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**REALATIONSHIP OF TMT GREEN COMMITMENT AND ETHICAL
LEADERSHIP:
AN EXPLORATORY STUDY IN DEVELOPING COUNTRY CONTEXT**

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Abstract

There is a limited study conducted on the relationship between green human resource management, top management team green commitments, ethical leadership, as well as environmental performance, particularly in manufacturing industries. The impact of GHRM on environmental performance is examined through the mediating role of TMT green commitment and the moderating function of ethical leadership in this study that bridges a knowledge gap. A quantitative research methodology was applied to a pre-tested instrument for this purpose. This study gathered multi-source data from 292 CEOs, Presidents, Vice presidents, HR managers, and chief financial officers from 60 companies. As per the findings, ethical leadership of the CEOs moderates positive association between Green HRM and Top management Team green commitment, which in spin, mediates the association between GHRM and environmental performance of the firms. The findings have a wide range of consequences for researchers and practitioners, particularly for manufacturing industries. The study's limitations, as well as its practical implications and opportunities, are also discussed.

1- Introduction

In light of this, Green HRM has become widely popular over the last decade as a holistic approach that firms can implement to develop their environmental performance (Dumont et al., 2017; Guerci et al., 2016). Green HRM refers is a collection of HRM and its dimensionsthat specifically recognize the company's environmental objectives (Ren et al., 2018; Singh, 2020).The approaches of Green HRM such as leveraging employee appointment to decrease the environmental contamination, which experienced by 3M Corporation, German automakers use measurable environmental key metrics and training programs (Paul and Nilan, 2012; Wagner, 2011), and executive compensation can be linked to pollution prevention policies, as suggested a method of achieving a company's strategic goals (Berrone and Mejia, 2009). On the other hand, firms' progress in the environmental sphere differs greatly (Bov et al., 2017). We concentrate on three organization internal resources to explain this gap: CEO ethical leadership, implementation of Green HRM strategies and procedures, and top management team green commitment to (TMTGC) environmental issues.

GHRM investigation opens up new avenues for studying strategic human resource management and business ethicsinstitutions. However, the idea that GHRM would support and boost firms' environmental performance has not been tested empirically. Also, few research studies investigates green training in general for environmental management (Vidal et al., 2012).Productive GHRM inevitablyneeds a high level of cooperation among top management with different disciplines and accountability, which is a particular challenge (Ren et al., 2018). However, not just in the Green human resource management studies, but in the tactical HRM articles and books in general, the position of top business leader in the process has been under-specified (Leroy et al., 2018; Jackson et al., 2014). The scarcity of theories and empirical studies limits the literature's progress and risks turning existing initiatives useless (Renwick et al., 2016). Incorporating Green HRM practices by itself is not always enough to obtain a competitive advantage in the quest for better environmental performance.

According to the resource-based theory paradigm, greater concert necessitates firms acquiring and effectively utilizing specific bundles of core competencies (Barney et al., 2011). The accountability of those in advanced management positions, such since the CEO and the

TMT, to organize organizational members for intra-organizational and cross-functional collaborative efforts to strengthen environmental performance is widely acknowledged, with human resource (HR) professionals frequently attempting to play a minor role (Sobiah, 2020; Cohen et al., 2010). The position of CEO, who is usually a leader of revolutionize initiatives, as well as offerings appropriate cues that are hugely useful to the firm's stakeholders, comprising individuals who are concerned about the ethical facets of the firm's practices (Hartog, 2015). One of several stakeholders' moral considerations is the need to conserve and protect nature, which is essential to societal existence. Meanwhile, because of its positional influence within the organizational hierarchy, the top management team is probably one of the firm's most valuable tools to mobilize, and the possible consequences of adhering to stated goals (Michalisin et al., 2004; Ulrich, 1998). As a result, per the RBT, the top management team's dedication to solving environmental challenges, which we pass on to as green dedication, is not merely fundamental, but in addition unique, impossible to duplicate, and irreplaceable (Wiernik et al., 2013).

