

# ETHICAL LEADERSHIP BRIDGES CORPORATE SOCIAL RESPONSIBILITY AND GREEN INNOVATION: EVIDENCE FROM MANUFACTURING FIRMS OF PAKISTAN

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## Abstract

*This study examines the relationship between ethical leadership, corporate social responsibility (CSR), and green innovation within the context of manufacturing firms in Pakistan. The objective is to explore how ethical leadership practices influence the integration of CSR initiatives and the adoption of green innovation strategies in these organizations. The research utilizes a quantitative approach, employing a structured questionnaire to collect data from a sample of manufacturing firms in Pakistan. The questionnaire measures ethical leadership behaviors, CSR practices, and green innovation adoption. The data collected is analyzed using statistical techniques such as correlation and regression analysis to establish the relationships among the variables. The findings reveal a positive and significant relationship between ethical leadership, CSR, and green innovation. Ethical leaders exhibit behaviors that prioritize social and environmental concerns, leading to a greater emphasis on CSR practices and the integration of green innovation strategies within the organization. Moreover, the study demonstrates that CSR acts as a mediator between ethical leadership and green innovation, indicating that ethical leadership influences green innovation adoption by promoting CSR initiatives. The study also identifies several mechanisms through which ethical leadership facilitates the integration of CSR and green innovation. These mechanisms include fostering a culture of ethics, promoting employee engagement, and aligning organizational values with social and environmental goals. Additionally, the research highlights the role of top management support in driving ethical leadership practices and creating an organizational climate that encourages CSR and green innovation.*

**Keywords:** Ethical Leadership; Corporate Social Responsibility; Green Innovation

## 1. INTRODUCTION

In the management literature, the phenomenon of corporate social responsibility has attained considerable significance in the management profession during the previous decades, being regarded as a significant contributor to competitive advantage (Currás-Pérez et al., 2018; Graafland et al., 2003; Mira Pérez, 2020). Simultaneously, moral norms are shifting, and corporations' innovation should react to changes in stakeholder expectations (Bello-Pérez et al., 1999; Gallardo-Vázquez & Sanchez-Hernandez, 2014; Sánchez-Hernández et al., 2019). "CSR will be a drive of firms' innovative techniques" since corporations must incorporate CSR practices to their goods and services. (WATTO et al., 2020).

How businesses control social and environmental aspects throughout their value chain will become a critical competitive advantage. (Aftab et al., 2021). Even though the effect of Ethical leadership efforts has been extensively discussed in the research, an effectual organizational perspective centered on manufacturing and how CSR might increase effectiveness via green innovation appears to be relatively untouched (Valmohammadi, 2014). Our study examines Ethical leadership as a facilitator in the significant interrelationship between CSR and green innovation, since as a feedback to green ecological concerns, CSR-related change is widely not appeared but also as a result in distant future success (Liu et al., 2012). Ethical leadership (Aguilera-Caracuel et al.) and corporate social responsibility (Aftab et al.) are connected to a wide range of positive consequences both for companies and communities (Nejati et al., 2020). The function of EL and CSR in green innovation is



significant since the costs of green practices include human and financial resources, the need to hire and develop new staff, and decreased quality of service (Vardaman et al., 2016).

The impact of social responsibility and green innovation has been investigated from the studies on innovativeness conducted in advanced countries like the United States (Marquina & Ethics, 2010), Europe (Padilla-Lozano & Collazzo, 2021), and on selected Asian markets (Padilla-Lozano & Collazzo, 2021), and research is not that much came to be in evolving economies. The goal is to examine and overcome the gap by researching how ethical leadership affects social responsibility and its influence on green innovativeness in the manufacturing sectors in an evolving market context. (Aftab et al., 2021). Manufacturing continually aims to account for a bigger part of GDP in many emerging nations to move up top value chains globally (Gereffi, 2019). However, increasing firm's productivity is frequently gained at the price of decreasing social benefit and negative ecological effect. This widespread disparity appears to be being addressed in Ecuador by the rise of a new class of ecological innovators in industrial firms. Our anticipated participation will focus on the mediating impact of Ethical leadership in the interaction among CSR and green innovation in manufacturing in a growing market scenario. The research moderating model and the emphasis on manufacturing and developing markets allow for distinction in the study that urges to be addressed orderly to offer scientific proof to broader theoretical statements. (Arshad et al., 2021).

What explains the link between EL and CSR and decreased workforce turnover? The study on EL, CSR, and workforce turnover suggests several possible processes. Throughout the worker's retention (Brunetto et al., 2013), EL (Schwepker et al., 2016), and CSR writings, employee actions at large, and work commitment and worker engagement specifically, are particularly essential (Barton & Lee, 2013). While both elements work at distinct stages (CSR at the business and EL at the personal stage), two of them significantly affect employee engagement and contribute to creativity. Furthermore, functioning for a corporation with a higher CSR image and a leader exhibiting excellent EL may generate a favorable organizational climate that increases work performance.

