

# **Journal of Development and Social Sciences**

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#### **RESEARCH PAPER**

# The Impact of Environment Ethics and Performance on Firm Competitive Advantage: A Dynamic Capability Framework with Green HRM Practices

<sup>1</sup> Safyan Majid\* <sup>2</sup>Ali Raza Elahi <sup>3</sup> Nisar Ahmad

- Lecturer, Department of Commerce and Finance, Government College University Lahore, Punjab, Pakistan
- 2. Assistant Professor, Department of Commerce and Finance, Government College University Lahore, Punjab, Pakistan
- 3. Assistant Professor, Hailey College of Commerce, The University of Punjab, Lahore, Punjab, Pakistan

PAPER INFO	ABSTRACT
Received: February 07, 2022 Accepted: May 07, 2022 Online: May 10, 2022 Keywords: Competitive Advantage, Environmental Ethics, Green HRM Performance *Corresponding Author  safyanmajid@gc u.edu.pk	Environmental concerns have become the central point of discussion for businesses because climate change results from negligence by the industries have put the planet at stake. To survive in this era, stakeholders have started pressuring the firms to adopt environmentally friendly practices to save the planet and build a positive image among the customers. This study has used the framework of Dynamic capabilities (DC) to examine the hypotheses extracted from the previous literature suggesting the nexus of environmental ethics and performance in building competitive advantage through the help of green HRM practices. The findings of our study reveal that environmental ethics and performance have a significant impact on competitive advantage. The study also revealed that green HRM practices of an organization moderates the relationship between environmental ethics and performance on a firm's competitive advantage. The study results suggest that the organizational approach towards environmental and ethical practices in the workplace should not be reactive but proactive to create and sustain synergy amongst the triads, namely, profits, society, and the environment. Green HRM practices should be adopted effectively to beat the competition and improve environmental performance in the organization.
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## Introduction

Businesses in today's era have been concerned about the sustainable growth of their firms. Pressure groups and lobbies push the firms to adopt environmentally friendly policies (Chang, 2011) and hold them responsible for any deviant behavior. Environmental ethics has become one of the industries' stakeholders' major concerns; companies have focused on achieving environmental performance to gain a competitive advantage (Steblyanskaya et al., 2021). Therefore, businesses are now bound to switch from traditional approaches to green activities. For the years, companies have only set their vision on generating revenue. Still, the time has changed, and the stakeholders demand that these firms pay society back with environment-friendly policies and responsible behavior. However, businesses and environmental stakeholders face problems achieving this target due to the lack of research data on environmental ethics and performance.

Furthermore, the business surroundings observe novel forces (e.g., consumer strikes, choices, and moral values) that affect the organization's actions towards achieving a competitive edge. Customer purchase behaviors rely on their imagination which is usually based on the brand image of the firm and also on its operations (J. Singh et al., 2019). Eventually, companies do not solely purport to adopt environment-friendly values to protect sustainable economic growth (Tate & Bals, 2018); however, they ought to get insights into environmental administration as a criterion for their 'better and sustainable performance (Yawar & Seuring, 2017). That demands conceptual leaders to stay focused and dedicated to following the environmental ethics by promulgating companies' policies on it along with their execution in daily activities to cut back the hazardous impact of business operations on the society (S. K. Singh et al., 2019).

The research shows that an organization's social performance primarily relies on its HRM assets and their implementation of environmental concerns and also the green values incorporated in their strategies and policies so that they can build their brand image as well as increase their value in the market (Yong et al., 2019). Hence, we put our point that the application of green ethics and performance intended by the firm's top management is only possible through their means of the human resources, which are in charge of implementing the strategic policies and also sorting out the environmental problems, i.e., customer or stakeholders issues regarding green standards (Renwick et al., 2013).

Numerous researchers have emphasized the role of leadership (Dubey et al., 2015), higher authorities pledge, organizational culture, business environmental policy (Dubey et al., 2015), and employee's eco-friendly contribution proceeding the organization's environmental ethics & performance. However, we argue that companies should keep their staff updated regarding rising environmental niceties through conjunctive green HRM practices to improve their green skills, data, information, and perspective to enhance environmental ethics & performance, and competitive edge. The green HRM practices to personnel influenced them to play a role in green ethics (Dumont et al., 2017) and expounded on the connection between an organization's environmental ethics and performance (Guerci et al., 2016; O'Donohue & Torugsa, 2016).

Companies need to reinforce their environmental performance standards to build and sustain their competitive edge. Based on the literature, it is posited that training & development (T&D) is a vital tool for the human resources that increase employees' capability and dedication and eventually increases the organization's innovative performance (Sung & Choi, 2018). To fill the gap within the worker's training for green HRM practices and environmental ethics & performance data, our study suggests a unified research analysis framework with some empirical proof that green HRM practices mediate the influence of environmental ethics & environmental performance on competitive advantage.

Our research study contributes to three dimensions to increase the environmental sustainability philosophy and capture the environmental impact of business operations. At first, it contributes to developing the emerging data and facts on the role of employees' green HRM practices vis-à-vis environmental ethics and competitive advantage. After that, this study contributes to filling up the crucial role of employee green HRM practices in facilitating the firm's environmental performance and competitive advantage. Finally, it explains the application of the green HRM policies and their effects in different firms, which provides insights for other business operators.