The current study considers, how the CEOs and Top management team of an organisation may influence the contribution of GHRM, which leads the firm's environmental performance, which is becoming more of a innovative key foundation of spirited improvement in radiance of rising people's concern about sustainability challenges (Peteraf, 1993; Barney, 1991), GHRM and CEO ethical leadership, as per our conceptual model, are significant, firms-specific property that are critical to sustaining TMT's green dedication, which contribute to enhanced environmental performance. We tested our model on data from 60 manufacturing industries in Khyber Pakhtunkhwa obtained from three sources in each industry as part of a firm-level study. The leadership of industries were deliberate to recognize the knowledge concerning firm activities to atmosphere change, especially in comparison to some Western countries. Pollution in the appearance and stream is now prevalent and unavoidable. As a response, China has started to implement measures aimed at reducing carbon emissions and protecting the atmosphere in other aspects of the effects of rapid development (Shuli, 2018; Marquis et al., 2015).

This novelty of this study deception in investigating the method which intentionally modified and links HRM system interaction with casual cues expressed by top-level leaders to achieve the looked-for environmental consequences. The ability of senior management and TMT leaders can affect the financial performance of companies has been well developed all the way through investigation based on upper echelons theory (Hambrick, 2007).

Prescriptions on how to carry out organisational transform frequently comprise a demand to secure the "hold up" of these top-level managers. On the other hand, have a poor grasp of how leadership and HRM systems collaborate to manipulate strategic business achievements (Jackson et al., 2014). While HRM and management embrace the goal of achieving an organization's approach, the minority research studies examine how they co-determine organizational dedications and presentation, according to past studies of Leroy et al., (2018). As a result, our broad theoretical and empirical findings add to the literature on approach Implementation of HRM, upper echelons theory, and ethical leadership. Despite environmental convention may restrain some aspects of commerce operations, they frequently set a low bar, allowing forward-thinking firms to go away from what is legally permissible. Several firms, therefore, began handling environmental issues before administration law prepared it obligatory, in response to

pressure from other stakeholders. These businesses with perfect inexperienced policy advantages like increased higher sales and brand image (Yang et al., 2011; Liu et al., 2015).

However, our research study has equally speculative and realistic implications for a greater understanding of how ethical leadership and GHRM work simultaneously to increase top management commitment to good corporate governance, ultimately enhancing a company's environmental performance.

2- Literature and Hypothesis development

2.1 GHRM and TMT green commitment

Workers commitment is a key strategy in the context of businesses that have faith in their operations since it increases one's desire to contribute in both inside and additional effort (Kehoe and Wright, 2013; khattak et al., 2017; Ghani, 2015). Green commitment, as defined by Raineri and Paillé (2016), is "a mental state that expresses mutually a brains of connection and obligations to an environmental problem in the place of work." In this learning, the expression Top Management team green commitment is used toward define the extent to which a company's top management is viewed as true environmental guardians. Considering that senior management is in charge of allocating a company's possessions (Chadwick et al., 2015), and their participation is essential to attain a planned goal of the corporation. HRM systems, such as commitment, impact positive employee attitudes, however, study of the association among Human Resource Management and commitment typically spotlight on top management team (Jiang et al., 2012). lying on the other hand, multiple sources of data, confirm our anticipation of a strong connection between GHRM system implementation and TMT-GC.

To actually in start, a GHRM need those the revelation, ethics, and objectives with the intention of represent the premeditated significance of higher environmental performance; for example, employing pro - environmental behaviour and skills as having to hire criteria, needing environmental education, gratifying human resources for achieving green goals, and involving workers in the investigate for more sustainable functioning methods is just a few examples. As a whole, such practices are meant to ensure that workers have the skills they encompass to make environmentally friendly behavior and choices, are inspired to perform toward environmental presentation goal, and contain various potential to help the company's environmental program. GHRM systems should have a greater influence on TMT leaders' green commitment than other types of strategic HRM systems in influencing lower-level workers' commitment, pretentious that businesses' collaborative HRM system is geared at all employees in the organization (Jackson et al., 2014; Singh, 2020). subsequent, implementing GHRM may enhance in sequencedistribution, allowing top executives to have a better understanding of overall work processes, needed to participate more effectively (Lee et al., 2016; khattak et al., 2021). According to the research study of Gong et al., (2009) that the senior management is provoked by a intellect of compulsion and significance, both of which are supported by HRM systems that are strategically aligned. Firms depends on senior management who are dedicated to and motivated about environmental concerns to properly put into operation GHRM systems to accomplish the objectives inherent in GHRM systems. The behavioral effects of information sharing inside the TMT are extra for the motivating ones. Information sharing enhances behavioral incorporation between top management, and this integration has been linked to