Ethical leadership foster ethical environment in the organizations (Schaubroeck et al., 2012). According to (Stafford-Smith et al., 2017), leadership is associated with integrity and is viewed "as a two-way transformational and fundamentally ethical relationship among leaders and their workers". (Brown et al., 2005) but from the other side, were one of the first few researchers to experimentally study this research of EL and elaborate it as "the presentation of universally suitable behavior via good deeds and social interactions, and the implementation of such behavior to adherents through two-way communication, encouragement, and strategic planning" (Brown et al., 2005). Brown and colleagues also claimed that EL consists of two distinct components: 1. component is the personal morality (e.g. fairness, uprightness, credibility, ethics, and so on) and 2. the ethical management component (e.g. a great leader in righteous conduct, emphasis on moral codes, motivating, criticizing, and so on) (Brown et al., 2005).

## 2. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

### 2.1. Ethical Leadership

According to (Brown et al., 2005), the idea of leadership is changing and not directly related to the ethics in the behavior of employees (fair decision making, equity, vulnerability) and leader characteristics, but also knows how to deal with people (Kuntz et al., 2013). Brown et al. (2005) stated that people are searching for any accepted definition universally that could narrate ethical leaders as 'truthful, cooperative, kind and morally strong, and make decisions and must be able to show a positive attitude to their followers, and become best example for them by using these moral characteristics of ethics themselves.' Ethical leadership is described by Brown and colleagues as 'the modelling of fair behavior through their actions and building relationship ties, that encourages the followers through communication, that boost up their thinking capabilities for making decisions successfully' (Brown et al., 2005).

Brown et al. (2005) defined key distinctions among ethical leaders as well as other styles of leadership, such as servant leadership, authentic leadership, and charismatic-transformational leadership, as "contextually reasonable conduct." To put it differently, ethical leaders aspire to do



the correct thing based on ethical values and are much more committed to doing so in their work and personal lives. Moreover, ethical leaders foster equitable and responsible intervention of employees besides empowering a cooperative as well as encouraging a working environment where employees value the well-being of others and offer additional assistance for professional growth, inspiring their employees to display the very same ethical practices forward into their entire organization (Brown & Treviño, 2006; Jones et al., 2017; Sarwar et al., 2020) and go an extra mile while performing their work, resulting in higher employee job performance (Kuntz et al., 2013; Sarwar et al., 2020). Employees are somewhat anxious if they work under an ethical leader. Ethical leaders set realistic goals for their workforce and lead them in an unbiased and reasonable way (Brown et al., 2005).

## **2.2. Corporate Social Responsibility**

CSR had increased its awareness, as has had its impact on businesses to sustain the company's life, it should not only increase profitability but provide benefits to stakeholders and associated groups (Aguilera-Caracuel et al., 2018; Brown et al., 2005; Guerrero-Villegas et al., 2018; Yáñez-Araque et al., 2021). (Cegarra-Navarro et al., 2016; Friedman, 2007; Guerrero-Villegas et al., 2018; Reverte et al., 2016; Reverte & management, 2012) Whereas (Perdomo & Escobar, 2011) further state that there's no widespread standard measure of CSR, distinct solutions have been developed over time, with many research findings classifying CSR as an essential idea. The evaluation is based on 37 definitions (Dahlsrud & management, 2008) established that CSR includes five dimensions: ecological, societal, socioeconomic, partners, and collaborators. According to the corporation for Economic Cooperation and Development, corporate citizen behavior has been defined as "making a contribution positively to economical, ecological, and social advancement" (OECD & Interpreting Innovation Data). The universally accepted triple bottom line (TBL) model divides CSR into social, environmental, and economic aspects, and so this idea reflects this division (Bansal, 2005; Dahlsrud & management, 2008).

The resource-based view (RBV) is used to explore CSR results, while organizational and stakeholder views are used to examine CSR reasons (Pan et al., 2021). The RBV (Barney, 1991) has emerged as an important issue within strategy formulation, concentrating on economic considerations to describe long-term competitive edge (Hart, 1995; Pan et al., 2021; Torugsa et al., 2013) argue that firms' interactions with vendors, customers, and other partners have influenced brief stability and productivity (Hart, 1995; Torugsa et al., 2013). The present RBV, on either side, has certain problems since it fails to account again for interplay between the business and its global ecosystems (Hart, 1995). (Barney et al., 2001; Hart, 1995; Pan & Zhang, 2020; Torugsa et al., 2013). Depending on RBV, the natural resource-based view (NRBV) evaluates ways organizations develop a comparative edge, enabling companies to stay ahead of their competitors. Environmental CSR stresses on the execution of precise practices to reduce the firm's environmental imprint with increasing resource consumption (Orlitzky et al., 2011; Slovic et al., 2019). However, RBV and NRBV may not consider the TBL's social dimension (G. Svensson et al., 2018).

