies have examined the connection between internal control and a diverse board, but not many have examined sustainable leadership's mediating function. Given the growing significance of sustainable leadership in the corporate sector and its potential to impact how board diversity affects internal control, this represents a substantial gap in the research. A study by (Alodat et al., 2023) suggests that the relationship between board diversity and internal control and the mediating role of sustainable leadership discovered that the relationship was partially mediated by sustainable leadership. This indicates that the

association between internal control and board diversity was explained in part by sustainable leadership. An extensive study is necessary to validate the mediation function of sustainable leadership between internal control and board diversity. To understand the mechanisms by which sustainable leadership mediates the correlation between internal control and board diversity, more research is also required (Zampone et al., 2022). Some particular queries that could be investigated further in subsequent studies are: How does the relationship between internal control and board diversity get mediated by sustainable leadership? What particular channels does sustainable leadership impact internal control through? How does the mediating function of sustainable leadership change based on the diversity on the board (e.g., ethnic, racial, or gender diversity)? In what ways does the mediating role of sustainable leadership change based on the particular facets of internal control, such as compliance, operational, and financial reporting controls?

Our study explores how board diversity affects internal control and how sustainable leadership might support proficient internal control mechanisms? How positively influence the mediate impact of sustainable leadership in the correlation between board diversity and internal control? Better knowledge of how board diversity affects internal control is one possible advantage of more research on the mediating role of sustainable leadership between board diversity and internal control. Ruling the precise mechanisms by which internal control is impacted by sustainable leadership, creation of suggestions on how to advance diverse boards and sustainable leadership to enhance internal control? a greater perceptiveness of the significance of diverse boards and sustainable leadership for corporate governance? financial reporting, and investor trust as well as increased market efficiency (Tideman et al., 2013).

In this study, four hypothesis developments are made. The first is the evident connection between internal control and diversity on the board. Internal control and board diversity are closely related. Broader safeguards and control mechanisms are generally found in firms with diversified board structures, which lower various known and unknown risks and increase levels of profitability and sustainable growth (Chen et al., 2016). Diverse directors can aid in identify and comprehend convoluted risks that a firm may encounter since they suggest a range of views and experiences to the boardroom. Diverse directors are more likely to raise serious concerns about the company's internal control system and to contest claims made by management. By doing this, you can ensure management is responsible for establish and keeping up an efficient internal control system. When making decisions about internal control, diverse directors are more likely to comprehend and consider the demands of all of the company's stakeholders, including shareholders, employees, clients, suppliers, and the community (Aziz et al., 2015).

The relationship between diverse boards and sustainable leadership is the second hypothesis. The assumptions and prejudices of management are more likely to be questioned by diverse directors, which can improve decision-making (Vairavan and Zhang, 2020). This can constructively impact the company's economic feat, lower threats, and boost stakeholder confidence, among other advantages. Thirdly, internal control and sustainable leadership are significantly correlated. Internal control and sustainable leadership are two crucial ideas that are becoming more widely recognized as being related (Niroula and Upadhaya, 2022).

Making choices and acting in a way that takes into account the long-term interests of all parties involved—stockholders, staff, clients, suppliers, and the community—is what sustainable leadership is all about. A system of rules and guidelines known as internal control is put in place to guard against fraud and other mistakes and ensure the company's resources are being used appropriately. Internal control can benefit from sustainable leadership in a variety of ways. ESG hazards are among the dangers a firm faces, and sustainable leaders are more likely to be aware of these risks and focus on them. Increased internal control implementation to lessen these risks may result from this awareness. Integrity and compliance are more likely to be fostered within an organization by sustainable leaders (Suriyankietkaew et al., 2022). This culture can aid in discouraging dishonesty and other wrongdoing. Leaders committed to sustainability are more likely to make the financial investments required to maintain a strong internal control framework. This covers spending money on staff training, technology, and auditing services. Sustainable leadership plays a mediating role in the fourth hypothesis, which concerns internal control and diversity on board. Sustainable leaders may have a greater awareness of and attention to the risks that the organization faces, including ESG issues (Tideman et al., 2013). Increased internal control implementation to lessen these risks may result from this awareness. Organizations with sustainable leaders may be more likely to foster an environment of honesty and compliance. This culture can aid in discouraging dishonesty and other misconduct. Executives that are committed to sustainability may allocate more funds toward keeping an efficient internal control system.

This covers spending capital on staff training, technology, and auditing services. Sustainable leaders may be more inclined to hold management responsible for putting in place and keeping an efficient internal control system, challenging the status quo, posing pointed questions about the decisions made by management, and promoting a diversity of viewpoints and ideas in the boardroom (McCann and Holt, 2010). All expressed, four interconnected assumptions directly and indirectly favorably impact the outcome.

## **2. LITERATURE REVIEW**

### **2.1. Board Diversity and Internal Control**

A system of rules and guidelines known as internal control is put in place to guard against fraud and other mistakes and ensure the company's resources are being used appropriately. It is essential to risk management and corporate governance. A system of rules and guidelines known as internal control is intended to offer a reasonable level of certainty about accomplishing goals concerning operations, reporting, and compliance (COSO, 1992). An internal control system's five primary components are information and communication, monitoring, control actions, risk assessment, and the control environment. All company members, including the board members, administration, and other staff members, are involved in the process of internal control (Bubilek, 2017) . It is an ongoing process that requires constant monitoring and updating to maintain its effectiveness rather than a one-time occurrence. Internal control aids in the following areas: protecting the company's assets, preventing fraud and other errors, enhancing operational effectiveness, encouraging adherence to legal requirements, enhancing financial reporting, and boosting stakeholder confidence (Lutz, 2014).