improved organizational performance (Lubatkin et al., 2006). Furthermore, prior study has discovered that senior management commits to the firm and its objective to the measure that the company allows them to express beliefs and concerns (Huo et al., 2020). With techniques like creating a learning atmosphere for green awareness and incorporate incentives to promote green behaviours, GHRM might build a sense of personal purpose and a value-consistent work identity (Wagner, 2013). Such approaches emphasize top management teams to achieve their own environmental goals by expressing themselves and/or influencing the behavior of other individuals. As per social exchange theory, senior management who gains advantages such as a heightened understanding of engagement and importance are more inclined to keep their work relationship balance by returning positive attitudes (Hannah and Iverson, 2004). Positive attitudes are exemplified commitment, which suggests a higher level of investment under corporate objectives (Kehoe and Collins, 2017), similar to attaining environmental sustainability. When all of the above arguments are considered together, we develop the below hypothesis:

Hypothesis1: GHRM is significantly allied with TMT green commitment.

2.2 TMT Green Commitment and Environmental Performance

Research study at the meeting point of HRM and environmental management is attempting to develop "black box" approaches that can enlighten how GHRM improves environmental sustainability (Paille et al., 2014), with TMT green commitment at the forefront of such initiatives. Individual and organisational performance are influenced by commitment, which has long been recognised as a factor (e.g. Jaramillo et al., 2005; Macedo et al., 2016). The more precise idea of TMT green dedication must impact the organization's environmental performance for two main reasons. TMT's green commitment, may help firms better coordinate their environmental management activities beyond key organizational lines (Teixerra et al., 2016). When the TMT expresses dedication to the firm's environmental goals, it's far less likely that GHRM standards would be viewed as disingenuous "greenwashing" that can be safely ignored. According to the past study of Chun et al. (2011), a key prevailing instrument that links company beliefs to a firm's financial success is collective organizational commitment, which is compatible with our assumption.

TMT members' Green commitment may increase their capacity to gain commitment from other parties in their industry. Intra-organizational commitment is significantly associated with influence techniques and project payback, according to a survey of 241 environmental specialists who described their efforts to obtain the buy-in of purchasing managers, production managers, manufacturing designers, and others for environmental projects (Gattiker and Carter, 2010). According to research, pro-environmental attitudes, which are related to the concept of green commitment, are strongly connected with pro-environmental practices, which can help boost business performance for those employees who are committed (Bissing-Olson et al., 2013). Hence, we develop the following hypotheses:

Hypothesis2: TMT green commitment positively mediates the association among GHRM and environmental performance.

2.3 Moderating character of Ethical Leadership

As per the main statement of the strategic HRM approach the system of HRM is most efficient when it is integrated with other aspects of the organization's inside impression, (Delery and Doty, 1996). Indiscretion can happen for a variety of reasons, including the pursuit of a new corporate strategy, passively copying what other companies do, and management changes. HRM systems prove to be more successful when they are connected with other facets of the company. Several researchers have found that HRM systems that are linked with the culture of the company are more efficient (Jackson et al., 2014; Ghani and Memon 2020). While top officials are widely acknowledged as key influencers shapers in organizational culture (Schneider et al., 2017), many researchers have investigated how leaders influence or hinder the performance of the deliberately associated system of HRM. Considering growing concerns about modern firms regarding ethical standing as a result of major crises and systemic collective issues, found no studies that investigated the combined influence of HRM and ethical leadership of the moral environment or ethnicity of an organization. It is expected this situation of relationships is to modify quickly, but consequently, this research learned determination exist next to the frontline of a novel pasture of investigation.

As per the eventuality judgment discussed below, the pressure of a GHRM arrangement on the assurance of an organization's high-level leader is likely to be influenced by relative factors that moreover support or contradict the performance opportunity and requirements that GHRM reportedly addresses. In light of recent recommendations for more research into relevant border circumstances and developing evidence that leadership is one key factor to consider (Chuang et al., 2016), the current study examines Chief executive ethical leadership as a prospective moderator of the GHRM–TMT green commitment association. Due to a massive Chief executive official position in the corporate hierarchy, their influence extends beyond what can be justified by lawful authority; ethical leadership can also endow CE with formal authority, as they are desired strong leaders that followers look to for direction (Brown and Trevi, 2006). Representatives of the TMT acquire socially accepted behaviours at work by observing the Chief Executive's activity, which is a particularly quiet social cue, and are more likely to connect in comparable actions in an attempt to integrate strengthen their connection with CE (Brett and Stroh, 2003; Lavelle, 2010). therefore, base on the exceeding hypothetical logic: we developed this hypothesis:

Hypothesis 3: Ethical leadership significantly moderate the affiliation between GHRM and environmental performance.