To overcome that imbalance, the social resource-based method (SRBV) describes that social competences also supplement the two other aspects while broadening the scope of study by involving various economic, societal, and ecological partners (Tate & Bals, 2018). Resultantly these three sections should collectively be forming a single TBL value, since "the world economy serves society, which rests inside Atmosphere's Innovation." Rules for Action the Consequences of Innovation. The Development of Innovativeness, Unexpected Innovation Has Improved Over the Years. From the triple bottom line viewpoint, the existing system is that Eco-Innovation Method for forming a New Product Innovation is an example of a real improvement. Innovation strategy, process innovations, and technical innovation are all examples of innovation. Non-Technological Area Innovations the innovation assessment paradigm was created after an analysis of relevant literature. (Yáñez-Araque et al., 2021).

Since "staff health, security, and overall well-being" encourage "businesses to engage as responsible citizens in the city's economy," worksite and society play a key role in societal CSR (Torugsa et al., 2013). (European Commission, 2003,) Considering their disparities, societal, ecological, and economical CSR are not collectively incompatible (Pan et al., 2021); these three things must always



come along to guarantee long-term success (Bansal, 2005). Like other researches which explores CSR as a dimensional concept employing the TBL's. ((Barney et al., 2001; Gough, 2018; Guerrero-Villegas et al., 2018; Hart, 1995; Orlitzky et al., 2011; Pan & Zhang, 2020; G. Svensson et al., 2018; Tate & Bals, 2018; Torugsa et al., 2013; Yáñez-Araque et al., 2021).

### **2.3. Green Innovation**

Green innovation, according to (Chen et al., 2006) is “physical and digital innovation in hardware and software through process and product advancement, taking into account technology solutions related to energy preservation, pollution prevention, recycling and reuse, environmental systems engineering, all use of eco-friendly packaging, and corporate environmental protection.” Depending on the earlier distinction which may be seen among conventional and sustainable green innovation, with the latter motivated because of the need to adhere to environmental rules or address market problems (Bekk et al., 2016; Shahzad et al., 2016). Green innovation is a pretty recent subject of research, with much of the literature concentrating on its concept and philosophical justification (Hermundsdottir & Aspelund, 2021). Hence, innovation may be classified based on the amount of effect it will see at the organization level.

Product innovation is involved with the layout and monetization of existing or significantly improved goods/services; process innovation is involved with the invention of novel equipment on manufacturing ways; organizational innovation is involved with the addition of another framework within the company; and marketing innovation is involved with launch of innovative sales practices. According to the (OECD & Interpreting Innovation Data, 2005; Rehman et al., 2021), there are four forms of change: (1) product innovation related with the change in existing good/services and also the innovation of new things; (2) process innovation is involved with the invention of novel device on manufacturing operations; and (3) process innovation is involved with the development of new devices on manufacturing operations. Eco-innovation (also called environmental, sustainability, or ecological) is a practical method for tackling ecological concerns, with double benefits that ultimately enable environmental and waste management (Pan & Zhang, 2020). As a response, this notion has grown from simple measures targeted at decreasing environmental harm to a more intricate multifunctional dimension (Bekk et al., 2016; Chen et al., 2006; Co-operation & Staff, 2005; Hermundsdottir & Aspelund, 2021; Pan & Zhang, 2020; Pereira et al., 2020; Rennings, 2000).

### **2.4. Ethical Leadership and Green Innovation**

Firms with a particular sort of Ethical leadership focus can improve their creative potential (Bekk et al., 2016). The possibility to improve environmental performance management while satisfying environmental protection regulations is undoubtedly the value of green innovation. As a result, Green innovation is considered capable of generating long-term corporate success and responding to environmental problems (Bekmezci & Sciences, 2015). However, before introducing green innovation, businesses must consider the advantages customers may experience (Chen et al., 2006). Green innovation has indeed been written in a variety of research, mostly treated as an independent factor, parameter, and mediator factor (Chen et al., 2006) A significant portion of the publications on green innovation is conceptual, focused on conceptual framework and advancement, since the significance and extent of green innovation are debatably always in the creation (Bekk et al., 2016; Chen et al., 2006) Innovation should generate wealth, and to do so, it must unleash efficiency gains, leading to increased profit margin, increased profits, higher value for stakeholders, increased market share, improved company identity, environmental quality enhancement, or a mixture of all the above, leading to greater competitive spirit (Bekk et al., 2016; Chen et al., 2006).

Ethical leadership delivers resources and capabilities by enhancing workers' contribution to sustainable ideals and boosting their ability to implement positive practices. In comparison to the research indicating that enterprises pursuing financial objectives are far less concentrated on other nonfinancial ways (i.e. social and environmental efforts) (Friedman, 2007), new studies imply that, in the persistent, environmental and economic goals may overlap The focus on long-term economic success may produce adequate cash flow for green impacts, maintaining a solid connection with partners; this provides access to both productive capacity and resources, which are both essential for change in environmental growth (Bekmezci & Sciences, 2015; Friedman, 2007; Graafland et al.,



2003; Martinez-Conesa et al., 2017; Padilla-Lozano & Collazzo, 2021; Pan & Zhang, 2020; Pan et al., 2021; Slovic et al., 2019).