Therefore, we intend to examine whether environmental ethics and environmental performance have any nexus in building competitive advantage and whether green HRM practices have any intermediary role. This study aims to analyze the impact and examine the

relationship between environmental ethics and performance on building competitive advantage while simultaneously exploring the mediating part of green HRM practices, specifically in Pakistan.

#### **Literature Review**

#### **Environmental Ethics**

Environmental ethics refers to the set of ethical beliefs, norms, values, and behavior based on concerns over environmental protections, which aims to increase the profit for the firms (S. K. Singh et al., 2019). The environmental ethics of any corporation depicts the firm's concerns and its responsibility toward protecting the environment (Guerci et al., 2016). It is one of the components of organizational culture (Peng & Lin, 2008) linked to environmental performance and competitive edge. Environmental ethics deal with two issues: one concern covers the equity purpose while another covers the health and ecosystem (Teece, 2014).

According to Renwick et al. (2013), competitive advantage can be achieved by creating environment-friendly strategies that should be different from competitors and unique so that the benefits of sustainable development and growth can be gained. Firms can gain the edge by effectively using their intangible assets like policies related to environmental ethics (Chen, 2008; S. K. Singh et al., 2019).

One research by Chang (2011) suggests that companies who incorporate environmental ethics have higher chances of increasing their resource productivity through efficient measures of green HRM and green technologies, i.e., cutting up the cost. Environment ethics will add value to the corporate's performance and improve the environment ethics by motivating the other firms to follow the same trend. In short, green HRM and environmental ethics can make companies competitive and sustainable (Porter & Van der Linde, 1995).

Considering the DC, a firm's culture and human resources, which are mostly unique, inimitable, and differentiable, can be categorized as its central resource, which can be achieved through building up environmental ethics, and it will also give a competitive edge to the organization (Barney, 2000). Another explanation of environmental performance is given by Mui and Chan (2005); the author refers to it as a company's effectiveness in achieving the goal of environmental concerns at its best. Organizations must take action as soon as possible to save the environment and boost their performance in compliance with the rules and regulations.

Several studies have proved that environmental ethics pave the way for employees to learn innovative ideas and skills to develop environment-friendly goods, i.e., electricity, recycling, etc., which enhance the environmental performance and thus the competitive advantage (Kim et al., 2019). Those firms whose stakeholders bind to follow the regulations of environment protection have higher chances to improve their finances and environment protection by being receptive to the upcoming changes (Lai et al., 2012). The increase of renewable resources and biodegradable goods, eradicating hazardous materials, reducing environmental pollution, etc., enables the firms to enhance environmental performance (Zhu et al., 2010).

The dynamic capability view supports the argument that environmental performance can enhance the firm's competitive advantage in many ways. Firstly, firms with high environmental performance are likely to modify their business operations by reducing waste and pollution and effectively using the resources that cut the company's costs (Saeed et al., 2019). Secondly, the environmental concerns of a firm can contribute to building its

positive reputation, which increases customer satisfaction and helps firms increase their revenue (Luo & Bhattacharya, 2006). Thirdly, researchers Starik and Rands (1995) found that environmental performance also positively influences the company's human resources by increasing productivity.

Although environmental performance harms the firm's profitability for the short term due to the expenditure on Research and Development, it is only for a short time, argued (Cai & He, 2014). The author further suggested that in the long run, these firms get a large volume of profit through operational efficiency, better reputation, and less risk of natural disasters, which contribute to the overall firm's economic performance. The stakeholders of any firm interpret environmental performance as a commitment and support of their businesses for opting for those operations and strategies that help firms to grow in an environmentally friendly way, which is possible by putting an end to hazardous activities and by increasing their productivity so that future generations can be saved from any mishap (Rahman & Post, 2012). From the above discussion, it can be deduced that environmental performance has an active role in promoting ethical behavior in the companies to enhance the company's capacity further to move forward toward innovative technology and green strategies.

# **Competitive Advantage**

The literature suggests that a competitive edge can be gained through the dynamic capabilities and resources of the companies (Barney, 2000); the resources refer to the company's assets, human capital, financial ability, and innovativeness. A study by William (2007) shows that competitive advantage is built when customers get the product or service according to their needs and demand. If the customer is satisfied with the product, it will spread the joyous mouth of the word for the company. The same is the case with firms using environmental ethics and performance to enhance their competitive advantage. They fulfill the green requirements of customers by catering to their needs through innovative techniques, making them a first mover for the concerned product. Innovation is the main ingredient that prepares the company for gaining a competitive edge (Daghfous, 2004). Innovation comes from the continuous efforts of employees to invent technologies that could ease firms' green activities. But to sustain themselves in the long run, companies should create those innovative strategies and goods that are inimitable for their competitors (García-Morales et al., 2007). The literature suggests that access to rare or valuable resources is not enough to gain a competitive edge. Still, it depends on the organization's capability to use them in the best possible way (Sirmon et al., 2007). According to Majid et al. (2021), innovation is considered a crucial strategic driver for retaining knowledge, finding new opportunities, and achieving a competitive advantage in today's dynamic economic climate. Thus, the management's decision about constructing, reconstructing, and deploying its resources can bring a competitive advantage (Sirmon et al., 2007).

Organizations that have proactively followed environmental ethics enjoy maximum profits by selling their environment-friendly technologies, which add value to their brand image and provide a forum for the new market (Hart, 1997). In addition, those firms committed to environmental ethics and contributing to environmental performance have increased overall profits. They have made their position deep in the consumer's minds by providing them the environment-friendly values (Singh et al., 2020). Only environmental concerns can help organizations sustain the market due to the mass awareness about a clean and green world. This research will address how environmental ethics and performance can achieve a competitive edge by incorporating green HRM practices.