2.4 Supportive theory

Resources Based theory

Despite the reality that the study of GHRM or strategic HRM in wide-ranging is not developed as of the organization's resource-based theory (Peteraf, 1993), The Resource-Based Theory has played an important role in the field's enlargement (Jackson et al., 2014). Resources base theory, a major empirical model in strategic HRM research, shifts the focus of competitive advantage from different factors (e.g. industry position) to accessible resources (e.g. leadership, awareness, and strategic flexibility), providing HRM strategic value credibility (Saridakis et al., 2017: Colbert, 2004). Environmental performance helps an organization 's productivity through the

efficiency of manufacturing processes, innovation of innovative goods / services, pass integration, and organisational learning, as per a GHRM belief (Marcus and Fremeth, 2009; Porter and van der Linde, 1995). It has aordinarysimilarity with Resource Base theory, — especially the company's current natural resource-based perspective (Hart, 1995). According to Hart (1995), Initial RBT formulations, overlook the importance of the ordinary environment, which might stifle a firm's hard work to develop special opportunity for obtaining and retaining competitive advantage. As a result of the development of RBT, it the present it includes the entire variety of possessions on which enterprises rely, including natural resources as well as individuals in the firm (Hart and Dowell, 2011). RBT's basic tenet highlights the importance of a company's internal resources as sources of superior performance that are valued, unique, inimitable, and non-substitutable. RBT is an integrative approach to understanding why and how strategic HRM practices contribute to business success (Colbert, 2004). It is frequently used in concert with other hypotheticalviewpoints, e.g., the behavioral view (Schuler and Jackson, 1987). According to various observations, great business performance is dependent on both the availability of resources required and the successful orchestration of those resources across organizational levels and functions (Sirmon et al., 2012). When effectively handled, the resources of the organization can be utilized to develop unique and valuable capabilities (Christmann, 2000). Despite its potential contribution of GHRM to performance and sustainable performance, its promotion has virtually always been based on the behavioral view of strategic HRM, which posits that firms use their HRM systems to communicate, elicit, and sustain desirable job behavior (Mossholder et al., 2011: Snape and Redman, 2010).

However, achieving GHRM needs to allocate resources in other organizations (Jabbour, 2015), a confront that extends beyond standard strategic HRM methods and is underappreciated. Having conventional that GHRM practices are being adopted by certain organizations, as recent reviews of the GHRM literature confirm, more research is needed to investigate the circumstances and process for achieving the possible intentionalworth of GHRM (Ren et al., 2018: Renwick et al., 2016).

In the above, we enlighten our reasoning for stating with the aim of a company's TMT's green commitment and its ethical leadership(CEO)are two key organizational tools that can help GHRM to accomplish its strategic contributions.

2.5 This study conceptual framework

This study consists of one independent variable (GHRM), one dependent variable (EP), one mediator (TMT green commitment), and one moderator variable (EL).