H1. EL is positively related to green innovation.

### **2.5. Ethical Leadership And CSR**

While ethical conduct in enterprises has proliferated, there is no agreement on effectively investigating this phenomenon (Friedman, 2007; Graafland et al., 2003). (Schwepker et al., 2016) While ethical leadership has been emphasized, the notion is still in disarray and misunderstanding. Responses have been tried in the research literature from a blend of scientific and theoretical viewpoints or normative, theoretical approaches. However, “What really is ethical leadership?” remains unanswered (Comrey & Lee, 2013). Ethical leadership is described in management studies as “the presentation of moral right behavior through individual acts and social communication, and the encouragement of such behavior to followers via multiple interaction, encouragement, and moral choice projects (De Roeck & Farooq, 2018), agreed that the rising expansion of the company is accountable for increased social demands on enterprises to enhance the social effect of EL, ethical conduct, and corporate social responsibility. EL also improves the community-minded efforts and improvements that are elements of CSR practices. According to (Mazutis & Zintel, 2015), the EL function is critical in obtaining CSR acceptance and creating durable comparative edge, both of which are aspects of CSR. According to (De Roeck & Farooq, 2018), fully motivated leaders in CSR activities exhibit elevated amounts of EL conduct. In this spirit, (Brown & Treviño, 2006) emphasized that ethical leaders engage their employees with respect and equality, and show greater care for their society, business, and workers rather than their personal self-interest, which falls into the social component of CSR. On the opposite, unethical leaders disregard the urge for CSR and concentrate his own benefits. According to (Aslam et al., 2020; Christensen et al., 2014), ethical leaders aim to match the many requirements in a way that serves the objectives of every stakeholder and so frequently emerge as CSR champions. This point of view is reinforced by scientific investigations, which show that EL impacts CSR, resulting in greater of company effectiveness.

Sheldon first described the concept of CSR in 1924, but it did not gain traction in the business and academic sectors late 1960s. CSR has extended professionals’ and scholars’ perspectives since it extends above economic advantages and defined CSR as “the responsibility of businesses to seek those initiatives, take those judgments, or adopt those courses of action that are advantageous in terms of our society’s aims and values.” As a result, (Dahlsrud & management, 2008) agreed with Carroll and noted that CSR has been framed in several ways, but it typically combines economical, societal, ecological willingness, and stakeholder aspects. In definition, CSR refers to a company’s operations that benefit society and the environment through participate in social responsibility ((Arshad et al., 2021; Brown et al., 2005; Cacioppe et al., 2008; Christensen et al., 2014; Dahlsrud & management, 2008; De Roeck & Farooq, 2018; Edwards & Bowen, 2003; Islam et al., 2019; Jones et al., 2017; Kross et al., 2013; Mazutis & Zintel, 2015; Mishra & Schmidt, 2018; Nejati et al., 2020; Saha et al., 2020; Samad et al., 2016; Schinzel, 2018; Schwepker et al., 2016).

H2. EL is positively related to CSR.

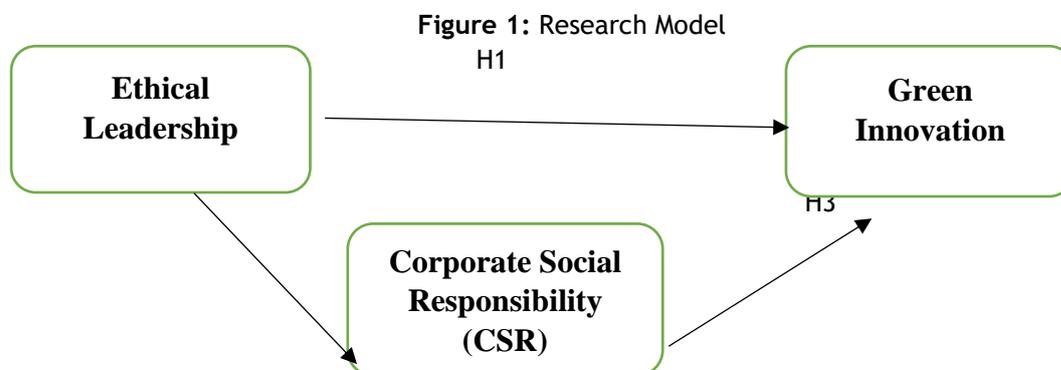
### **2.6. Corporate Social Responsibility and Green Innovation**

The function of CSR and green innovation is significant since the costs of ecological practices include human and financial resources, the need to hire and develop new staff, and decreased quality of service (Vardaman et al., 2016). (Arshad et al., 2021). Unethical behavior is an essential concern since it may be monetarily damaging to the overall industry (Glavas, 2016). This remark implies that neglecting ethical behavior might have a detrimental impact on corporate performance. According to), CSR has been viewed as critical to achieving market goals and success throughout developmental economics. CSR participation in business improves corporate values, especially in contentious industries. According to (Story & Neves, 2015) Socially responsible practices improve performance outcomes and, as a result, overall organizational outcomes. According to (Inthavong et al., 2023; Story & Neves, 2015) only when employees believe their company is engaged in CSR initiatives and green practices will it improve society and the environment inside the country. As a result, we hypothesize the following:

H3. CSR has a direct and positive effect on GI.