#### **Green HRM Practices**

The term green human resource practices refer to the environmental goals set by an organization according to its human resource goals (Yong et al., 2019). Emphasizing its importance, Cherian and Jacob (2012b) presented their research result and suggested that companies enforce green HRM to boost their employees' confidence towards better environmental performance.

A research study by Khurshid and Darzi (2016) explained that green HRM aims to assist a firm in following its agenda regarding environmental performance to reduce carbon emissions and earn public trust, confidence, and loyalty. A firm can get a competitive edge in the market in the long run as the public is more concerned about environmental protection than ever before. A study by Tang et al. (2017) explained the term green behavior as HRM practices that contribute toward a better environment by using resources effectively to increase the environmental performance, boost staff to show interest in development, and clearly show the existence of truth by giving proof which committed to environmental management issues.

Green HRM practices also promote environmental awareness among their staff, which refers to creating Environment friendly between their private or working lifestyle (Saeed et al., 2019).

Research conducted by Milliman and Clair (2017) shows that green HRM practices are necessary to promote environmentally friendly activities, practices, procedures, and services. Considering this fact, it can be claimed that green HRM practices can bring development and increase environmental performance by building a competitive edge for the company.

# **Theoretical Foundation**

# **Dynamic Capabilities**

The research is based on the Dynamic Capabilities lens (DC), which explains the total ability to effectively build and fit their employees' competencies into their organization's strategies. A research study by Teece (2014) suggests that employees are getting more curious to use the lens of dynamic capabilities for the development of themself as well as the whole human resource capital. Based on the DC, the researchers posit that environmental ethics can be adopted in firms only when firms will explore the dynamic capabilities of employees. Companies can sense their unique abilities and turn them into a compelling performance and competitive edge over their rivals (Teece, 2007, 2014). Now that stakeholder pressure has been rapidly increasing for the firms to adopt green behavior, the dynamic capability view will prove to be the best fit for organizations to go green. Researchers Adner and Helfat (2003) also emphasize its importance by posing that environmental skills can be viewed as dynamic capabilities that will assist the firm's human resources in reducing negative behavior and stimulating positive behavior.

This view suggests that if the firms want to sustain their competitive advantage, they should follow the path of dependency (modifying and matching with the latest trends), properties should be inimitable, and, most importantly, build brand equity (Dess & Lumpkin, 2005).

Moreover, the theory suggests that firms should align their policies and processes with employees' skills, attitudes, behavior, and motives to develop dynamic capabilities for a company's competitive advantage (Teece, 2007). The organizations' systems, procedures,

and activities should be matched with their human resource capital to gain a competitive advantage as it enables employees to explore their talent.

According to one research by Teece (2014), to convert the corporate environment ethics into practice, organizations need to develop dynamic capabilities in their employees, i.e., sensing and grabbing the opportunities. Providing the ground of Dynamic capabilities for theoretical perspectives to our research, we intend to examine whether environmental ethics and performance have any nexus in building competitive advantage and whether green HRM practices have any intermediary role.

# **Environmental Ethics and Competitive Advantage**

An organization's ethical culture can play a huge role in differentiating the firm from its competitors regarding employees' knowledge, skills, and responsibility towards the environment. It is nearly impossible to copy such intangible attributes of any company; that is why it is a source of building a competitive edge. Environment ethics act as a guideline for the employees to conduct the operations. Porter and Van der Linde (1995) have reasoned that companies with low cost and high profit are not the ones that get a competitive advantage. Still, it is gained by the firms which can rebuild, modify and innovate their services with the shifting trends.

Moreover, these researchers have provided insights on green strategies, i.e., environmental ethics, that can bring a higher profit to the firm. Thus, a competitive advantage can also improve the environmental performance for an extended period. In addition to it, one research study has proved that many consumers get through the product development process before buying it to make themselves assured about environmental performance.

This era of globalization has bound businesses in the overall world to comply with environmental ethics, so the competition has been increasing rapidly (Chang, 2011). Companies are trying to align with the international rules and regulations to avoid the hot waters. Environmental ethics can be a source of competitive advantage if it includes a strong relationship of stakeholders with the company based on trust, values, and codes of business conduct (Boatright, 2000). An ideal organization has a good reputation that depicts trust and intellectual bond with its stakeholders, and it also becomes the source of reliability for the company's image (Verhezen, 2010).

H1. Environmental ethics is positively related to competitive advantage.

# **Environmental Performance and Competitive Advantage**

Companies are introducing green products and services as early as possible to mark their name in history, i.e., electric cars, renewable energy, recycling, virtual meet-ups, etc. It gives their products an edge over other substitutes available in the market. Although these first movers can feel specific challenges; however, the outcome of green strategies is always fruitful. It is the responsibility of top management to lead the other staff towards achieving green goals and performance.

To enhance environmental performance, firms use different environmental practices that cannot have the same effect on all organizations (Henri & Journeault, 2008). Firms make some conceptual decisions, including purchasing green technology and ecofriendly designs of products and processes. It reduces their operational cost, which gives them a competitive advantage (Henri & Journeault, 2008). Furthermore, the research says that firms' proactive technologies for reducing pollution will provide them cost advantage with the help of environmental strategies. Wagner et al. (2002) argue that the environmental

process of any company mitigates the risk of competitiveness for it and helps it achieve sustainability. Literature suggests that organizations with low carbon emissions than their competitors can gain an advantage by positioning themselves as green environment performance.