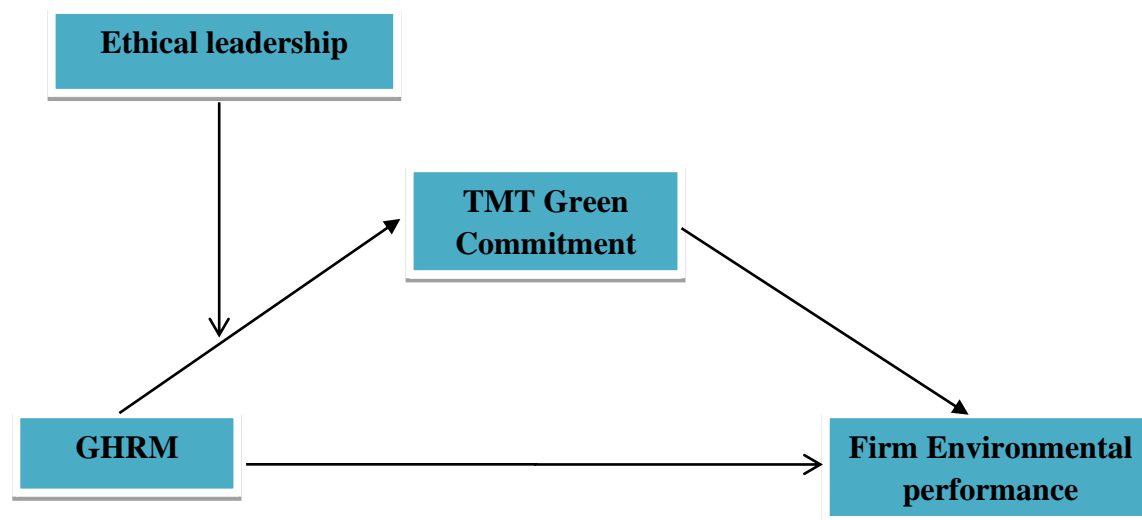


Figure 1: Proposed model

3- Methodology

3.1 Study Sample and Data Gathering

The sample size of the current study was top management leaders of manufacturing industries operating in Khyber Pakhtunkhwa, Pakistan, where environmental problems to control pollution from industries are a major concern. Collection of primary data from selected respondents, the study uses adapted questionnaires. Study questionnaires were sent in two methods to ensure a reasonable response rate. A total of 630 questionnaires was sent to respondents who were selected for the study. Only 292 authentic responses were received from firms, top leadership (e.g. Owner as CEOs, Presidents, Vice presidents, HR managers, and CFOs), resulting in 46.3 %. All respondents were educated that contribution was absolutely voluntary and that their contributions would be kept secret. In this process, we accompanied generally accepted research beliefs for the appropriate carry out of research (Comstock, 2013). Thus We included a simple terms language in all of the temptationwriting we send to firm owners, Presidents, Vice presidents, HR managers, and CFOs that described the goal of the entire study, the techniques utilized to gather information, and the latent risks concerned to participate in the research. This level of in sequencediscovery is essential so that the participant make the appropriate evaluation of the study's benefits and risks before choosing to contribute (DuBois, 2006).

3.2 Instruments measurement

From a Pakistani perspective, this paper is an attempt to confirm the impact of GHRM on firm environmental performance with an important role of TMT green commitment and ethical leadership. The research instruments were modified to meet the objectives of the study. All of the items were categorized on a five-point Likert scale, 1 indicating strong disagree and 5 representing strong agreement.

Independent variable

Tang et al., (2018) thirteen items scale was used to insured Green Human resources management (GHRM).

Dependent variable

To measure firm environmental performance, Chen et al., (2015) scale was used having four items.

Mediating variable

Raineri and Paill (2016) developed a seven items scale to measure TMT green commitment that was followed for this study.

Moderating variable

Ten items scale was used to measure the moderating variable ethical leadership, developed by Brown et al., (2005).

4- Analysis

4.1 Scale Reliability

Model Table 1	IV (GHRM)	DV (EP)	Mediator (TMT-GC)	Moderator (EL)
Instruments	13	04	07	10
Cronbach'sAlpha	.829	.830	.881	.922

The reliability of the scale instruments was tested by measuring the Alpha value through SPSS. Cronbach's Alpha was used to test the reliability that indicates how frequently elements in a scale are significantly correlated to one another (Sekaran, 2003). According to the past study of Sekaran (2003) when the Cronbach's alpha value is .7 or greater to be considered elements are reliable and retain in the study. As shown in the above model table no 1, alpha values of scale items are above .7, clearly indicating that the elements used in the scale are reliable. The result of the reliability test did not show the validity of the scale instruments.

However, different types of validity analysis were used to validate the scale instruments in the study. Experts of scale instruments and prior research studies have been used to validate this, but no statistical technique has been found to validate such instrument's validity (Hair et al., 2010). For convergent validity testing, factor analysis was used. So, to identify whether the scale items testing coverage into a theoretical concept, the study used exploratory factor analysis.

Model table 2	IV	DV	Mediater	Moderator
Name of variables	GHRM	EP	TMT-GT	EL
Values of KMO	.835	.784	.859	.874

Values of BTS	Chi-square (1629.167)	Chi-square (433.824)	Chi-square (1054.938)	Chi-square (2085.188)
Values of df	78	6	21	45
Values of P	.000 (P<.5)	.000 (P<.5)	.000 (P<.5)	.000 (P<.5)

Based on the finding, KMO' values of study variables are more than .5, indicated that the sample is adequate. Similarly, the BTS values are significant for the study variables, indicating that the alternative hypothesis is supported. The EFA analysis was applied to check any cross-loading issues in the instruments of the scale. However, based on the findings, the factor loading values of all of the elements were used in this study were above .06 (range .60 to .90).