### 3. METHODOLOGY

This study aims to use GI to examine the interaction between EL and CSR to understand better the relationship between dependent, independent, and mediating variables.



The data is collected from Sukkur's manufacturing firms, which has been selected as the study's target population. A self-administered questionnaire was adopted to collect data, from which we compiled and used the responses for the study purpose. The respondents aged between (20-60) from which the majority of respondents is laying among the bracket of (20-40) has 96% and rest is from the bracket of (40-60) is 4%, and mostly males. To check the accuracy of data collected from population, we adopted the restrictive minimum size of sample according to the statistical power recommended by (Oduro).

#### 3.1. Procedure of sample and data collection

We emailed the supervisors of 7 manufacturing firms to explain our research's goal and obtain their consent to gather data. 4 out of the 7 firms agreed to let us conduct the poll. After obtaining authorization, 150 questionnaires were given among firm's supervisors by email, and personal visits that stated the purpose of the study and ensured respondents' anonymity. Some responders completed the questionnaire just on place, while others requested that we email the questionnaire so that they may fill it out later.

#### 3.2. Measurement

This study aims to assess the link between EL and CSR, as well as its impact on green innovation. In a quantitative manner, a cross-sectional survey questionnaire methodology was used to explain the relationship between dependent and independent components. Employees working in manufacturing firms in Sukkur, Pakistan were the target responders. Questionnaire was adopted and which consisted of two parts: part 1 used to have two questions about respondents' basic information, such as age, gender and part 2 used to have 15 questions about EL (8), CSR (3), and green innovation (4).

EL: The design used 8 items from the (Brown et al., 2005). Due to inadequate item loading, few of the items were excluded from the analysis. We deleted these items in accordance (Hair Jr et al., 2016) standards because they caused quantification inaccuracy in the independent variable reduces sample size and endangers the results' authenticity. The structure was fairly dependable. (See table 2).

CSR: Three questions modified from (Du et al., 2010) were used to assess this construct. All three things were heavily loaded onto a higher definition. The construct was quite reliable.

GI: This dimension was assessed employing two questions taken from the questionnaire of (Tett & Meyer, 1993) who had developed to quantify the data in prior investigations (Oliveira & Rocha, 2017) The construct had a good level of dependability.

**Table I: List of measurement items**

Construct	Loadings	VIF
<b>CSR</b>		
My organisation is socially responsible	0.681	1.184
My organisation has put in substantial resources to various social initiatives	0.688	1.227
My organisation is really committed to its social initiatives	0.868	1.314
<b>Ethical Leadership</b>		
My direct supervisor/leader listens to what department employees have to say	0.737	1.928
My direct supervisor/leader has the best interests of employees in mind	0.769	2.117
My direct supervisor/leader makes fair and balanced decisions	0.821	2.362
My direct supervisor/leader can be trusted	0.792	2.337
My direct supervisor/leader discusses business ethics or values with employees	0.707	1.611
My direct supervisor/leader sets an example of how to do things the right way in terms of eth	0.756	2.032
My direct supervisor/leader defines success not just by results but also the way they are obta	0.227	1.034
My direct supervisor/leader asks "what is the right thing to do?" when making decisions	0.698	1.547
<b>Green Innovation</b>		
My company uses materials that produce customer-oriented products.	0.745	1.405
My company uses materials that consume less energy and resources.	0.815	2.132
My company uses materials that design environment-friendly products and improve sustainable business.	0.853	1.943
My company uses materials that are easy to recycle, reuse, and decompose.	0.831	2.106

### 3.3. Validity and reliability

We used validity and reliability techniques to confirm the instrument's accuracy. For example, internal consistency was employed to validate the study scales' credibility. According to (Wendel-Vos et al., 2004) content validity largely determines if the content of your survey tool represents the key parts of the idea. Similarly, to validate the scales' dependability. Cronbach's alpha was employed to determine item internal dependability because it is the most often utilized way of determining dependability in empirical studies (Aftab et al., 2021). Per the (Wendel-Vos et al., 2004) an instrument's dependability is almost typically analyzed regarding recurrence. It indicates that if you measure the same thing again, you should obtain the same measurement. According to (Okello Candiya Bongomin et al., 2018) dependability is the extent to which measuring instruments are dependable, foreseeable, constant, and reliable. EL scale was 0.846, 0.709 for CSR, and 0.828 for GI, as shown in the tables are for the Cronbach's alpha. As a result, the data imply that every item has appropriate adequate validity because all of the values are greater than 0.7, which is desirable in social empirical investigations (Okello Candiya Bongomin et al., 2018).