**H2.** Environmental performance is positively related to competitive advantage.

# Nexus between Environmental Ethics and Performance in Enhancing Competitive Advantage

Firms with intelligent top management incorporate environmental strategies to shape their competitiveness (Wang et al., 2021). It has been proved that green firms who own their responsibility can easily project their image and can effectively sustain in this competitive market. It promotes their green idea, which indicates the use of environmental-friendly processes. Through these green strategies, firms secure the future of coming generations and project their image in consumers' minds (Bathmanathan & Hironaka, 2016). Most businesses increase their market share by bringing environmental ethics into their work operations and Human capital. Adding value to the literature, researcher Widyastuti et al. (2019) argue that environmental ethics and performance are considered crucial for an organization as it differentiates a firm from other competitors in the market and also it projects its green image, which eventually creates loyalty and equity to given them a competitive advantage.

Moreover, if the firm follows environmental ethics in true essence, it impacts the environmental performance, too, as both are the components of green strategies. Singh et al. (2020) suggest that green HRM is the key to implementing environmental ethics in the firm as it is in the hands of human capital to turn the strategies into practice. Also, environmental performance can be achieved in compliance with the rules only if the company's workforce works efficiently on it. Thus, both ethics and performance pave the way for gaining a competitive edge based explicitly on novel ideas and green values (Cai & He, 2014).

H3. Environmental ethics and performance are positively related to building a competitive advantage.

#### Gaining Competitive Advantage through the Mediating Role of Green HRM Practices

The world is changing rapidly, which demands a change in business operations. The pressure built up by globalization for firms to compete on a larger scale has compelled the organizations to change and modify their structure and policies to survive. Specifically, human resource management must be updated with current trends, as they have to play the firms' economic and environmental sustainability roles. The literature suggested that companies that implemented green ethics into their policies by reducing and recycling the waste helped them save the costs related to electricity, water, and waste management (Ekasatya, 2015). At the staff level, the implication of green HRM practices empowered employees, resulting in more productivity and environmental performance, and a problem-solving attitude. Moreover, one study by Jabbour (2013) argued that to build a clean green environment and healthy lifestyle, HRM practices should be based on green values, which will speed up achieving a standard environment performance.

Shen et al. (2018) divided the outcome of green HRM into two groups; green employee work and non-green employee work. Most of the previous studies have focused on green HRM employee outcomes, i.e., green innovation, pro-environmental behavior, employee's commitment toward the environment, green recovery performance (Luu, 2018), green lifestyle, behavior, value, and pro-environmental morale along with passion and

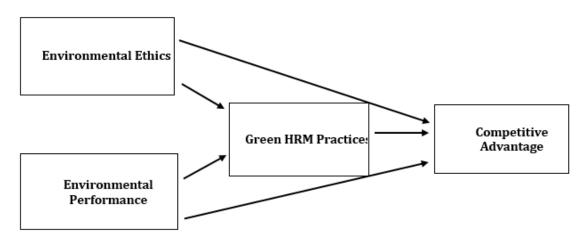
dedication (Tang et al., 2018). Nevertheless, much literature is available on the influence of green HRM on non-green work outcomes, i.e., sense of ownership, task performance, loyalty, trying to quit the job, etc. (Kalpana, 2018). Besides these benefits, green HRM can enhance environmental performance by shifting from traditional office work to home-based jobs. It will help firms save the cost and time of employees and organizations, i.e., less transportation means less fuel consumption and thus less pollution. The same for organizations as they can speed up activities through telecommunication and save electricity and other fixed costs. Hence, green HRM can make the firm compete and gain a competitive advantage in the industry. The literature also claims as Bhutto and Auranzeb (2016) suggested sustainable environmental performance can be achieved if the firms start following the green HRM practices.

It was claimed by researchers Cherian and Jacob (2012a) that green HRM could improve competitiveness and the performance of the employees due to their increased morale and sense of worth by working in a recognized environment-friendly organization. Thus, green HRM is the only tool that is hard to replicate. Firms need to invest in their employees' green training to enjoy a sustainable competitive edge as efficiently as possible.

H4. Green HRM practices mediate environmental ethics and competitive advantage.

H5. Green HRM practices mediate environmental performance and competitive advantage.

### **Conceptual framework**



#### **Material and Methods**

The research design used in this study is cross-sectional and based on primary data. The sample for this research consisted of 500 companies from the private sector, including pharmaceuticals, textile, banking, information technology, engineering, and agriculture industry in Pakistan. The industry was chosen based on its recent initiatives toward green practices across significant work prospects. Managerial employees were selected, including operations managers, supervisors, assistants, and marketing managers. Choosing managerial employees was to objectively view how firm's human resource view green HRM practices and their influence on individual green values. A total no of 201 responses was collected from the 500 questionnaires. The response rate was around 40%; moreover, the sample size is evaluated to confirm adequate (Tabachnick et al., 2007).

This study has used a questionnaire or survey method to gain the responses from our sample size. The data was collected from the respondents based on the Likert scale

(1=SD and 5= SA) for each item of environmental ethics, green HRM practices, environmental performance, and competitive advantage scales.

The scale used to measure environmental ethics consisted of four items borrowed from Henriques and Sadorsky (1999), and the sample item was, "Our Company has clear and definite environmental policies." In this study, researchers have used regression and correlation to know the influence of environmental ethics and performance on competitive advantage by using green HRM as a mediator.