Increased internal control is correlated with a more diverse board. A study by the Institute of Internal Auditors, businesses with more diverse boards of directors have better internal control frameworks (Sri Utaminingsih et al., 2022). Sustainable leadership is also connected with stronger internal control. A study by (Lin and Huang, 2023), organizations with sustainable CEOs had higher rates of internal control effectiveness. Compared to traditional internal control, risk-based internal control is more effective. Risk-based internal control systems outperformed conventional internal control systems in preventing fraud and other wrongdoing (Bentley-Goode et al., 2017). Companies with more diverse boards had better inner control systems. A study by (Sri Utaminingsih et al., 2022) proposed that boards with a diverse membership were more likely to hold management accountable for putting in place and maintaining efficient internal control systems, to examine the assumptions made by management, and to ask pointed questions. A research by (Benaroch et al., 2012), risk-based internal control systems outperformed conventional internal control systems in reducing fraud and other wrongdoing. Risk-based internal control systems had a higher likelihood of being customized to the unique risks that a company faced and of being updated often to consider modifications to the company's risk profile (COSO, 1992).

Boards with a diverse membership were more likely to hold management accountable for putting in place and maintaining efficient internal control systems, to examine the assumptions made by management, and to ask pointed questions. Businesses with more diverse boards had lower fraud rates. Diverse boards had higher propensities to identify and stop fraud and to discipline management when uncovered (Martinez-Ferrero et al., 2017). A study indicated that organizations with more diverse boards had better financial reporting. A research by (Firoozi et al., 2016), boards with a varied membership were more liable to hold management responsible for the completeness and accuracy of financial reporting.

Most records point to board diversity as a benefit for internal control. Businesses with a more varied board of directors are more liable to have robust internal control frameworks, lower fraud rates, and better financial reporting. Therefore, the first hypothesis is formed.

**H1:** Board diversity has positively correlated with internal control

## **2.2. Board Diversity and Sustainable Leadership**

An organization can achieve long-term success through sustainable leadership, which also considers the social, economic, and environmental effects of its decisions. Sustainable leaders understand that the health of the communities and ecosystems in which their business operates is intrinsically tied to the success of their enterprise. Leaders who practice sustainability are dedicated to making choices that benefit both the organization and the environment. They try to identify solutions that benefit all parties involved, including the community, shareholders, employees, and suppliers, while also considering the long-term effects of their decisions (Tideman et al., 2013).

Sustainable leaders also bring about change. They don't hesitate to question the current quo and advocate for innovative approaches. They are dedicated to making the future of the globe and their organizations more sustainable. Strategic, innovative, collaborative, visionary, and accountable are qualities that define sustainable leaders. Because it can assist organizations in reducing their ecological impact, advancing their communal impact,

improving their economic performance, becoming more resilient to future challenges, attracting and retaining top people, and establishing a great brand, sustainable leadership is crucial. A study by (Suriyankietkaew et al., 2022), businesses with sustainable leaders beat their competitors on several financial indicators, including revenue growth, return on equity, and return on assets. As per one of survey, sustainable leaders were more likely to support long-term projects, encourage an innovative culture, and draw in and keep top personnel. A study by (Kohntopp and McCann, 2023), workers under sustainable leaders are more likely to be engaged at work and to feel a sense of kinship with the goals and values of their organization. Sustainable leaders were more likely to foster a supportive work atmosphere, offer chances for professional development, and honor and reward staff members for achievement. A research by (Gomez-Vasquez, 2023), customers are more inclined to buy goods and services from businesses that have sustainable CEOs. As per the research, customers were more inclined to trust businesses led by sustainable individuals, think these businesses were working for society's best interests, and be prepared to pay a premium for their goods and services. These studies offer insightful information about the advantages of sustainable leadership. Enterprises seeking to enhance their operational efficiency, augment workforce involvement, and draw in and hold onto clientele ought to contemplate adopting sustainable leadership methodologies (Foscht et al., 2018).

A research by (Kamarudin et al., 2022), businesses that had more diverse boards had higher adoption rates for sustainable business practices. Boards with a diverse membership were more likely to hold management accountable for establishing and upholding sustainable business practices, question management's presumptions, and pose difficult questions. Businesses that have more diverse boards have a higher chance of being leaders in sustainability. Diverse boards had higher chances of investing in resources to support sustainability efforts, developing and implementing strategic plans for sustainability, and having a clear vision for sustainability (Fallah Shayan et al., 2022). Organizations that had more diverse boards of directors also had higher ESG scores. Boards with diverse memberships were also more likely to focus on governance, social, and environmental issues and to take the initiative to raise their ESG performance (Alabdullah and AL-Qallaf, 2023).

Most studies point to board diversity as a benefit for long-term leadership. Businesses with more diverse boards are more liable to be leaders in sustainability, implement sustainable business practices, and receive higher ESG ratings. As a result, hypothesis two is formed.