### 3.4. Data analysis

This research used PLS software, which has quickly achieved greater interest from scholars as it is a more convenient way to process the data and more widely used worldwide software for the use of covariance-based structural equation modelling. Many researches used it for the research purpose of different fields to analyze the data results (Hair Jr et al., 2016) accounting (Nitzl, 2016) (Nejati et al., 2017; V. Svensson et al., 2018). Our research goal is to investigate the impact of EL and CSR on staff at a time. PLS employs for method, which is intended to identify the research different aspects and conduct when hypotheses are weakly supported and information is few (Wold, 1980). Considering the recommendations of (Hair Jr et al., 2016) as indicated in the table 3 below the current study's measuring model proved appropriate validity and reliability. As seen in Table 2, the measuring model demonstrated sufficient individual indicator dependability by having item loadings greater than 0.5. Furthermore, all structures have an AVE value better over 0.5, as seen in Table 2. As a result of this, the measurement model demonstrated convergent validity. Composite reliability and Cronbach's alpha values well over 0.7 were employed to validate construct dependability. We used correlation analysis to assess the sample. The analyses were carried out by the use of smart PLS-3. Comparisons are usually low to moderate, indicating that goodness - of - fit difficulties on partial regressions are unlikely.

### 3.5. Common method variance

We gathered data on the self-report measure from a single source (e.g., manufacturing SMEs) at a single short period form, that might create a cause for common method variation (CMV). As a result, CMV testing was performed on all 15 items utilized in this scholarly work. To check for measurement



biases, we used Herman’s single-factor technique (Albalawi et al., 2020). As a consequence of data which revealed the results from the data is collected has not problematic because of the percentage indicated in one component was 97.5 percent, which is higher than the limit of 50%. (Jnaneswar & Ranjit, 2020; Manzoor et al., 2019). As a result, it was clear that CMV would have significant impact on our findings.

**3.6. Data results**

This study employed partial least squares structural equation modelling (PLS-SEM). This variance-based SEM approach has piqued the interest of academics as a suitable and, to certain extent, preferable alternative to the more rigidly applied covariance-based statistical tool. It was utilized in sales (Hair Jr et al., 2016), training (Shafaei et al., 2018), financial (Nitzl et al., 2016), personnel management (Shafaei et al., 2018) and sustainable development (G. Svensson et al., 2018). The research aims to investigate the impact of EL and CSR on GI simultaneously. PLS employs the statistical method, It is meant to represent academic and practical aspects of social fields of science and conduct when hypotheses were weakly supported and data is scarce (Wold, 1980). PLS-SEM outperforms factor-based SEM in predicting accuracy over various situations encountered in practical science (Evermann & Tate, 2016) and provides a equitability among explication (Shmueli et al., 2010).

The latest research concentrated on explaining the variation using a complicated model based on the type of predicted associations, which supports the usage of PLSEEM. SmartPLS software version 3 was utilized in this study. (gle 2015). Individual item reliability, construct reliability, average variance extracted (AVE), and discriminant validity of the indicators were commonly used to evaluate the measurement tool as per the standard two-step technique in SEM model analysis (Hair Jr et al., 2016). The structural model was then evaluated in the next stage to prove the hypothesis. Due to the recommendations of (Hair Jr et al., 2016) the present authors of the study measuring model proved sufficient validity (convergent and discriminant validity) and reliability, as seen in the table below. As seen in Table 2, the measuring model demonstrated sufficient individual indicator reliability by having item loadings greater than 0.5. Furthermore, as seen in Table II, all of the buildings have an AVE greater than 0.5. As a result of this, the measurement model demonstrated convergent validity. To validate construct dependability, composite reliability and Cronbach’s alpha values more than 0.7 were employed.

Table II: AVE, Composite reliability and Cronbach’s alpha assessment			
Construct Scale	AVE	Composite reliability	Cronbach’s alpha
CSR Reputation	0.563	0.792	0.709
Ethical Leadership	0.506	0.885	0.846
Green Innovation	0.659	0.885	0.828

Notes: \*Satisfaction was a single-item measure. Therefore, it’s loading, AVE, composite reliability and Cronbach’s alpha were all equal to one.