We adopted three items given by Daily et al. (2012) and Melnyk et al. (2003) to measure it; a sample was taken as "Our firm has shown significant growth and development since we have incorporated environmental activities." We adopted six items from Barney (1991) and Porter and Van der Linde (1995) to measure a company's competitive advantage. To examine them properly, the sample item was taken as "the goods and services my organization offers are better than that of its competitor." A 6-item scale by Dumont et al. (2017) was adapted to examine the mediating role of green HRM practices.

# **Results and Analysis**

Table 1
Descriptive Statistics

			D	CSCLIP	cive bear	Bucs				
	N	Minimum I	Maximum	Mean	Std. Deviation	Variance	Ske	wness	Kui	rtosis
							Statistic	Std. Error	Statistic	Std. Error
SETH	201	1.00	5.00	3.4739	.96934	.940	-1.042	.172	.743	.341
EXPERT	201	1.00	5.00	3.4428	1.00949	1.019	785	.172	.127	.341
COMPARED	201	1.00	5.00	3.5066	.96549	.932	-1.096	.172	1.115	.341
GHRMP	201	1.00	5.00	3.4287	.97718	.955	996	.172	.600	.341

The table shows the sample size, mean, standard deviation, variance, skewness, and kurtosis of dependent, independent, and mediating variables. The mean of competitive is 3.5066. The value shows the average response by respondents, and the result lies between neutral and agrees while the standard deviation is 0.96549, which means the reaction of competitive advantage is deviating from its mean. The mean of environmental ethics equals 3.4739. The value shows the average response by respondents, and the result lies between neutral and agree, while the standard deviation of environmental ethics is 0.96934, which means the reaction is deviating from its mean (3.4739). The mean of environmental performance equals 3.4428. The value shows the average response by respondents, and the result lies between neutral and agrees, while the standard deviation of environmental performance is 1.00949, which means the reaction is deviating from its mean (3.4428). The mean of environmental green HRM practices equals 3.4287. The value shows the average response by respondents, and the result lies between neutral and agrees, while the standard deviation of green HRM practices is 0.97718, which means the reaction is deviating from its mean (3.4287).

Table 2 Correlation

		EETH	EPERF	COMPAD	GHRMP
EETH	Pearson Correlation	1	.742**	.704**	.676**
EPERF	Pearson Correlation	.742**	1	.701**	.786**
COMPAD	Pearson Correlation	.704**	.701**	1	.763**

GHRMP Pearson Correlation .676 .786 .763 1	GHRMP	Pearson Correlation	.676**	.786**	.763**	1
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The table shows the correlation among variables; environmental ethics, performance, competitive advantage, and green HRM practices. All the items are intercorrelated with each other significantly. All the variables show a strong relationship as their value is above 50%, and any change in one variable will affect the other variable.

#### Regression

Table 3 Model summary

			<u>J</u>	
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.763	0.582	0.58	0.62542
2	.805	0.648	0.644	0.57608
3	.704	0.495	0.493	0.68757
4	.704	0.495	0.493	0.68757
5	.753	0.567	0.562	0.63888
6	.753	0.567	0.562	0.63888
7	.763	0.582	0.578	0.62726

- 1. Predictors: (Constant), GHRMP
- 2. Predictors: (Constant), GHRMP, EETH
- 3. Predictors: (Constant), EETH
- 4. Predictors: (Constant), EETH
- 5. Predictors: (Constant), EETH, EPERF
- 6. Predictors: (Constant), EETH, EPERF
- 7. Predictors: (Constant), ETHGRM, EETH

#### Interpretation

The results of the model summary table report the relationship between the model and dependent variable, and it shows the overall impact of the independent variables on the dependent variable.

- The R-Square value .582 translated by multiplying with 100 is 58.2% variation independent variable (competitive advantage) due to the mediating variable green HRM practices.
- The R-Square value .648 translated by multiplying with 100 is 64.8% variation independent variable (competitive advantage) due to the independent variable environmental ethics and mediating variable green HRM practices.
- The R-Square value .495 translated by multiplying by 100 is a 49.5% variation independent variable (competitive advantage) due to the independent variable of environmental ethics.
- The R-Square value .567 translated by multiplying with 100 is 56.7% variation independent variable (competitive advantage) due to the independent variables environmental ethics and performance.
- The R-Square value .582 translated by multiplying with 100 is 58.2% variation independent variable (competitive advantage) due to the independent variable environmental ethics and mediating variable green HRM practices.

			Table ANO			
	Models	Sum of Squares	Df	Mean Square	F	Sig.
	Regression	108.596	1	108.596	277.628	.000ь
1	Residual	77.840	199	.391		
	Total	186.436	200			
	Regression	120.727	2	60.363	181.892	.000c
2	Residual	65.709	198	.332		
	Total	186.436	200			
	Regression	92.357	1	92.357	195.359	.000ь
3	Residual	94.078	199	.473		
	Total	186.436	200			
	Regression	92.357	1	92.357	195.359	d000
4	Residual	94.078	199	.473		
	Total	186.436	200			
	Regression	105.618	2	52.809	129.381	.000c
5	Residual	80.817	198	.408		
	Total	186.436	200			
	Regression	105.618	2	52.809	129.381	.000 <sup>b</sup>
6	Residual	80.817	198	.408		
	Total	186.436	200			
	Regression	100.468	2	50.234	115.699	.000ь
7	Residual	85.967	198	.434		
_	Total	186.436	200			