**H2:** Board diversity has a positive correlation with sustainable leadership

### **2.3. Sustainable Leadership and Internal Control**

Internal control and sustainable leadership are strongly associated. Leaders who practice sustainability are dedicated to making choices that benefit both the organization and the environment. This entails creating and putting robust internal controls into place to stop fraud and other wrongdoing, safeguard the company's assets, and guarantee that it conducts business ethically and competently. Effective internal control can be promoted by sustainable leadership in a variety of ways. Sustainable leaders are more likely to create a culture of compliance and honesty (Fallah Shayan et al., 2022). Spend money on resources that will help internal control and hold management responsible for internal control. Effective internal controls are implemented and maintained by management under the direction of

sustainable leaders. Sustainable leaders are also more likely to be aware of organizations' risks, particularly ESG concerns (Alabdullah and AL-Qallaf, 2023). Increased internal control implementation to lessen these risks may result from this awareness.

Effective internal control can be promoted in a specific way by sustainable leadership. Establishing goals for energy efficiency and renewable energy use are two examples of internal controls that a sustainable leader may be more likely to put in place to lessen the company's carbon impact. A sustainable leader could be more inclined to implement internal measures to support moral business activity, such as making suppliers sign a code of conduct or doing background checks on potential partners. A sustainable leader might be more inclined to implement internal controls to safeguard worker safety, such as creating safety policies and offering safety-related training (Banmairuroy et al., 2022). Sustainable leaders can contribute to developing a more ethical and sustainable corporate environment by putting these kinds of internal controls in place. Organizations with more environmentally conscious executives also had higher rates of internal control effectiveness. Sustainable leaders are more likely to uphold management's responsibility for internal control, foster a culture of compliance and integrity, and allocate resources to assist internal control. Businesses with more sustainable CEOs had lower fraud rates (Han et al., 2023). Sustainable leaders were more likely to create and implement efficient internal procedures to thwart fraud and recognize and act upon it promptly.

Organizations with more sustainable CEOs had better financial reporting. A research by (Liu et al., 2021), executives prioritizing sustainability are likelier to have a strong ethical culture that discourages financial reporting fraud and to have internal controls in place to guarantee the accuracy and completeness of financial reporting—internal control benefits from sustainable leadership. Organizations with more environmentally conscious executives are more likely to have efficient internal control frameworks, lower fraud rates, and better financial reporting. As a result, hypothesis three was created.

**H3:** Sustainable leadership positively correlated with internal control

#### **2.4. Mediating Role of Sustainable Leadership**

Organizational operation and board diversity, internal control, and sustainable leadership are strongly intertwined. The range of backgrounds, experiences, and viewpoints represented by a firm's board members is referred to as board diversity. Better decision-making may result from the varied thoughts and viewpoints that a board member can bring to the table. Financial performance and better corporate governance are also linked to a diverse board. An organization uses internal control, a collection of rules and guidelines, to ensure that its resources are safeguarded, its operations run smoothly, and its financial reporting is accurate (Behlau et al., 2023). All organizations need internal control, but those subject to regulatory scrutiny or publicly traded should prioritize it more than others.

Sustainable leadership is a style of leadership that prioritizes an organization's long-term performance while also considering the social, economic, and environmental effects of its decisions. Leaders who practice sustainability are dedicated to making choices that benefit both the organization and the environment. In the interaction between internal control and board diversity, sustainable leadership may act as an intervention effect (Al-Shaer et al.,



2023). The correlation between internal control and board diversity can be mediated in several ways by sustainable leadership, including the culture of ethics and compliance, which is more likely to be established by sustainable leaders. Both the likelihood of investing in resources to support internal control and the likelihood of holding management responsible for internal control are higher among sustainable leaders (Suriyankietkaew et al., 2022). The link between internal control and board diversity can benefit from sustainable leadership. Effective internal control systems can be ensured in organizations by sustainable leaders through resource allocation, developing a compliance and ethics culture, and management accountability.

A board that is aware of and attentive to ESG concerns is more likely to exist in a corporation with a diverse membership. It is more likely that a board that is conscious of and attentive to ESG issues will insist that management put internal controls in place to reduce these risks (Alabdullah and AL-Qallaf, 2023). As a result, businesses with diversified boards of directors are more likely to have efficient internal control frameworks. Sustainable leadership influences the board's risk oversight and monitoring efforts, mediating the correlation between board diversity and internal control. Boards that were diverse and had sustainable leaders had higher rates of effective risk oversight and monitoring, which enhanced internal control. Sustainable leadership influences the board's compliance and ethical culture, which in turn mediates the association between board diversity and internal control. There was an increased likelihood of a robust compliance and ethics culture on diverse boards led by sustainable leaders, which resulted in enhanced internal control. A study by (Fakir et al., 2019), sustainable leadership influences the board's accountability for internal control, which in turn mediates the association between board diversity and internal control. There was an increase in internal control when diverse boards with long-term leaders held management responsible for internal control.

Overall, the research points to sustainable leadership as a potential mediator in the conflict between internal control and board diversity. Effective risk oversight and monitoring, a robust culture of compliance and ethics, and accountability for internal control are all critical components of effective internal control that sustainable leaders should support. Thus, the fourth hypothesis was created.

