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Green HRM and its Sustainability Towards Economic Growth

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Abstract: ***By bringing together business and ecological aims, green HRM methods hope to encourage a more ethical work environment. This study looks at how sustainable economic development is connected to "Green Human Resource Management (HRM) practices." This study presents a comprehensive methodology that analyses the effect of Green HRM's many facets on costreduction and resource efficiency in businesses. The research intends to assist businesses and governments in adopting HRM practices that are good for the environment and the economy by combining current literature and using empirical data. Objective: The research aims to determine the factors of Green HRM practices resulting in economic growth trajectory of organization. The study's secondary objectives are to ascertain whether or not green HRM practices contribute to cost savings and resource efficiency, and whether or not they have any impact on economic development. Methodology: A survey among 100 respondents is conducted and data is collected by using Self-constructed questionnaire having 21 questions in total which are further divided into 5 variables. To find the determined factors, a model will be prepared using AMOS v21.Further the Regression is calculated to find out the impact of G-HRM on cost saving and resource efficiency. The Pearson's correlation is calculated to find out the relationship among Green HRM and economic growth. Findings: The determined factors have a significant impact on Green HRM. Also, the Green HRM has a significant positive relationship with economic growth of an organization and it has a significantly positive impact on the cost saving and resource efficiency of the organization [1][7].***

Keywords: Green HRM, Human Resource Management, Economic Growth, Cost Savings, Resource Efficiency

I. INTRODUCTION

To achieve a sustainable future, businesses must strike a balance between profit and protecting the environment (Guest, 2017) [5]. In order to achieve sustainable growth, it is necessary to include environmental issues into HRM and other areas of organizational practice (HRM) [10][11]. Human resource management (HRM) is a key driver of sustainable practices inside businesses because of the significant impact it has on molding organizational behavior, beliefs, and practices (Renwick et al., 2013) [3].

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G-HRM is an increasingly popular concept that emphasizes the incorporation of ecological considerations into HRM practices and policies (Jackson et al., 2011) [6] [15]. Recruiting and selecting candidates who share the company's environmental values, providing them with opportunities to learn new green skills, monitoring their progress toward sustainability goals, and encouraging their participation in environmental initiatives are all examples of green HRM practices (Renwick et al.,2016) [2][16].

The desire to learn how businesses may promote sustainable development while maintaining or improving their economic performance motivates researchers to investigate the connection between Green HRM and expansion. More and more businesses are beginning to see the financial, reputational, and strategic value in implementing ecologically sound practices (Delbridge et al., 2018) [4]. Organizations may have a positive impact on sustainability in environment and economic development by adopting green HRM practices [14].

There is a dearth of data showing how exactly green practices affect financial outcomes, despite the expanding field of Green HRM. The primary emphasis of the current literature is on demonstrating the connection between Green HRM and environmental results (Renwick et al., 2013). Therefore, taking into account the wider sustainability characteristics, there has to be a thorough knowledge of how Green HRM practices affect economic development.

By conducting a literature review and using empirical research, this article hopes to fill this knowledge gap and aid businesses and governments in making more environmentally and economically responsible HRM decisions [7-9].

The results of this investigation should have implications in both theory and practice. Theoretical ramifications include making progress in knowing how Green HRM practices impact economic expansion. Organizations looking to implement sustainable HRM practices that promote economic development and environmental sustainability would benefit from the evidence-based insights provided by the practical implications.

II. REVIEW OF LITERATURE

(Marditama et al., 2021) studied "Green human resource management and sustainable organizationliterature: A mini-review approach" and said that in the 21st century, businesses have a responsibility to reduce their environmental effect and adapt to the difficulties presented by greenerworkplaces [12].

Green Human Resource Management (GHRM) departments of large companies proactively green their workplaces. Literature on green HRM and sustainable organizations is analyzed from a variety of perspectives in this study. The study's findings suggest that incorporating employees' perspectives into business decisions might boost productivity and reduce negative impacts on the environment. Future research should focus on MSMEs since they are the backbone of the economy and major contributors to GDP in developing countries [13].

(Adubor et al., 2022) studied "Exploring Green Human Resource Adoption and CorporateSustainability in Nigerian Manufacturing Industry" and said that We looked at manufacturing companies in Lagos State, Nigeria, to see how they were using GHRM and other sustainability initiatives. A total of 336 factory employees were analyzed using social identity theory. Predecessors of GHRM have a significant effect on business sustainability in the industrial sector. Organizations gain from GHRM, as shown by the regression study. Training in environmental sustainability helps cut down on waste and increase resource reuse, boosts a company's public profile, brings in and retains environmentally conscious customers, and boosts profits. This success benefits the company and encourages employees to think of ways to reduce their impact on the environment.