a. Dependent Variable: COMPAD

b. Predictors: (Constant), GHRMP

c. Predictors: (Constant), GHRMP, EETH

a. Dependent Variable: COMPADb. Predictors: (Constant), EETHa. Dependent Variable: COMPAD

c. Predictors: (Constant), EETH, EPERF

a. Dependent Variable: COMPAD

b. Predictors: (Constant), EETH

b. Predictors: (Constant), EETH, EPERF

a. Dependent Variable: COMPAD

b. Predictors: (Constant), EPERGRM, EPERF

The table shows the fitness of our research model. The Sig value of all tests run on the variables is .000, which is less than the P-value of 0.05; hence perfect for this research, and it means we can accept the hypothesis of this research.

• The table shows a significant mediating impact of green HRM practices on Competitive advantage. Moreover, when the green HRM practices play mediating

role along with independent variables, environmental ethics can impact more on competitive advantage. The F values are F1 (1, 199) = 277.628; F2 (2, 198) = 181.892.

- Environmental ethics significantly impact competitive advantage as the F value is (1, 199) =195.359.
- The table shows the significant impact of Environmental ethics on Competitive advantage. Moreover, environmental ethics and performance collectively can impact more on competitive advantage. The F values are F1 (1, 199) =195.359; F2 (2,198) = 129.381.
- There's a significant impact of Environmental ethics and performance on Competitive advantage as the F value is F (2, 198) = 129.381.
- There's a significant impact on Environmental performance and mediating impact of green HRM practices on Competitive advantage as the F value is (2, 198) =115.699.

Table 5
Regression Analysis

Regression Analysis									
	Models	<b>Unstandardized Coefficients</b>		Standardized Coefficients	t	Sig.			
		В	Std. Error	Beta					
1	(Constant)	.921	.161		5.710	.000			
	GHRMP	.754	.045	.763	16.662	.000			
	(Constant)	.516	.163		3.166	.002			
2	GHRMP	.523	.057	.529	9.246	.000			
	EETH	.345	.057	.346	6.046	.000			
2	(Constant)	1.071	.181		5.923	.000			
3 -	EETH	.701	.050	.704	13.977	.000			
4	(Constant)	1.071	.181		5.923	.000			
4 -	EETH	.701	.050	.704	13.977	.000			
	(Constant)	.782	.176		4.458	.000			
5	EETH	.407	.069	.409	5.862	.000			
	EPERF	.380	.067	.398	5.700	.000			
	(Constant)	.782	.176		4.458	.000			
6	EPERF	.380	.067	.398	5.700	.000			
	EETH	.407	.069	.409	5.862	.000			
	(Constant)	1.791	.211		8.483	.000			
7	EPERF	.122	.130	.128	.944	.346			
	EPERGRM	.103	.023	.613	4.521	.000			
a. Depe	a. Dependent Variable: COMPAD								

# Interpretation

- (a) Sig. The value of all the variables is less than the alpha value of 0.05, which signifies the significant impact of independent and mediating variables on the dependent variable.
- (b) The T value of all the variables is more significant than plus-minus two, which helps us derive that the null hypothesis will be rejected entirely. It can be concluded that the alternative hypothesis will be accepted.

- The mediating variable of this model, green HRM practices, is significant in describing the dependent variable "competitive advantage" based on its T value of 5.710.
- The independent variables of this model, environmental ethics and mediating variable green HRM practices, are significant in describing the dependent variable "competitive advantage" based on its T value of 3.166.
- The independent variables of this model of environmental ethics are significant in describing the dependent variable "competitive advantage" based on its T value of 5.923.
- The independent variables of this model, environmental ethics and performance, are significant in describing the dependent variable "competitive advantage" based on its T value of 4.458.
- The independent variables of this model, environmental performance and mediating variable of green HRM practices, are significant in describing the dependent variable "competitive advantage" based on its T value of 8.483.

#### Conclusion

This study aimed to measure the impact and the relationship of environmental ethics and performance with the mediating role of green HRM practices on competitive advantage. As the extant literature has suggested the positive and significant relationship among these variables, this research has also shown a positive relationship and considerable impact on competitive advantage. It should be noted that this study deals only with the environmental ethics, performance, and green HRM that affect competitive advantage, but there are some other factors also that may have an impact on the competitive advantage; such factors can be a work environment, employee interest, motivation, and many more. Also, only limited respondents, e.g., 201, are considered for this study, which can cause variation in the results. From the study's findings, it can be concluded that the study's research objectives have been accomplished; all the relationship and impact of the independent variable over the dependent variable has been found. Businesses or retailers can use this research to identify the key pillars to build their edge and how they can use environmental ethics and performance to boost their sales with the help of green HRM practices. We believe that the findings of our study will stir up the researcher's curiosity to unravel the human side of environmental management, which will surely steer future research in significant directions.