**H4:** Sustainable leadership mediates the relationship between board diversity and internal control

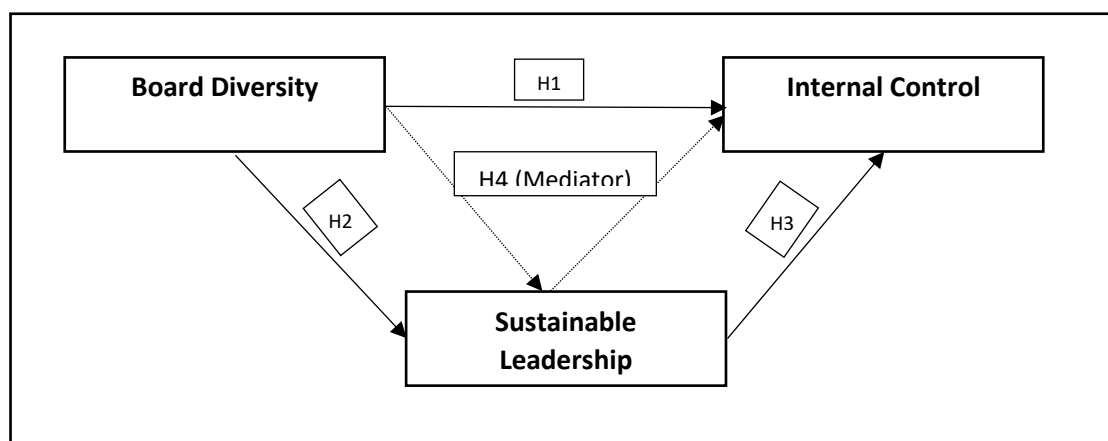


Figure 1. Conceptual Model

### **3. RESEARCH METHODOLOGY**

#### **3.1. Research Method and Data Collection Tools**

Research methods are techniques and procedures used to select, process, implement, and evaluate data related to a specific topic (Kothari, 2004). The study's aim, research question, objectives, and hypotheses were all addressed using quantitative methods (Nenty, 2009). The primary focus was on the various facets of board diversity, including the influence of sustainable leadership mediation on internal control. First, we carefully analyzed the demographics, sample, and study design. After that, we concentrated on the data gathering and analysis procedures, validation techniques, experiments, and instruments. This meant that all population members had an equal chance of being chosen for the sample, and basic random sampling techniques were utilized to establish general demographic targets.

The rationale behind simple random sampling research by (Olken and Rotem, 1995), is that it should yield a representative sample and eliminate bias from the selection process. A closed-ended survey was used to gather the data; each question was prepared, logically, and with minimal embellishment. By allowing participants to address any uncertainties of any kind, this technique allowed us to communicate the study's aim in a way that would inspire them and lead to a high rate of questionnaire return (White and Frederiksen, 2005).

The study focused on registered small, medium, and large corporate house employees from the districts of Kathmandu, Bhaktapur, and Lalitpur in Nepal, and we selected 162 corporate house employees as our sample. Nevertheless, a closed-ended questionnaire was used. All registered corporate houses in these cities operating various branches throughout Nepal and adhering to conventional corporate policies nationwide were included in the target sample.

The population was small, and the sample was drawn from various demographic groups. Therefore, we preferred using standard random sample techniques. Equally, a purposive sample approach was used to select the respondents, who included the owner/CEO, managers, officers from various departments and sections, corporate heads, sales directors, finance directors, human resource directors, learning and development heads, quality management heads, operational heads, and supervisors from various departments of the selected corporate houses. Their managerial and operational duties for the board diversity in the organization, which were significant for influencing the economic feat and sustainable development of the company, served as the basis for the selection criterion. We were chosen using standard random sample procedures since the population was smaller and more representative. Instead, we targeted board members, owners/CEOs, managers, officers from various divisions, operations in charge, supervisors from various branches and departments, and officials of the selected organization when choosing the respondents through the use of a purposive sample technique. As mediators of this research, which served as the foundation for the selection criterion, their department head, manager, corporate officer, and operational head of the relevant branches were crucial in influencing internal control in a struggle for sustainable leadership.

#### **3.2. Data Collection Methods**

A survey is typically associated with deductive methodologies, depending on the type of research quantitative technique utilized for this study's data collection procedure (Rahi,

2017). Using an assessment approach gave us complete control over the explore procedure. It permitted us to create survey outcomes that more accurately represented the organizations in Nepal's districts of Kathmandu, Bhaktapur, and Lalitpur, as well as more reasonably priced. The two primary methods of acquiring data that are frequently used in survey tactics are structured interviews and questionnaires (Bryman, 2006).

For this reason, the primary source of quantitative data for the current trial was a self-administered questionnaire. The final questionnaire had the same questions for every variable utilized in this study. Moreover, partial least squares structural equation modeling was used to analyze the survey data (PLS-SEM). Survey boards of directors, owners, managers, and participants can all easily use the 5-point Likert scale. Higher point scales need more effort and time to complete. It is preferable to have more pointed scales that fit on mobile devices. There isn't a sense of option saturation among respondents. Because of this, a 5-point Likert scale with the options strongly agree to strongly disagree was utilized in the current study (Finstad, 2010).

A total of 200 persons participated in the study, and 175 replies were gathered. Following the initial evaluation, 13 questions were determined to be incomplete. As a result, 162 respondents were prepared for additional examination. The 58 female participants in the study comprised 36% of the total number of participants, where 104 males accounting for 64% of the total. To be split up into several age groups for the research. Specifically, 20 individuals (12%) were younger than 25, 55 individuals (34%) were in the 26–35 age range, 48 individuals (30%) were in the 36–45 age range, and 39 individuals (24%) were older than 45.