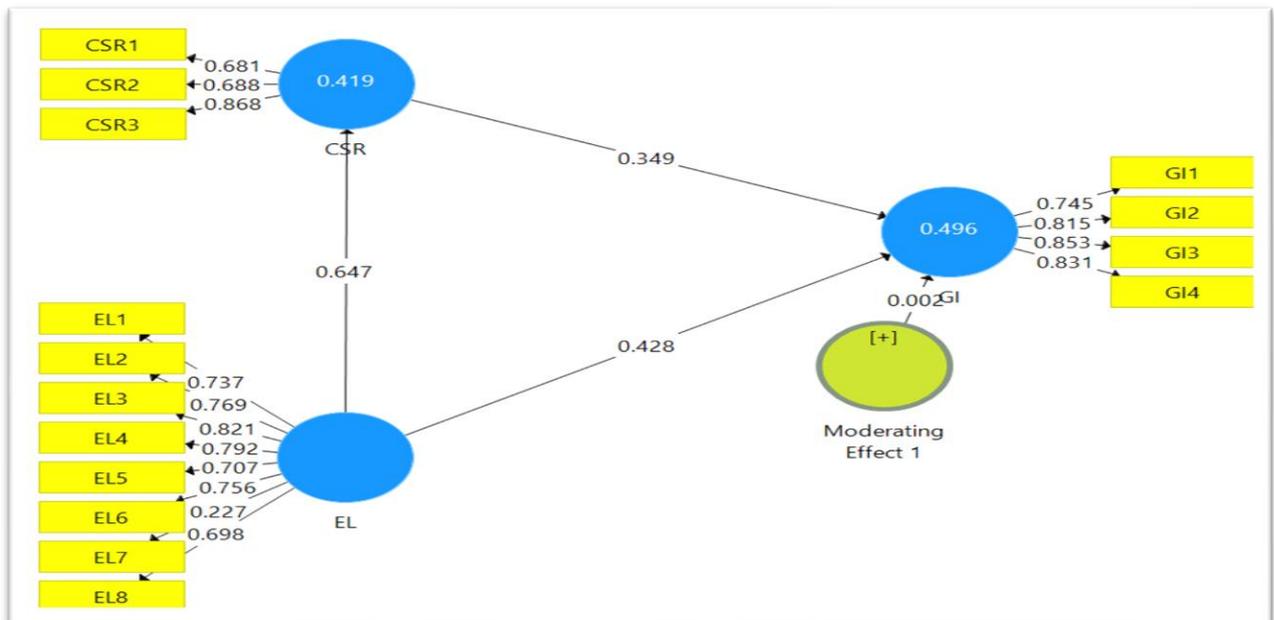
To ensure that the constructs are actually different from one another, we calculated the heterotrait-monotrait ratio (HTMT) of the coefficients, as indicated by (Henseler et al., 2015) Because all measuring variables had HTMT ratios that were more or less than the target value of 0.85 (Henseler et al., 2015), we infer adequate discriminant validity (Table III). After successfully validating the measurement model, we tested the offered hypotheses using the PLS Bootstrapping approach with Bias-corrected and Accelerated Bootstrap and one-tailed. Bootstrapping is a method for determining the significance of PLS-SEM estimations that involves periodically picking subsets of data using substitution out from primary dataset (Hair Jr et al., 2016).



Construct	CSR	EL	GI	Moderating Effect 1
CSR				
EL	0.851			
GI	0.824	0.745		
Moderating Effect 1	0.533	0.503	0.382	

Figure 2 depicts a synopsis of the route analysis findings. Table IV presents the hypothesis testing outcomes. The study discovered that EL is negatively associated with CSR (95 percent CI), supporting H1. Additionally, H2 was confirmed by EL having a negative connection with GI (99 percent confidence level). We studied the indirect effects to test the mediation hypotheses and observed that CSR mediation on GI had no significant affect (95 percent confidence level, not supporting H3). According to the study’s findings, the overall influence of EL on CSR is 0.64 (t-statistics = 9.09), whereas the total influence of CSR on TI is 0.42 (t-statistics = 3.82). As a result, EL has been shown to have a greater impact on CSR than GI. This difference, however, was shown to be significant enough to support H1 and H2.

**Figure 2:**



Hypothesis	Path coefficient	t-statistics	p-value	Decision
Direct effect				
H1: EL - CSR	0.64	9.096	0.000	Supported
H2: EL - GI	0.42	3.824	0.000	Supported
Mediating effect				
H3: CSR - GI	0.002	0.05	0.95	Not Supported

Notes: One-tailed. \*p value < 0.05 significant at 95% confidence level; and \*\*p value < 0.01 significant at 99% confidence level.



#### 4. DISCUSSION

We explored the link between EL, CSR, and GI in this study. We discovered that EL and CSR were both have a straight (adverse) association with employee GI. Furthermore, CSR was associated to GI indirectly (negatively) and had no substantial influence; however, neither Ethical leadership nor CSR to the firm adjudicated any association between EL, CSR, and GI. To conclude, there was no significant difference in the overall effects of EL and CSR on GI, suggesting that both are equally relevant.