#### References

- Adner, R., & Helfat, C. E. (2003). Corporate effects and dynamic managerial capabilities. *Strategic management journal*, 24(10), 1011-1025.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J. B. (2000). Firm resources and sustained competitive advantage. In *Economics* meets sociology in strategic management. Emerald Group Publishing Limited.
- Bathmanathan, V., & Hironaka, C. (2016). Sustainability and business: what is green corporate image? IOP Conference Series: Earth and Environmental Science,
- Bhutto, S. A., & Auranzeb, Z. (2016). Effects of green human resources management on firm performance: An empirical study on Pakistani Firms. *Eur. J. Bus. Manag*, *8*, 119-125.
- Boatright, J. R. (2000). Ethics and the Conduct of Business, 6/e. Pearson Education India.
- Cai, L., & He, C. (2014). Corporate environmental responsibility and equity prices. *Journal of Business Ethics*, 125(4), 617-635.
- Chang, C.-H. (2011). The influence of corporate environmental ethics on competitive advantage: The mediation role of green innovation. *Journal of Business Ethics*, 104(3), 361-370.
- Chen, Y.-S. (2008). The positive effect of green intellectual capital on competitive advantages of firms. *Journal of Business Ethics*, 77(3), 271-286.
- Cherian, J., & Jacob, J. (2012a). Green marketing: A study of consumers' attitude towards environment friendly products. *Asían social science*, 8(12), 117.
- Cherian, J., & Jacob, J. (2012b). A study of green HR practices and its effective implementation in the organization: A review. *International journal of business and management*, 7(21), 25.
- Daghfous, A. (2004). Absorptive capacity and the implementation of knowledge-intensive best practices. *SAM Advanced Management Journal*, 69(2), 21.
- Daily, B. F., Bishop, J. W., & Massoud, J. A. (2012). The role of training and empowerment in environmental performance: A study of the Mexican maquiladora industry. *International Journal of operations & production management*.
- Delmas, M. (2001). Stakeholders and competitive advantage: the case of ISO 14001. *Production and Operations Management*, *10*(3), 343-358.
- Dess, G. G., & Lumpkin, G. T. (2005). The role of entrepreneurial orientation in stimulating effective corporate entrepreneurship. *Academy of Management Perspectives*, 19(1), 147-156.
- Dubey, R., Gunasekaran, A., & Ali, S. S. (2015). Exploring the relationship between leadership, operational practices, institutional pressures and environmental performance: A framework for green supply chain. *International Journal of Production Economics*, 160, 120-132.

- Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human resource management*, *56*(4), 613-627.
- Ekasatya, H. N. (2015). Penerapan Kesadaran Lingkungan Dengan Penghematan Anggaran Listrik, Kertas, Air Di Kantor Badan Lingkungan Hidup Kabupaten Probolinggo. *Calyptra*, *3*(2), 1-15.
- García-Morales, V. J., Ruiz-Moreno, A., & Llorens-Montes, F. J. (2007). Effects of technology absorptive capacity and technology proactivity on organizational learning, innovation and performance: An empirical examination. *Technology Analysis & Strategic Management*, 19(4), 527-558.
- Guerci, M., Longoni, A., & Luzzini, D. (2016). Translating stakeholder pressures into environmental performance—the mediating role of green HRM practices. *The International Journal of Human Resource Management*, *27*(2), 262-289.
- Hart, S. L. (1997). Beyond greening: strategies for a sustainable world. *Harvard business review*, 75(1), 66-77.
- Henri, J.-F., & Journeault, M. (2008). Environmental performance indicators: An empirical study of Canadian manufacturing firms. *Journal of Environmental Management*, 87(1), 165-176.
- Henriques, I., & Sadorsky, P. (1999). The relationship between environmental commitment and managerial perceptions of stakeholder importance. *Academy of Management Journal*, 42(1), 87-99.
- Hoyle, R. H. (1995). Structural equation modeling: Concepts, issues, and applications. Sage.
- Jabbour, C. J. C. (2013). Environmental training in organisations: From a literature review to a framework for future research. *Resources, Conservation and Recycling*, 74, 144-155.
- Kalpana, R. (2018). Factors affecting the Organisational Commitment with special reference to Women Faculties of Engineering Colleges.
- Kelloway, E. K. (1998). *Using LISREL for structural equation modeling: A researcher's guide*. Sage.
- Khurshid, R., & Darzi, M. A. (2016). Go green with green human resource management practices. *Clear International Journal of Research in Commerce & Management*, 7(1).
- Kim, Y. J., Kim, W. G., Choi, H.-M., & Phetvaroon, K. (2019). The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance. *International Journal of Hospitality Management*, 76, 83-93.
- Kline, R. B. (2011). Convergence of structural equation modeling and multilevel modeling. In: na.
- Lai, K.-h., Wong, C. W., & Cheng, T. (2012). Ecological modernisation of Chinese export manufacturing via green logistics management and its regional implications. *Technological Forecasting and Social Change*, 79(4), 766-770.
- Luo, X., & Bhattacharya, C. B. (2006). Corporate social responsibility, customer satisfaction, and market value. *Journal of Marketing*, 70(4), 1-18.