This study classified the distribution of career levels among four positions and employment roles. Supervisor/worker, middle manager, manager, and owner/CEO. The supervisor/worker, 36 people (22%) are in the sample. The sample consisted of 78 people (48%) in middle management, 40 people (25%) in the manager position, and 8 people (5%) in the owner/CEO position. The participant's educational backgrounds ranged from basic/secondary (10), undergraduate (56), master's (81), and doctoral (15) degrees. As per the degrees, these percentages were 6%, 35%, 50%, and 9% in Table 1. Demographic variations and a variety of characteristics of the population are exhibited.

**Table 1.** Demographic Variations

<b>Respondents characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>		
<b>Men</b>	104	64%
<b>Women</b>	58	36%
<b>Total</b>	162	100%
<b>Age group</b>		
<b>Under 25</b>	20	12%
<b>26-35</b>	55	34%
<b>36-45</b>	48	30%
<b>Over 45</b>	39	24%
<b>Total</b>	162	100%
<b>Education</b>		
<b>Secondary or Basic</b>	10	6%
<b>Undergraduate</b>	56	35%

<b>Masters</b>	81	50%
<b>PhD</b>	15	9%
<b>Total</b>	162	100%
<b>Position</b>		
<b>Supervisor/ Worker</b>	36	22%
<b>Middle Manager</b>	78	48%
<b>Manager</b>	40	25%
<b>Owner/ CEO</b>	8	5%
<b>Total</b>	162	100%

### 3.3. Measurement Scale

For the measurement of board diversity, 7- items were employed (Behlau et al., 2023, Miller and del Carmen Triana, 2009). To measure the sustainable leadership, 15- items were adopted (McCann and Holt, 2010). To measure internal control, 7 items were adopted from (Utaminingsih et al., 2022).

## 4. RESULTS AND DISCUSSION

Partial least squares structural equation modeling was the researchers' preferred method for data analysis. PLS-SEM is a more favorable technique than other conventional multivariate procedures (Haenlein and Kaplan, 2004). Using the bootstrapping procedure, PLS-SEM is a statistical technique that yields a dependable analysis (Iqbal et al., 2022). Researchers can use this strategy to construct standard errors for route coefficients, which will help them assess the importance of their findings (Nitzl et al., 2016). Initial assumptions that were assessed were multicollinearity, normality, and ordinary method variation (Tabachnick et al., 2007; Hair Jr et al., 2010). The collected data was then analyzed and interpreted by a two-step approach that combined measurement and structural models.

### 4.1. Measurement Model Assessment

Studying the measurement model requires evaluating each concept's discriminant validity, convergent validity, internal uniformity, and reliability (Hair Jr et al., 2010). Because PLS-SEM has been widely accepted and adopted by academics in a range of academic disciplines, it was employed in this investigation. This study is relevant since it employed a novel approach to establish guidelines for comprehensive data analysis (Hair et al., 2019). Researchers employed factor loading to evaluate every item's dependability (Hair et al., 2012). (Hair et al., 2019) state that a minimum threshold of 0.7 or above is necessary. All of the outside loadings in our investigation match the criteria, as Table 2 demonstrates.

**Table 2.** Mean, SD, CA, CR, and AVE

<b>Constructs</b>	<b>Mean</b>	<b>SD</b>	<b>CA</b>	<b>CR</b>	<b>AVE</b>
<b>Board Diversity</b>	3.36	0.85	0.861	0.893	0.543
<b>Internal Control</b>	3.19	0.82	0.876	0.904	0.574
<b>Sustainable Leadership</b>	3.38	0.85	0.941	0.948	0.547

\*Note: SD- standard deviation, CA- Cronbach alpha, CR- composite reliability, AVE- average variance extracted

## 4.2. Internal Consistency

Researchers frequently utilize Cronbach's alpha and composite reliability to evaluate the internal consistency of an instrument. The measurements often employ a minimum threshold of 0.7, per several studies (Hair et al., 2019; Hair Jr et al., 2021; Hair et al., 2011; Bagozzi et al., 1991). Table 3 displays the internal consistency and reliability of the structures, A research by (Bagozzi et al., 1991) recommends that, The variance inflated factor (VIF) is used for statistical measures to evaluate common bias and collinearity effects, a research by (Ringle et al., 2015). It is frequently preferable to consider a threshold of 5 or below for the VIF, as Table 3 illustrates.

**Table 3.** Factor Loadings and Variance Inflated Factor

<b>Construct</b>	<b>Item</b>	<b>Loading</b>	<b>VIF</b>
<b>Board Diversity</b>			
	BD1	0.720	1.627
	BD2	0.720	1.488
	BD3	0.709	1.738
	BD4	0.718	1.719
	BD5	0.771	1.691
	BD6	0.770	1.865
	BD7	0.807	2.025
<b>Internal Control</b>			
	IC1	0.708	1.671
	IC2	0.860	3.828
	IC3	0.781	2.954
	IC4	0.769	2.047
	IC5	0.738	1.720
	IC6	0.722	1.717
	IC7	0.714	1.797
<b>Sustainable Leadership</b>			
	SL1	0.733	3.269
	SL2	0.789	4.005
	SL3	0.728	3.454
	SL4	0.707	2.316
	SL5	0.703	2.000
	SL6	0.737	2.188
	SL7	0.703	2.698
	SL8	0.792	3.883
	SL9	0.762	4.495
	SL10	0.746	2.815
	SL11	0.776	2.921
	SL12	0.708	2.008
	SL13	0.768	3.048
	SL14	0.705	1.828
	SL15	0.729	1.967

\*Note: VIF = Variance Inflated Factor

As recommended by (Fornell and Larcker, 1981), the average variance extracted (AVE) is employed to assess the discriminant and convergent validity. Convergent validity is often established using minimum criteria of 0.5 or above (Chin, 1998). The results of the convergent validity research are shown in Table 4. All latent variables had average variance extracted (AVE) values higher than the predetermined cutoff, as Table 3 demonstrates. Table 4 demonstrates that it was discovered that the square root of the average extracted variance (AVE) was greater than the correlations between the latent components. The current study demonstrates acceptable discriminant validity in all dimensions.

