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Abstract

Purpose: The purpose of the study was to determine the mediating effect of employee outcomes on the relationship between green human resource management (HRM) practices and the performance of firms listed on the Nairobi Securities Exchange (NSE). The study was anchored on the Guest model of HRM. It was guided by the positivist research philosophy and used a cross-sectional research design. A pilot was done in 12 firms not listed on the NSE. Reliability was ascertained through Cronbach’s coefficient and validity through expert judgement.

Methodology: Primary data was collected using a structured questionnaire in a census of all the 62 NSE-listed firms. SPSS software was used to conduct descriptive and inferential statistics including Pearson correlation and simple regression analysis. The presentation of the results was in tables.

Findings: The findings revealed an indirect link between green HRM practices and firm performance through employee outcomes. This implies the presence of a mediating effect (total effect minus the direct effect (1.019 – 0.735)) of 0.284. Meaning that employee outcomes partially mediated the relationship between green HRM practices and firm performance. Therefore, the null hypothesis that employee outcomes have no statistically significant mediating effect on the relationship between green HRM practices and firm performance, was rejected.

Unique contribution to theory, practice and policy: The study concluded that green employee outcomes (competency, commitment, and empowerment) were present in the listed firms and led to enhanced firm performance. The study validates the Guest model of HRM illustrating that the model is applicable in the study of firm performance. The study recommends that firms should introduce green HRM practices to realise employee outcomes that engrave an eco-culture among employees linked to sustainable performance. Further areas of research are; a study exploring the mediating role of other employment outcomes on the relationship between green HRM practices and firm performance. The study contributes to green HRM research theory and practice and offers a platform for further research by HR students, scholars, and researchers. Finally, the findings would guide Human Resource Managers as they institute green HRM practices in their organisations.

Keywords: Employee Outcomes, Green HRM Practices, NSE and Firm Performance.
INTRODUCTION

Firm performance is an obligation of all organisations globally by all stakeholders, irrespective of the sector. (Armstrong & Taylor, 2020). However, despite its critical importance, it remains a persistent problem for firms resulting from the depletion of natural resources by individuals and institutions as raw materials for production (Osolase, 2022). Further climate change, globalisation, changing customer and investor demands, and human resource management complexities worsen the situation (Mohammed, 2019). To address these climate and environmental realities firms are shifting towards green economic facets (Mitra & Hembrom, 2020). Given the unique contribution of human resources to firm performance, green human resource management (HRM), whose scope and nature is extending HRM practices to green concerns, has emerged as a central business strategy for competitive corporate organisations (Aykan, 2017). Osolase (2022) and Shafaei et al. (2020) affirm that green human resource management has been linked to superior results as it thrusts a firm’s competitive advantage by increasing efficiencies, saving costs, and lowering carbon footprints making firms competitive and sustainable. Further, Parletta (2019) asserts that over 80% of people respect brands and firms that embrace environment-friendly practices. The study conceptualised firm performance as employee and firm productivity, retention and green behaviour and green HRM practices as green training and development, green socialisation and green health and safety.

Employee outcomes typically constitute employee skills, attitudes, or physiological/behavioural outcomes exhibited through employee competency, commitment, and empowerment in firm operations (Suchitra et al., 2019; Sagwa, 2015). Employee outcomes equip employees with skills, knowledge, and experience making them more responsible, effective, and efficient (Karuri, 2015). In addition, they make employees act in the firm’s best interests and increase their productivity by fully utilising their abilities to achieve organisational outcomes (Yazid et al., 2017). Sagwa (2015) Karuri (2015) and Mulabe (2013) linked human resource management practices to employee outcomes. On the one hand, Ren et al. (2022) and Hameed et al. (2020) assert that several studies have revealed a positive association between employee outcomes and firm performance. On the other hand, there are contradicting findings to existing empirical and theoretical literature regarding the role of employee outcomes as an antecedent of firm performance (Suchitra et al., 2019).

Study Objective

The objective of this study was to establish the mediating effect of employee outcomes on the relationship between green human resource management practices and the performance of firms listed on the Nairobi Securities Exchange.

Study Hypothesis

H₀: Employee outcomes have no statistically significant mediating effect on the relationship between green human resource management practices and firm performance.
LITERATURE REVIEW

This section covers theoretical and empirical review and conceptual framework.