(Manoj et al., 2022) studied "Impact of Green HRM on Work-Life Balance of Employees in Automobile Industry: An Empirical Investigation and said that This essay looks at how Green HRM is changing the work-life balance of the car industry. It examines the degree to which GreenHuman Resource Management approaches, such as Green training and development, Green selection and recruitment, Green performance management, Green employee involvement, and Green incentives and compensation" have been adopted by the car sector. In order to learn how Green HRM in the automotive industry influences 'Work-Life Balance of Employees,' 203 workers were surveyed. In the automotive business, 'Work-Life Balance of Employees' is profoundly affected by green HRM.

(Saeidi et al., 2022) studied "Evaluate sustainable human resource management in the manufacturing companies using an extended Pythagorean fuzzy SWARA-TOPSIS method" and said that This article suggests a methodical approach to studying the foundations of Sustainable HRM. A survey, along with a literature review and expert interviews, is used to identify, evaluate, and analyses the significant SHRM aspects in Ecuadorian manufacturing firms. This research introduces the "PF-SWARA-TOPSIS method, which utilizes Pythagorean fuzzy sets (PFSs) in conjunction with Stepwise Weight Assessment Ratio Analysis (SWARA) and the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS)" to order and priorities considerations. The green work-life balance ranked first, ahead of CSR, employee relations, and business process reform. This study provided evidence that the current approach may be useful indealing with SHRM concerns in manufacturing companies.

(Yong et al., 2022) studied "Accentuating the interconnection between green intellectual capital, green human resource management and sustainability" and said that studies sustainability, humanresource management, and green intellectual capital. Malaysia's total came from 112 major factories. Green human resource management, backed by green relational and human capital, improves corporate success. G-HRM strengthens the link between green human capital and economic, social, and environmental performance. Green HRM may extend an organization's longevity by promoting eco-friendly behavior. The results suggest industrial leaders invest in green IC to achieve sustainability via green HRM.

(Yue et al., 2023) studied "Does the Environmental Management System Predict TBL Performance of Manufacturers? The Role of Green HRM Practices and OCBE as Serial Mediators" and said that This research analyzed the effect of EMSs on TBL performance in ISO14001-accredited manufacturing organizations. Three hundred and fifty firms were selected atrandom and asked to fill out standard questionnaires as part of a quantitative positivist study. SEM analyses revealed a favorable relationship between TBL and EMS and OCBE. OCBE and EMS benefit from green HRM practices. The effectiveness of EMS and TBL in ISO14001-accredited factories was sequentially mediated by green HRM and OCBE. The managerial and organizational implications of this research are substantial.

III. METHODOLOGY

Both primary and secondary sources of information were included for this investigation. The basicdata were gathered via the use of a method called stratified random sampling. A survey among 100 respondents is conducted through a self-administered questionnaire. The questionnaire contains 21 questions including some demographic questions and was further divided into 5variables. The responses are collected from respondents through e-mail. The responses were collected and then analyzed using SPSS V27 to find out the required regression and correlational test. The reliability and validity of questionnaire will be calculated using Cronbach's alpha. IBM AMOS V21 was used to do the structure equation modeling and the model was created using it. In the research, to reveal the impact of Green HRM and its relation with cost saving, resource efficiency and economic growth will be calculated using the regression analysis and Pearson correlation test respectively[17-26].

A. Objectives:

1. To determine the effect of factors of G-HRM practices resulting in economic growth of anorganization.
2. To find out the impact of G-HRM practices on cost saving and resource efficiency.
3. To find the relationship between G-HRM practices and economic growth.

B. Reliability:

Case Processing Summary		
		N
Cases	Valid	100
	Excluded [a]	0
	Total	100
Reliability Statistics		
Cronbach's Alpha		N of Items
0.994		21

The presented table shows the reliability output of the questionnaire. There was a total of 21 questions and 100 respondents. The value of Alpha is 0.994, which is a very high value, suggesting that the results obtained are reliable and can be used for further studies.

IV. RESULTS

A. Demographic:

	Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Age	18 to 25	15	15.0	15.0	15.0
	26 to 35	30	30.0	30.0	45.0
	36 to 45	10	10.0	10.0	55.0
	46 to 55	30	30.0	30.0	85.0
	“56 and Above	15	15.0	15.0	100.0
Gender	Male	60	60.0	60.0	60.0
	Female	40	40.0	40.0	100.0
Education	High School	10	10.0	10.0	10.0
	Bachelor's Degree	50	50.0	50.0	60.0
	Master's Degree	25	25.0	25.0	85.0
	Ph. D or Higher	15	15.0	15.0	100.0
Job Position	Entry-level employee	5	5.0	5.0	5.0
	Mid-level manager	15	15.0	15.0	20.0
	Senior executive”	35	35.0	35.0	55.0
	HR professional	35	35.0	35.0	90.0
	Other	10	10.0	10.0	100.0

In terms of Age, the survey respondents were distributed across different age groups. Approximately 15% of the respondents fell within the 18 to 25 age range, while 30% belonged to the 26 to 35 age group. The 36 to 45 age categories accounted for 10% of the respondents, and another 30% were between the ages of 46 and 55. Lastly, 15% of the respondents were 56 years old or above.