**Table 4.** Discriminant Validity

Constructs	BD	IC	SL
Board Diversity	0.737		
Internal Control	0.730	0.758	
Sustainable Leadership	0.709	0.675	0.740

### 4.3. Structural Model Assessment

The R2 coefficient measures how well the model can predict results (Sarstedt et al., 2014). (Chin, 1998) categorized an R2 (R-Square) value of 0.60 as vital, 0.33 as reasonable, and 0.19 as feeble. They also suggested certain standards for assessing the R2 number. Table 5 displays the R2 and Q2 values for the IC and SL variables. The SL variable's coefficient of determination (R2) is 0.503; similarly, it is 0.583 for the IC variable. The Q2 values for SL and IC were found to be 0.264 and 0.327, respectively. Our study model is valid, as indicated by the results of the F2 tests for the BD constructs (0.305) and SL (0.119).

**Table 5.** Predictive Relevance and Model Fit

Constructs	Q <sup>2</sup>	R <sup>2</sup>	F <sup>2</sup>
Board Diversity			0.305
Internal Control	0.327	0.583	
Sustainable Leadership	0.264	0.503	0.119

To determine the statistical significance of the hypothesis, the study employed the bootstrapping approach, specifically utilizing 5,000 bootstrap samples (F. Hair Jr et al., 2014, Henseler et al., 2009). Based on empirical evidence from Table 6 and Figure 2, Hypothesis 1 (H1) proposes a significant and positive correlation between BD and IC (= 0.506, t = 5.890, p = 0.000). As an outcome, hypothesis H1 has been established.

The study's findings supported hypothesis H2 shows a statistically significant linkage between board diversity (BD) and sustainable leadership (SL) (= 0.709, t = 19.056, p = 0.000). The correctness of hypothesis H3 is supported by the values of t = 3.515, p = 0.000, and = 0.316. The outcome of the study confirmed the hypothesis that sustainable leadership (SL) acts as a mediator in the relationship between internal control (IC) and board diversity (BD). The results of the analysis produced a statistically significant result (= 0.224, t = 3.306, p = 0.001), supporting the partial mediation theory proposed by (Baron and Kenny, 1986).

**Table 6.** Structural Model

Hypothesis	Relationship	Beta	SE	t-Value	p-Value	Decision
H1	BD → IC	0.506	0.086	5.890	0.000	Supported
H2	BD → SL	0.709	0.037	19.056	0.000	Supported

<b>H3</b>	SL → IC	0.316	0.090	3.515	0.000	Supported
<b>H4</b>	BD → SL → IC	0.224	0.068	3.306	0.001	Supported