Theoretical Review

The theoretical foundation of this study is the Guest model of HRM. David Guest developed this model in 1997. The model postulates that HRM managers have definite strategies which require certain practices, and their implementation leads to outcomes. The Guest model is a fusion of both soft and hard HRM and holds that the design of HRM practices should ensure the production of high-quality employees who are flexible and committed to their firm. The model constitutes six dimensions of analysis that include HRM strategy, HRM practices, HR outcomes (HRM behaviour), HRM performance, and financial outcomes (Guest, 1997). The model helps in HRM development by ensuring firms follow a set strategy. According to Armstrong and Taylor (2020), the basis for greater use of HR practices is the tenet that higher levels of performance are associated with higher levels of employee commitment and contribution (Armstrong & Taylor, 2020). Application of this model in organisations helps to develop employees, create a favourable working environment, and encourage employees to participate in decision-making, which reduces absenteeism, lowers employee turnover, and improves employee retention (Guest, 2017).

A critique of the Guest’s Model is that it focuses on the individual employee needs rather than the total firm workforce, which enables it to develop power and flexibility. Further, the model does not consider external or even all internal factors of the firm (Marsden, 2002).

Therefore, this model underpins this study by explaining that green HRM practices are not directly linked to firm performance but indirectly through employee outcomes (mediator). Ren et al. (2022) have previously used this model in assessing the relationship between green HRM practices and performance.

Empirical Review

Past scholarly studies on the mediation role of employee outcomes on the relationship between green HRM practices and firm performance were reviewed and established conceptual, contextual, and methodological gaps.

The Mediation Role of Employee Outcomes on Green HRM Practices and Firm Performance.

Employee outcomes are affective dispositions associated with work-related attitudes (Avey et al., 2011). According to Baron and Kenny (1986) and Kenny (2014), a mediator is a variable that causes mediation in the relationship between the outcome variable - firm performance and the causal variable - green HRM practices. Ren et al. (2022) observed the need to have an improved understanding of the mediating processes through which green HRM influences green-specific and
general outcomes to guide the design of a green HRM system that potentially achieves sustainable longer-term outcomes.

Shafaei et al. (2020) used a cross-sectional survey design focusing on the hospitality industry in Malaysia and industries in Australia in two studies of antecedents and outcomes of green human resource management in Australia and Malaysia. The study included a mediator variable. They established that improved performance resulted from green HRM practices through employee outcomes. They identified employee outcomes as vital since employees are the significant agents in implementing and practising environmental activities in their firms and the core source of the firm’s competitive advantage. The study only focused on one employee outcome – job satisfaction. In addition, the study was not anchored on any theoretical proposition. In contrast, this current study was anchored on Guest model of HRM and explored several employee outcomes in assessing whether they mediated the link between green HRM practices and firm performance.

Pham et al. (2019), in a study on greening HRM and employee commitment towards the environment in the hospitality industry in Vietnam, established that green HRM practices enhance employee commitment to environmental activities in organisations. The study revealed that various green HRM practices reinforce each other to achieve employee commitment, which leads to better performance. The study was anchored on AMO and Social Exchange Theories. In contrast, the current study used Guest model of HRM. However, the generalisation of the findings of this study is skewed only toward the hospitality industry.

Hameed et al. (2020) investigated the influence of green HRM practices on employee green performance in Pakistan. They established a significant indirect relationship between green HRM practices and performance through employee empowerment. The study confirmed that employee empowerment (a construct of employee outcome) mediates the relationship between green HRM practices and performance. This study explored other employee outcomes constructs to assess whether they mediate this relationship.

Sagwa (2015), in a study on human resource management practices and firm performance of NSE listed firms, revealed that firm performance is expected to be influenced by employee outcomes through the competency, commitment and empowerment of employees. Nonetheless, the study established no relationship between employee outcomes and firm performance of the firms listed on the NSE. This finding contradicted existing empirical and theoretical evidence indicating that employee outcomes are an intermediate product of human resource management practices and an antecedent of firm performance (Suchitra et al., 2019; Yazid et al., 2017; Purcell et al., 2003; Huselid, 1995).

**Figure 1: CONCEPTUAL FRAMEWORK**

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Mediator variable</th>
<th>Dependent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Green HRM practices (X)</strong></td>
<td><strong>Employee outcomes (M)</strong></td>
<td><strong>Firm performance (Y)</strong></td>
</tr>
<tr>
<td>• Green socialisation</td>
<td>• Competency</td>
<td>• Productivity</td>
</tr>
<tr>
<td>• Green training and development</td>
<td>• Commitment</td>
<td>• Retention</td>
</tr>
<tr>
<td>• Green health and safety</td>
<td>• Empowerment</td>
<td>• Green behaviour</td>
</tr>
</tbody>
</table>
METHODOLOGY

This study was guided by a positivist research philosophy and used a cross-sectional research design. The study conducted a census of the 62 firms listed on the Nairobi Securities Exchange and collected data using a structured questionnaire directly administered to the respondents through the drop-and-pick method or emailed as digital questionnaires by the researcher. Using SPSS software data was analysed using descriptive, correlation, and regression techniques.