When it comes to Gender, the survey had a fairly balanced representation. Sixty percent of those polled were men, while the remaining forty percent were women.

Moving on to Education, the respondents had diverse educational backgrounds. The data reveals that 10% of the participants had completed their education up to the High School level. The majority, comprising 50% of the respondents, held a Bachelor's Degree. A significant portion, 25%, possessed a Master's Degree, and 15% had achieved a Ph.D. or higher qualification.

Finally, distribution of respondents based on Job Position. The survey participants held various positions within their respective organizations. A small percentage, 5%, occupied Entry-level employee positions. Mid-level manager positions were held by 15% of the respondents. Senior executives made up the largest proportion, with 35% of the respondents falling into this category. Another 35% of the participants identified themselves as HR professionals. The remaining 10% represented individuals in various other job positions.

B. Results:

Exploratory Factor Analysis

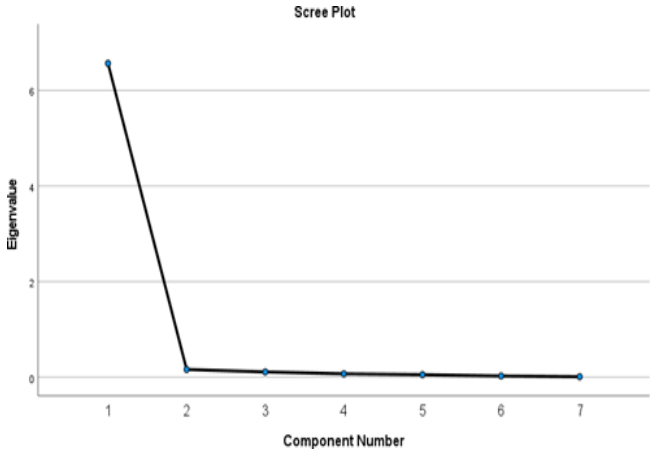
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.887
Bartlett's Test of Sphericity	Approx. Chi-Square	1527.459
	df	21
	Sig.	0.000

“KMO and Bartlett's Test was applied in which KMO value found is .887 which is more than the 0.6 hence it confirms the validity of the factor analysis and Bartlett's test of sphericity” confirms the presence of significant correlations among the variables. This indicates that factor analysis can be applied to explore underlying factors within the data.

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.567	93.817	93.817	6.567	93.817	93.817
2	0.162	2.307	96.124			
3	0.111	1.582	97.706			
4	0.071	1.019	98.725			
5	0.053	0.756	99.482			
6	0.026	0.370	99.851			
7	0.010	0.149	100.000			

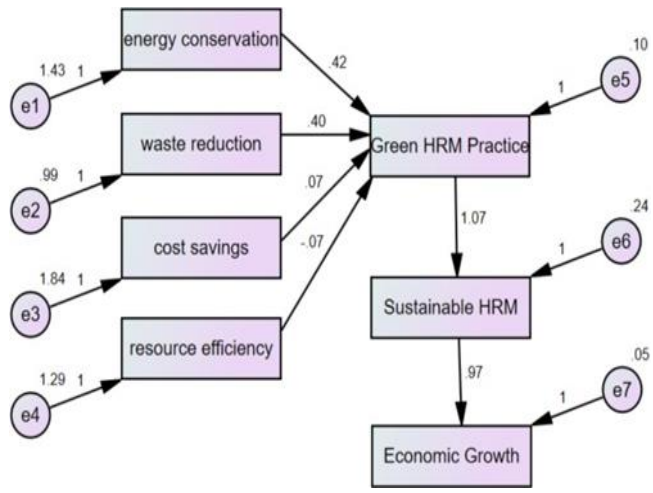
According to what is displayed in the table, there are a total of seven factors that account for all 100% of the variance, with the first factor accounting for 93.817 percent of the variance on its own. The second factor accounts for 2.307 percent, the third factor for 1.582 percent, the fourth factor for 1.019 percent, and any other factors accounting for less than one percent of the variance.

The seven numbers that were derived from the table serve as the basis for this figure's graphical depiction of the total variance explained.