Confirmatory factor analysis (CFA) is also used to validate the study scale. The results of CFA were summarized in the following model Table 3. All of the research variables have satisfactory fit indices. Standardized loading values lies, which range from.62 to.91, and all of the measurements of study variables are significantly and positively associated the constructs. The χ^2/df values are less than 2, and the GFI and AGFI values are nearer to.90. Similarly, CFI is more than.90 and RMSEA is less than.05. All of the values suggest a good model-data fit.

Model Table 3	GHRM (IV)	EP (DV)	TMT-GC (MV)	EL (Moderator)	Recommended value
Instruments	13	4	7	10	
CMIN	35.273	39.198	63.239	52.197	
DF	09	19	17	11	
CMIN/DF	1.21	1.94	1.67	1.82	≤2
RMR	.074	.059	.054	0.09	≥.5
GFI	.979	.998	.917	.993	≥.9
AGFI	.900	.964	.902	.936	≥.9
CFI	.977	.966	.988	.950	≥.9
RMSEA	.040	.036	.029	.049	≤.5

4.2 Regression analysis

As per the regression results, TMT GC has a significant and positive relationship with Green HRM of ($\beta=.738$).GHRM has a high beta value, suggesting that it contributes more to explaining variance in the dependent variable (EP).A 19 % variationoccurs independent variable explains by R2. The high value of F and positive value of P of overall model indicate the model significance and fitness.Thus,the Hypothesis 1 is supported.

Constructs	Values
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TMT GC	Outcome
R	.044
R²	.19
Value of F	22.79
Value of P	.000

4.3 Mediation analysis

			Model table 5	
Mediating variable (TMT-GC)	Und.Coefficient	Standard error	t	p
GHRM FEP	.66	.04	16.89	.000
GHRM TMT-GC	.5	.4	1.36	.000
GHRM+TMT-GC → FEP	1.05	.16	6.45	.000

The above model table illustrates the summary of GHRM and intervening variable (TMT GC). The value of p is less than .05, and the t value is more than the average value of ± 1.96 , indicating that TMT GC has a positive and significant association with the intervening variable. Also, R² has a standard value of .55, suggesting a variance of 55 % in the mediator (TMT GC).

4.4 Moderation Analysis

			Model table 6	
Moderating variable (EL)	Und Coefficient	Standard error	t	p
Constant	.46	.71	.64	.000
GHRM	.1	.21	4.66	.000
Int 1	.19	.06	3.45	.000

Model table 6 describes the moderation analysis between GHRM and FEP the moderating effect of ethical leadership. As shown in the above table, top management team green commitment has a positive and significant relationship with FEP and GHRM and the value of p is .000. However, we are just interested in the value of p of the interaction effect in this case. The moderating variable (EL) moderates the link between the independent and dependent variables if the p-value

of the interaction effect (int_1) is significant. Hence, the value of p int_1 is significant in this case. It means that EL moderates the link between GHRM and FEP.

Supplementary analysis

According to this study, the findings of moderated deterioration can be misleading and pretense a non-linear link among independent variable and dependent as well (Shepperd, 1991). Thus, we investigated this option by counting the squareconditions of the two variables (i.e. Green HRM, CEO ethical leadership) in the overall model as extra control variables. The interfaceperiod of GHRM and CEO ethical leadership remain statistically noteworthy after adjusting for their non-linear effects (B=6.78, standard error = 0.42, the value of p is less than0.000), indicating that the observed interaction impact was not spurious. Non-linear sound effects of green HRM and Ethical leadership of CEO, the quadratic term of Green HRM was drastically and negatively linked with TMT green commitment (B= -0.666, standard error = 0.41, the value of P is less than 0.000), indicating that green HRM can be linked with TMT green commitment up to high points subsequent to its significant control slows.

5- Results and Discussion

Previous research studies has contributed to gaining a healthier knowledge of Green HRM and its dimension (Khattak et al., 2021; Chaudhary, 2020; Ren et al., 2018). This research started by establishing a conceptual model basis on the previous studies on Green HRM, TMT GC, leadership and firm environmental performance, with a particular on firms wherever possible. The results of the study revealed that Green HRM has a important influence on firm environmental performance in the textile industries. The findings of the study revealed that top management team green (TMT GC) positively and significantly mediates the connection among green HRM and firm environmental performance. Moreover, the findings of the current study also revealed that the CEO ethical leadership statistically moderates the association between green HRM and firm environmental performance.