- Luu, T. T. (2018). Employees' green recovery performance: the roles of green HR practices and serving culture. *Journal of Sustainable Tourism*, *26*(8), 1308-1324.
- Majid, S., Maryam, H., Elahi, A. R., Chaudhary, M. G., Awais, M., & Ikram, K. (2021). Journal of ISOSS 2021 Vol. 7 (1), 199-221 CORPORATE INNOVATION AND PERFORMANCE NEXUS: THE MEDIATING ROLE OF ORGANIZATIONAL CULTURE. *Journal of ISOSS*, 7(1), 199-221.
- Melnyk, S. A., Sroufe, R. P., & Calantone, R. (2003). Assessing the impact of environmental management systems on corporate and environmental performance. *Journal of operations management*, 21(3), 329-351.
- Milliman, J., & Clair, J. (2017). Best environmental HRM practices in the US. In *Greening People* (pp. 49-73). Routledge.
- Mui, K. W., & Chan, W. (2005). Application of the building environmental performance model (BEPM) in Hong Kong. *Energy and Buildings*, *37*(8), 897-909.
- O'Donohue, W., & Torugsa, N. (2016). The moderating effect of 'Green'HRM on the association between proactive environmental management and financial performance in small firms. *The International Journal of Human Resource Management*, *27*(2), 239-261.
- Peng, Y.-S., & Lin, S.-S. (2008). Local responsiveness pressure, subsidiary resources, green management adoption and subsidiary's performance: Evidence from Taiwanese manufactures. *Journal of Business Ethics*, 79(1), 199-212.
- Porter, M. E., & Van der Linde, C. (1995). Toward a new conception of the environment-competitiveness relationship. *Journal of economic perspectives*, 9(4), 97-118.
- Rahman, N., & Post, C. (2012). Measurement issues in environmental corporate social responsibility (ECSR): Toward a transparent, reliable, and construct valid instrument. *Journal of Business Ethics*, 105(3), 307-319.
- Renwick, D. W., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International journal of management reviews*, 15(1), 1-14.
- Saeed, B. B., Afsar, B., Hafeez, S., Khan, I., Tahir, M., & Afridi, M. A. (2019). Promoting employee's proenvironmental behavior through green human resource management practices. *Corporate Social Responsibility and Environmental Management*, 26(2), 424-438.
- Shen, J., Dumont, J., & Deng, X. (2018). Employees' perceptions of green HRM and non-green employee work outcomes: The social identity and stakeholder perspectives. *Group & Organization Management*, 43(4), 594-622.
- Singh, J., Teng, N., & Netessine, S. (2019). Philanthropic campaigns and customer behavior: Field experiments on an online taxi booking platform. *Management Science*, 65(2), 913-932.
- Singh, S. K., Chen, J., Del Giudice, M., & El-Kassar, A.-N. (2019). Environmental ethics, environmental performance, and competitive advantage: Role of environmental training. *Technological Forecasting and Social Change*, 146, 203-211.
- Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green

- human resource management. *Technological Forecasting and Social Change*, 150, 119762.
- Sirmon, D. G., Hitt, M. A., & Ireland, R. D. (2007). Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of Management Review*, *32*(1), 273-292.
- Starik, M., & Rands, G. P. (1995). Weaving an integrated web: Multilevel and multisystem perspectives of ecologically sustainable organizations. *Academy of Management Review*, 20(4), 908-935.
- Steblyanskaya, A., Bi, K., Denisov, A., Wang, Z., Wang, Z., & Bragina, Z. (2021). Changes in sustainable growth dynamics: The case of China and Russia gas industries. *Energy Strategy Reviews*, 33, 100586.
- Sung, S. Y., & Choi, J. N. (2018). Effects of training and development on employee outcomes and firm innovative performance: Moderating roles of voluntary participation and evaluation. *Human resource management*, *57*(6), 1339-1353.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5). Pearson Boston, MA.
- Tang, G., Chen, Y., Jiang, Y., Paille, P., & Jia, J. (2018). Green human resource management practices: scale development and validity. *Asia Pacific Journal of Human Resources*, *56*(1), 31-55.
- Tang, G., Yu, B., Cooke, F. L., & Chen, Y. (2017). High-performance work system and employee creativity: The roles of perceived organisational support and devolved management. *Personnel Review*.
- Tate, W. L., & Bals, L. (2018). Achieving shared triple bottom line (TBL) value creation: toward a social resource-based view (SRV) of the firm. *Journal of Business Ethics*, 152(3), 803-826.
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal*, *28*(13), 1319-1350.
- Teece, D. J. (2014). The foundations of enterprise performance: Dynamic and ordinary capabilities in an (economic) theory of firms. *Academy of Management Perspectives*, 28(4), 328-352.
- Verhezen, P. (2010). Giving Voice in a culture of silence. From a culture of compliance to a culture of integrity. *Journal of Business Ethics*, 96(2), 187-206.
- Wagner, M., Van Phu, N., Azomahou, T., & Wehrmeyer, W. (2002). The relationship between the environmental and economic performance of firms: an empirical analysis of the European paper industry. *Corporate Social Responsibility and Environmental Management*, 9(3), 133-146.
- Wang, Y., Hu, H., Dai, W., & Burns, K. (2021). Evaluation of industrial green development and industrial green competitiveness: Evidence from Chinese urban agglomerations. *Ecological Indicators*, *124*, 107371.

- Widyastuti, S., Said, M., Siswono, S., & Firmansyah, D. A. (2019). Customer trust through green corporate image, green marketing strategy, and social responsibility: A case study.
- Yawar, S. A., & Seuring, S. (2017). Management of social issues in supply chains: a literature review exploring social issues, actions and performance outcomes. *Journal of Business Ethics*, 141(3), 621-643.
- Yong, J. Y., Yusliza, M.-Y., & Fawehinmi, O. O. (2019). Green human resource management: A systematic literature review from 2007 to 2019. *Benchmarking: An International Journal*.
- Zhu, Q., Geng, Y., & Lai, K.-h. (2010). Circular economy practices among Chinese manufacturers vary in environmental-oriented supply chain cooperation and the performance implications. *Journal of Environmental Management*, *91*(6), 1324-1331.