#### 5. IMPLICATIONS

This study has important constraints for EL, CSR, and GI research. For instance, past studies have suggested that EL and CSR are related to GI, but they have not thoroughly examined these correlations. In terms of ethics research, themes becomes more prevalent, researchers must assess alternative theories to determine the distinctiveness of their convergent accuracy (Schminke & Sheridan, 2017). When examined combined, both EL and CSR are strongly and adversely associated to GI; nevertheless, there was no large discrepancy in their total impact on GI. In other words, both EL and CSR are critical for comprehending GI. Only one other study (Lin et al., 2017) has looked into the correlations between CSR, EL, and GI simultaneously. Our findings vary from those of (Lin et al., 2017) in that our moderating systems have received more attention and support from prior research than the moderators employed in their investigation. Although, (Lin et al., 2017) did not detect a direct link, probably due to a smaller sample size, we also found that EL was both directly and indirectly associated to CSR.

Second, we discovered that CSR, rather than GI, partially moderated the interactions between EL, CSR, and GI. In other words, employees who work for socially responsible companies and ethical executives emphasize GI because they are happy. Previous research suggests that EL has a greater influence on CSR than GI (Tett & Meyer, 1993), therefore the distinctive characteristic of GI in our sample may have been too minor to observe. The differences in cultural background between our study and previous studies could explain the lack of significant GI outcomes. Although the relationship between EL (as measured in this study) and CSR is stronger in non-Western cultures, conventional EL and CSR is weaker in non-Western cultures (Tett & Meyer, 1993). Future studies should focus on various leadership modalities as well as the cultural contexts in which the research is conducted to fully comprehend these connections. Our findings have consequences for managers and organizations. Many firms struggle to secure qualified staff. Our findings suggest that firms should consider EL and CSR as potential sources for lowering employee turnover.

Although many factors influence employee turnover, we discovered that “doing the right thing” in general is consistent with staff retention efforts. Even if they do not minimize employee turnover, EL and CSR are vital. Our findings give managers with an economic basis for investing in initiatives that foster robust EL and social responsibility efforts. Second, our observations are especially significant for small organizations. Running a full CSR program is sometimes financially unsustainable for small firms with little resources to spend in social projects. Conversely, EL is something that any company of any size can grow at a low cost. Third, we found a link between reduced GI and how employees perceive CSR. This is significant because previous research has focused on the relationship between employees’ participation in specific CSR activities and GI. An essential lesson for managers is that reducing turnover may not require employee participation in CSR programs; rather, merely working for a firm that is seen as socially responsible may be sufficient to enhance staff retention and operations by implementing green practices. Consequently, businesses must effectively explain their CSR programs to employees in order for them to be aware of them.

#### 6. LIMITATIONS AND FUTURE RESEARCH SUGGESTIONS

However, this study would fill a gap in the literature and provide valuable insight to Pakistani SMEs’ management. A few limitations of our study also present potential for further research. To start, a longitudinal research design may be used instead of a cross-sectional study design for data collection to eliminate data ambiguity. Second, because this study was conducted in Sukkur, Pakistan, the



sample was limited to a less developed country, and the findings may not be applicable to other less advanced technologically developing and culturally diverse countries. Thus, the sample can be increased by incorporating developing countries and/or countries with different cultures, and then comparing the results for general implications. Third, while our model is relevant to any firm, regardless of industry, there may be differences in results related to firm size and age, meaning that findings may not be equally applicable for large or multinational organizations. As a result, a larger sample of SMEs and large companies is suggested for future research. Fourth, advanced and developing countries have different levels of knowledge and understanding of CSR.

It is significantly greater in industrialized nations where society, employees, and consumers are educated and keep putting pressure on businesses and the government. As a result, it requires company stakeholders to completely participate in CSR-related activities. However, it is somewhat constrained in developing nations because CEOs of SMEs work to achieve government standards without being influenced by society, customers, employees, or the environment. This CSR knowledge gap could affect the outcome in less developed countries. The last restriction is social desirability bias. For instance, leadership, CSR, and ethics are thought to be delicate topics, and occasionally people choose not to address sensitive concerns or make up sensitive questions by responding to them in a way they believe is socially acceptable. Such misrepresentation or refusal to report could end up being the main reason for error in any study. Future research on a variety of leadership philosophies, including genuine, transactional, and transformational leadership, as well as ethical leadership, may examine how they affect CSR while controlling for job motivation.

## 7. CONCLUSION

This study demonstrates how EL and CSR procedures in companies enhance GI. In order to create and preserve a value-based culture and motivate employees to engage in eco-friendly activities, corporate structure, and procedures should support and encourage EL and CSR practices. It is the responsibility of leaders to consider their employees' best interests. Therefore, a good leadership style respected and admired by staff members will increase performance. The examination of EL's impact on CSR, GI, and the mediating role of CSR in Sukkur SMEs served as the foundation for this study. Based on the social exchange theory, our study's findings show that ethical and responsible leadership behavior significantly impacts CSR and green initiatives.

Moreover, EL significantly impacted how CSR and GI related in Sukkur SMEs. It indicates that moral managers are more concerned with their staff members' integrity and can develop and maintain an ethical and socially conscious attitude while working. As a result, people become more confident in their ability to complete challenging tasks, which enhances performance.

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