Practical implications arise a greater accepting of the influential job of ethical leadership as a circumstance with the intention can impact both TMT GC and the GHRM–environmental performance link and have consequences for firms in quest of to get the most out of GHRM in terms of achieving environmental objectives. Particularly, ethical leadership appears to pave the way for the GHRM system' efficacy. The association among GHRM and TMT members' green commitment is notably encouraging in organizations with top management who show ethical leadership. The association among GHRM and TMT green commitment is negative in firms with CEO who show poor ethical leadership, implying that a mixture of prescribed policies to endorse environmental stewardship and informal signals from unethical leaders may produce pessimism along with potentially promote environmentally harmful actions.

Before discussing the implications of the current study, it's important to note that the result of this study should be taken as beginning and evaluated with care. While the multi-source and lagged data gathering processes serve to address some methodological problems, they also make data gathering more difficult. As a result, one of our studies limitations is the relatively minute sample size, which only gives slightly enough influence used for our investigation (Bauer and Curran, 2005). big sample size would boost assurance in the outcome validity and generalizability to other companies. even though we gathered data from manufacturing

industries, a further study conducted in organizations from a more diverse mix of organizational settings is essential before making definite conclusions from our findings (Bruton and Lau, 2008; Khattak et al., 2018). One other limitation is that the research design is essentially cross-sectional, which means we can't prove causality; other reasonable models exist, so more work is needed to investigate the composite and vibrant associations among CEO ethical leadership, GHRM, and TMT green commitment as a harbinger to the enhanced environmental performance of the firms. We also depend on the CFOs report because objective environmental performance data for Khyber Pakhtunkhwa companies is typically unavailable, this could be biased upwards; if the quantity of accurate changeability in the environmental performance of the firms was miscalculated, it would likely decrease our ability to detect the expected links. Considering such restrictions, our findings provide sufficient indication to propose some exciting possibilities for advance research, as we explain subsequently.

5.1 Study contribution and practical Implications

In a few aspects, this research study adds to existing literature. First, by adding RBT to build our study model, it improves GHRM notion, which is currently being hypothesized (Ren et al., 2017). This study responds to frequent calls for an investigation that combines strategic HRM and environmental sustainability (e.g., Jackson and Seo, 2010; Jackson et al., 2011; Renwick, 2018; Renwick et al., 2013), as well as calls to see beyond the psychological approach of strategic HRM to explain the impacts of GHRM (e.g., Jackson and Seo, 2010; Jackson et al., 2011; Renwick, 2018; Jackson et al., 2020; Ren & Jackson, 2020). While the prevalent behavioral approach in the present GHRM literature is valuable for understanding employees' skills, desires, and possibilities, it is inadequate to fully reveal an organization's inner workings in order to achieve the planned goal of greater environmental performance. To untangle the linkages among various internal resources, RBT provides an explanatory judgment that is a substitute to the behavioral approach. RBT realizes the role of environmental performance to a firm's competitive advantages, as has consistently been recommended (e.g. Sobiah, 2020; Marcus & Fremeth, 2009). Our findings enhance the understanding of organizational resources in establishing GHRM's contribution to a company's environmental performance: ethical leadership and TMTs' green commitment. Past GHRM studies have mostly focused on the presence of green aspects in the practices of HRM or descriptive relationships between certain HR practices and environmental management systems, therefore this contribution is important (e.g. Harvey et al., 2013; Singh, 2020; Jabbour et al., 2010).

Next, this research contributes to the green HRM mechanism by focusing on the importance of top management in the development of extracting the impacts of HRM. Although both HRM and top management strive to encourage people to work toward the strategic objectives of their firms, the two disciplines have grown mostly independently until recently. In the recent concern, battling at combining the learn of Human Resources Management and management, work has been done to understand the leadership job of line supervisors and managers in the implementing of HRM policies and practices (Leroy et al., 2018). Our study shows another important part of leadership impact, namely, CEO's at the top, which is less well acknowledged. Even so, strategic HRM researchers have agreed that the support of CEOs and other leaders is important for unlocking value from HRM systems, as the leading scholars have started to take into account how HRM practices such as selection, coaching, and the innovation could have an impact on ethical leadership (Brown et al., 2005; Jiang et al., 2012). Our result that GHRM and

CEO and other ethical leadership stay in touch to improve TMT green commitment and company environmental performance reveals a supplementary fit - the benefits will be optimized when HRM and top leaders are aligned in their fundamental principles (Leroy et al., 2018). To increase our knowledge of the factors that might attenuate or increase the impact of formalized HRM systems, More detailed studies of leadership and other organizational characteristics are required (Chuang et al., 2016). Future studies at the interface of strategic HRM and leadership may help us to understand how transformational leadership could be applied in the course of Human Resources Management systems (Zhu et al., 2005).