S. No	Factors	Factor Loadings
1	Energy Conservation	0.957
2	Waste Reduction	0.979
3	Cost Savings	0.977
4	Resource Efficiency	0.973
5	Green HRM Practices	0.948
6	Sustainable HRM	0.980
7	Economic Growth	0.966

C. Structure Equation Modeling:



D. Regression Analysis:

Model Summary [b]						
Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
Regression Model		.913[a]	0.834	0.832	0.54099	
ANOVA [a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
Regression Analysis	Regression	144.069	1	144.069	492.262	.000[b]
	Residual	28.681	98	0.293		
	Total	172.750	99			

The model summary and ANOVA table give insights into the efficacy of the regression model in describing the influence of GHRM techniques on cost savings and resource efficiency. A significant positive linear connection may exist between the variables, as shown by the correlation coefficient (R) value of 0.913. The coefficient of determination, also known as R Square, is 0.834, which indicates that the predictor variable or variables that are included into the model can accountfor about 83.4 percent of the variation in the outcome variable. The sum of squares (144.069) and mean square (144.069) for the regression component are included in the table for the ANOVA analysis. The significant F-statistic of 492.262 and p-value of .000 indicate that the regression model as a whole is statistically significant in explaining the variance. Hence, the regression model demonstrates a strong and positive impact of Green HRM practices on cost savings and resource efficiency.

E. Correlation Test:

Correlations		
		Economic Growth
Green HRM Practices	Pearson Correlation	.878**
	Sig. (2-tailed)	0.000
	N	100

The correlation analysis examines the relationship between the variables of Green HRM Practices and Economic Growth. The Pearson correlation coefficient between Green HRM Practices and Economic Growth is 0.878. This positive correlation suggests a strong association between these variables. The correlation coefficient indicates that as Green HRM Practices increase, there is a tendency for Economic Growth to also increase. Also, the significance value (Sig.) of 0.000 indicates that the correlation is statistically significant.

V. DISCUSSION

According to the results, businesses may increase productivity and lessen their negative effects on the environment by taking into account the opinions of their workers. Since MSMEs are the lifeblood of economies and important contributors to GDP in developing nations, they should be the primary focus of future study. It looked into how widely implemented "Green Human Resource Management strategies are in the industry, including green training and development, green selection and recruiting, Green performance management, Green employee participation, and Green incentives and pay. Based on the results, all the sector leaders should invest in green practices to achieve sustainability through green HRM."

The Green HRM practices like energy conservation, cost savings, waste reduction and resource efficiency play a vital role in achieving the sustainable HRM and hence moving towards the economic growth of the organization. The relationship between Green HRM and economic growth is also significant showing that, if the Green HRM will increase, Economic Growth can be achieved.

VI. CONCLUSION

By investigating the connection between green human resource management techniques and economic expansion, this study fills a significant need in the existing research. The purpose of this study was to investigate the effect that implementing G-HRM practices has on cost reductions and resource efficiencies. This research aimed to shed light on the relationship between Green HRM and economic growth, as well as determine the factors of Green HRM that are involved in achieving economic growth. The findings from the analysis demonstrate the significant positive impact that Green HRM practices can have on achieving cost savings and promoting resource efficiency within organizations. By implementing sustainable HRM practices, organizations can effectively reduce energy consumption, optimize resource allocation, minimize waste generation, and promote responsible procurement. The analysis also revealed the positive correlation betweenGreen HRM practices and economic growth of the organization. The factors of Green HRM practices involved were Energy Conservation, Cost Savings, Waste Reduction and Resource Efficiency. By using these factors, a model has been prepared showing the results, how Green HRM practices can produce effect in achieving the Sustainable HRM and Economic Growth. The table showing factor loadings depicts the relationship of these factors with the Green HRM and economic growth. The implications of this research are significant for organizations seeking to align their HRM strategies with sustainable development goals.

A. Limitations:

1. Limited sample size and generalizability
2. Potential data availability and quality issues
3. Limited timeframe and lack of longitudinal analysis
4. Limitation of resources

B. Future Scope:

1. Conducting long-term studies to track the impact of green HRM practices on economicgrowth over time.
2. Analyzing the connection between green HRM and economic development by comparing businesses across sectors and geographies.
3. Quantitative and qualitative methods should be combined.
4. Examining how various green HRM practices, such employee engagement programmers, training and development efforts, and performance management systems, contribute to or detract from overall economic growth.
5. Examining how new technologies like AI and IoT may make green HRM more resilient and productive in the pursuit of economic expansion.
6. International and cross-cultural studies: Conducting cross-cultural comparisons to examine how the effectiveness and impact of green HRM practices vary across different cultural contexts and countries.

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Authors Contributions	All authors have equal participation in this article.

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