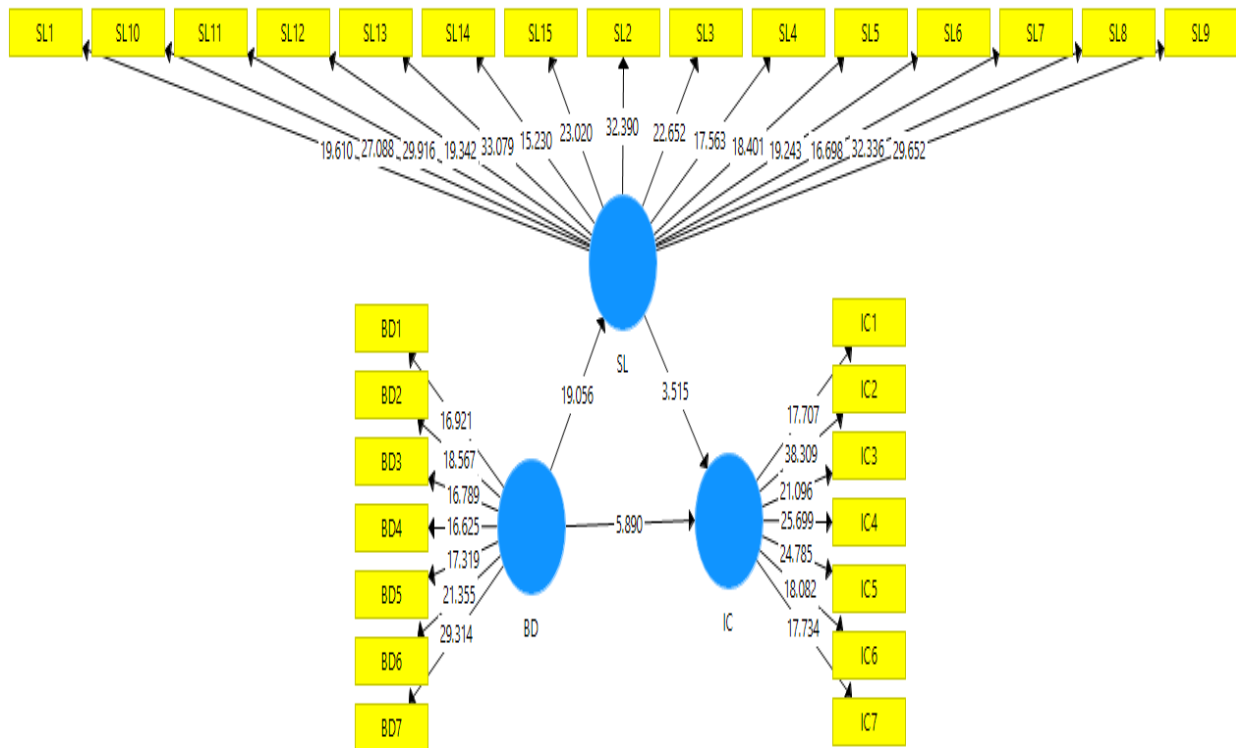


Figure 2. Hypothesis Results

#### 4.4. Discussion

The present study looked at the correlation between internal control and sustainable leadership. The findings showed a favorable correlation between internal control and board diversity. Additionally, it was demonstrated that sustainable leadership and a diverse board had a measurable impact on internal control. The findings also showed that the relationship between internal control and board diversity is mediated by sustainable leadership. The empirical findings showed that while diversity in the board will undoubtedly improve internal control. It can be enhanced if long-term planning and decision-making processes are carried out with effective, sustainable leadership at each level. This suggests that internal control will function more effectively when a high degree of diversity is incorporated and sustainable leadership practices are used for long-term goals. Companies with more diverse boards had better internal control systems (Ud Din et al., 2021). A study by (Ud Din et al., 2021) recommends that boards with a diverse membership are more likely to hold management accountable for putting in place and maintaining efficient internal control systems, examine the assumptions made by management, and raise pointed questions. Businesses with more diverse boards have lower fraud rates. Diverse boards had higher propensities to identify and stop fraud as well as to discipline management when it was uncovered. Businesses with more diverse boards had better financial reporting. Diverse boards were more likely to have a strong ethical culture that prohibited financial reporting fraud and to hold management accountable for the completeness and integrity of financial reporting. Most of the data points to board diversity as an advantage for internal control.

Businesses with a more varied board of directors are more liable to have strong internal control frameworks, lower fraud rates, and better reporting systems.

Aini (Aini et al., 2022) proposed that CEOs dedicated to sustainability were more likely to lead organizations in more diverse ways. Diverse boards had a higher propensity to question CEOs about sustainability-related matters and to hold them responsible for advancing sustainability objectives. Businesses that had more diverse boards had higher adoption rates for sustainable business practices. Boards with a diverse membership were more likely to be prepared to fund sustainability projects and be thoroughly aware of the benefits and risks associated with ESG (Menicucci and Paolucci, 2022). Businesses with more diverse boards had a better chance of receiving higher ESG ratings. Boards with a diverse membership were also more likely to focus on governance, social, and environmental issues and to take the initiative to raise their ESG performance (Menicucci and Paolucci, 2022). Most studies spot board diversity as a benefit for long-term leadership. Firms with a more heterogeneous board of directors are inclined to have CEOs dedicated to sustainability, implement eco-friendly business strategies, and maintain superior ESG ratings (Menicucci and Paolucci, 2022).

(Supriaddin, 2022) proposed that organizations with sustainable CEOs have higher rates of internal control effectiveness. Ethical and compliant cultures were more likely to be established, resources for internal control were more likely to be invested in, and management was more likely to be held responsible for internal control. A research by (Chen et al., 2023) state that, fraud was less common in businesses with sustainable CEOs. Sustainable leaders were more likely to create and implement efficient internal procedures to thwart fraud and recognize and act upon it promptly. Executives who prioritize sustainability are more likely to have a strong ethical culture that discourages financial reporting fraud and to have internal controls in place to guarantee the accuracy and completeness of financial reporting. Businesses with sustainable CEOs are more likely to have better financial reporting, more efficient internal control systems, and a lower incidence of fraud. Research by (Ud Din et al., 2021) state that sustainable leadership's influence on the board's risk oversight and monitoring operations acted as a mediator in the relationship between internal control and board diversity. Boards that were diverse and had sustainable leaders had higher rates of effective risk oversight and monitoring, which enhanced internal control. Sustainable leadership's effect on the board's compliance and ethics culture acted as a mediator in the relationship between board diversity and internal control. There was an increased likelihood of a robust compliance and ethics culture on diverse boards led by sustainable leaders, which resulted in enhanced internal control (Gerard et al., 2017). Through its effect on the board's accountability in control, sustainable leadership was found to alleviate the correlation between board diversity and internal control. There was an increase in internal control when diverse boards with long-term leaders held management responsible for internal control.

The evidence points to the possibility that sustainable leadership may mediate the interaction between internal control and board diversity (Ong et al., 2023). Effective risk oversight and monitoring, a robust culture of compliance and ethics, and accountability for internal control are all critical components of effective internal control that sustainable



leaders should support (Ong et al., 2023). The study found that sustainable leadership mediates the correlation between internal control and board diversity. This suggests that sustainable leadership may account for a portion of the relationship between internal control and board diversity. The study also found that there was a stronger correlation between the various degrees of internal control systems in businesses with higher levels of sustainable leadership. This suggests that sustainable leadership is more important for those businesses whose prospect goal is performing at a higher level among sustainable growth.