Third, this research study explains the causal instrument and initial conditions of the green HRM–environmental performance relationship, which is an additional GHRM surface (Ren et al., 2018). The mediating role of TMT's green commitment extends to the emerging organization of knowledge regarding the significance of effective and ideas as mediation in predicting whether HR strategies achieve their goals. Despite the fact that middle managers are commonly viewed as co-creators and implementers of HRM activities (e.g., Ostroff and Bowen, 2000; Jamali et al., 2015), there has seemed to be little organized research on the inter-relationships between HRM strategies and a company's CEO and other top-level management, which our study identifies.

additionally, our study's "black-box" on top-level leaders' performance as well as attitudes draws on previous research by Kim et al., (2017) on volunteer green place of work behavior which detected that team leaders' moral attentiveness and teammates' green behavior influence employees' pro-environmental behavior. Even though Kim et al. (2017) gathered data at the team level in Korean firms, This two research' findings both point to the fact that (UN) ethical leadership can be a powerful strength that affects organisational structure and gain a deep understanding that influence whether employees aspire to participate in environmental sustainability at workplace. Furthermore, our findings suggest that TMT members are just as attentive to the behavioural effect of unethical leaders as lower-level employees, such as studied by (Kim et al., 2017; Pitesa & Thau, 2013).

Workers pay very close attention to messages from aspects of a company's formal management system, such as human resource management systems, but they also pay great attention to comfortable cues provided through the CEO and other top-level management' attitudes and behavior. According to the past study of Trevi ani et al. (2014) firm owner as CEO who is considered to be unethical and others top level management who appear to lack a responsible dedication to resolving environmental issues may nullify the prospective settlement of formal regulations meant to deliver a pro-environmental message. Environmental indicators are employed as presentation targets, and incentive are provided for meeting individuals objectives, If lower-level workers feel their CEO and other top-level management are not honest, then they may engage in disreputable behavior to get the incentives existing when they make judgments regarding the value of environmental protection; When the proprietor as CEOs appear dishonest, people throughout the firm may believe that trying to cheat the structure is a realistic direction to take, when it possible (Latham and Locke, 2006; Schweitzer et al., 2004). It has been argued that a fish rots from the head down. The similar might be said for businesses. If so, engaging in activities aiming at enhancing the ethical behavior of lower staff members may be ineffective or even harmful in companies led by the unethical owner as CEOs. On the other hand, the current

study finding indicates that HRM systems designed to enhance environmentally sustainable corporate practices may be quite beneficial when complemented by decent and devoted top-level management.

While we comprise stated, the results of our study ought to be regarded with caution. Similarly, recommending particular practical actions based only on the findings of this one research would be premature. Moreover, a growing amount of information suggests that the employees' performance and their behavior are affected by the casual social milieu made by firm' leaders and official policies like those compromising the system of HRM. Hence, government and citizens keep putting pressure on companies to take responsibility for operations; we encourage those recommending how to react considers the significance of integrating formal and informal messaging.

Our findings suggest the importance of CEOs who encourage environmental objectives through ethical leadership and GHRM system that gain the obligation of individuals liable for driving business in the direction of its planned objectives, for organizations that aspire to build spirited benefits through environmental stewardship. Formal policies like making an investment in environmental training, integrating environmental management indicators into TMT performance reviews, and hiring most senior management with related environmental knowledge and social value systems is improbable to achieve the preferred outcome in the absence of supportive top management leadership. Therefore, our results from an organizational analysis show that successful GHRM must be understood in the circumstances of the organization's domestic possessions, especially top-level managers' commitment. In this respect, appointing and observing CEOs and TMTs for ethical and environmental behavior ought to become a key component of Asian firms' sustainability efforts.

5.2 Final annotations

Recently, presenting the issue of environmental smash up and quick environment transformation has garnered considerable attention, and companies are increasingly being asked to take on the burden of resolving society's growing concerns. It's not easy to effectively manage a company's resources that can attain environmental sustainability; But, indication from this research reveals that the firms were more likely to be successful in organizing the mandatory possessions by implementing GHRM policies and implementing them with CEO ethical leadership, which together make TMT green commitment and encourage environmental performances.

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