## **5. CONCLUSION, LIMITATIONS AND PROSPECT DIRECTION**

This study sought to investigate the correlation between board diversity and internal control in mediating the impact of sustainable leadership in Nepali public and private firms. These findings suggest that certain critical measures in the board diversity and internal control systems are necessary for a firm to have a sustainable leadership strategy (Unite et al., 2019). The degree to which organizational staff members are knowledgeable about sustainable development procedures and processes is a major factor in the effectiveness of board diversity structures in Nepal. This study looks at how sustainable leadership affects internal control and board diversity. It was discovered that sustainable leadership significantly influences the correlation between internal control and board diversity (Niroula and Upadhaya, 2022).

This implies that even in situations where board diversity is higher, sustainable leadership can contribute to increasing the efficacy of internal control mechanisms. Additionally, the study reveals that sustainable leadership has a stronger mediation effect in companies with more diverse boards. This implies that sustainable leadership is especially crucial for companies with diverse boards to ensure that the advantages of having a diverse board are realized. The research findings have significant ramifications for policymakers and practitioners alike (Werven, 2017). The results point to sustainable leadership as a crucial area of concentration for businesses seeking to increase the efficiency of their internal control frameworks. The results imply that policies supporting sustainable leadership can contribute to raising the standard of corporate governance for policymakers. More empirical investigations are still needed to explore fresh results of the existing research in the relatively new field of mediating the impact of sustainable leadership on board diversity and internal control (Suriyankietkaew et al., 2022). The paucity of research on the long-term impacts of sustainable leadership on internal control is one of the primary gaps. It is critical to comprehend whether the moderating influence of sustainable leadership increases or decreases with time. Another research gap is the dearth of research that looks at the mediating role of sustainable leadership in various circumstances. The question of whether sustainable leadership has the same mediating effect across various industries, nations, and company sizes remains unresolved. Further investigation is required to comprehend how various contextual circumstances impact the mediating effect of sustainable leadership. Lastly, there is a limitation in the research about how internal control and board diversity are mediated by sustainable leadership. Subsequent investigations must concentrate on pinpointing and comprehending the precise processes by which sustainable leadership enhances internal control system efficacy (Utaminingsih et al., 2022).

Long-term effects, contextual factors, and mediating processes are some directions for future study on the mediating impact of sustainable leadership among board diversity and internal control, based on the gaps in the research that have been mentioned above. Future studies could examine how sustainable leadership can help reduce fraud and other corporate scandals, how sustainable leadership affects corporate risk management, how sustainable leadership and corporate social responsibility are related, and how effective various interventions are at fostering sustainable leadership in businesses.

## **6. THEORETICAL AND PRACTICAL IMPLICATIONS**

The research on the mediating effect of sustainable leadership between internal control and board diversity has important theoretical ramifications. The results indicate that even in cases when board diversity is limited, sustainable leadership can be crucial in improving the efficacy of internal control mechanisms (Suriyankietkaew et al., 2022). This is significant because risk mitigation and maintaining the accuracy of financial reporting depend on internal control systems. The results also imply that the advantages of having a diverse board might be enhanced by sustained leadership. Diversity on boards is frequently viewed as a means of enhancing corporate governance and decision-making (Hoang et al., 2018). However, sustainable leadership is also necessary to fully realize the advantages of having a diverse board.

The research impacts theory and practice on the mediating role of sustainable leadership. The results contribute to our understanding of the intricate interaction among internal control, sustainable leadership, and board diversity from a theoretical standpoint. The results imply that companies should prioritize developing sustainable leadership to enhance the performance of their internal control frameworks and fully capitalize on the advantages of having a diverse board of directors. Board diversity can result in agency costs that can be reduced with sustainable leadership (Acharya, 2022). If several board members have competing interests or are unable to agree on crucial issues, board diversity may result in agency costs.

The study's important practical ramifications center on how sustainable leadership influences the relationship between internal control and board diversity. The results indicate that by emphasizing sustainable leadership, firms can increase the efficacy of their internal control systems and fully benefit from board diversity. Establishing a culture that prioritizes ethical decision-making, long-term planning, and stakeholder participation is important for organizations. This can be accomplished by creating and enforcing a code of ethics, offering instruction in sustainable leadership techniques, and rewarding staff members who exhibit sustainable leadership traits. Board members and executives should have access to opportunities for sustainable leadership practice training and development from their organizations. Stakeholder participation, ethical decision-making, and sustainability strategy should all be covered in this training (AKINLO et al., 2023).

Companies want to implement incentive programs that recognize and promote enduring leadership qualities. This could entail establishing executive sustainability goals, associating executive pay with sustainability outcomes, and honoring staff members who contribute to sustainability projects. Businesses should be encouraged to embrace sustainable leadership practices by disclosing their sustainability performance. Among the methods to achieve this

are releasing sustainability reports, participating in sustainability rating and ranking systems, and becoming a member of trade associations that promote sustainable leadership (McCann and Holt, 2010). It is recommended that policymakers create regulations that support sustainable leadership, such as mandating that businesses reveal their sustainability performance and incentivizing them to implement sustainable leadership practices. Tax breaks and other financial incentives are another tool policymakers can use to encourage businesses to fund sustainable leadership projects.

Overall, there are important theoretical and practical ramifications for the research on the mediating role of sustainable leadership between internal control and board diversity. The results imply that strong internal control and corporate governance depend heavily on sustainable leadership.

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