FINDINGS

The study sought to establish the mediating effect of employee outcomes on the relationship between green HRM practices and firm performance. Forty-nine questionnaires were successfully filled and found suitable for further analysis yielding a response rate of 79%. The response rate was comparable to those of previous studies in the same area; Kariuki (2022) 72%, Sagwa (2015) 60%, and Mulabe (2013) 79.7%. This meritorious response rate resulted from the cadre of human resource personnel in the listed firms and follow-up by the researcher. Computation of reliability used Cronbach Coefficient Alpha yielding a reliability coefficient of 0.957 for both employee outcomes and firm performance.

Descriptive Statistics

Descriptive Statistics of Employee Outcomes

The study aimed to establish the mediating effect of employee outcomes on the relationship between green HRM practices and firm performance. Based on the literature review, the employee outcomes were conceptualised as employee green competency, commitment, and empowerment. The respondents indicated their agreement with selected statements on employee outcomes, as shown in the results presented in Table 1.
### Table 1: Descriptive Statistics of Employee Outcomes

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The company offers employees an opportunity to learn in their jobs</td>
<td>49</td>
<td>4.37</td>
<td>0.528</td>
</tr>
<tr>
<td>Supervisors inspire their subordinates to do more than they think they can</td>
<td>49</td>
<td>4.06</td>
<td>0.517</td>
</tr>
<tr>
<td>Employees possess the required green knowledge and skills</td>
<td>49</td>
<td>3.80</td>
<td>0.499</td>
</tr>
<tr>
<td>required for effective green management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees have a greater willingness to continue working with the company</td>
<td>49</td>
<td>4.14</td>
<td>0.677</td>
</tr>
<tr>
<td>Employees view this company as a great place to work</td>
<td>49</td>
<td>3.96</td>
<td>0.538</td>
</tr>
<tr>
<td>Employees strongly value the company's environmental efforts</td>
<td>49</td>
<td>3.90</td>
<td>0.467</td>
</tr>
<tr>
<td>Employees take the initiative to act in environmentally friendly ways at work</td>
<td>49</td>
<td>3.86</td>
<td>0.408</td>
</tr>
<tr>
<td>The company delegates authority to employees equal to the level of responsibility</td>
<td>49</td>
<td>4.04</td>
<td>0.498</td>
</tr>
<tr>
<td>This company provides employees with green training to develop the knowledge and skills required for green management</td>
<td>49</td>
<td>3.96</td>
<td>0.498</td>
</tr>
<tr>
<td>This company gives employees freedom and flexibility to experiment with skills learnt in environmental training.</td>
<td>49</td>
<td>3.88</td>
<td>0.389</td>
</tr>
<tr>
<td>This company values employee’s green contribution</td>
<td>49</td>
<td>4.18</td>
<td>0.782</td>
</tr>
<tr>
<td><strong>Aggregate Mean</strong></td>
<td>49</td>
<td>4.01</td>
<td>0.535</td>
</tr>
</tbody>
</table>

N= Frequency, SD= Standard Deviation

Source: Primary data (2023)

The results in Table 1 show that the mean of employee outcomes ranged between 3.80 and 4.37 (range = 0.57). The standard deviation ranged from 0.389 to 0.782 (range = 0.393). The lower value of SD (0.389) implies that the positive responses concentrated the mean and the higher value of SD (0.782) implies that the positive responses were least concentrated around the mean. The results reveal that the aggregate mean is 4.01 and SD is 0.535. This result implies that at a mean = 4.01 and a standard deviation is 0.535, the respondents agreed with the statements describing the presence of green employee outcomes in the firms listed on the Nairobi Securities Exchange.

**Correlation Analysis of Employee Outcomes and Firm Performance**

To determine the strength and direction of the relationship between employee outcomes and firm performance a Pearson’s product movement correlation analysis was conducted to establish (r).
The (r) value range between -1 and 1 where -1 denotes a strong inverse relationship and 1 denotes perfect correlation. Results are shown on Table 2.

Table 2: Correlation Analysis of Employee Outcomes and Firm Performance

<table>
<thead>
<tr>
<th></th>
<th>Firm Performance</th>
<th>Employee Outcomes</th>
<th>Competency</th>
<th>Commitment</th>
<th>Empowerment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Performance</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee Outcomes</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>.730**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>49</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Competency</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>.522**</td>
<td>.933**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>49</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Commitment</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>.522**</td>
<td>.933**</td>
<td>1.000**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>49</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Empowerment</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>.843**</td>
<td>.764**</td>
<td>.481**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>49</td>
<td>49</td>
<td>49</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed)

Source: Primary data (2023)

The results presented in Table 2 indicate the Pearson’s product movement correlation of the study variables. The results show that employee outcomes are statistically significantly correlated with firm performance ($r = 0.730; p-value (sig. 2 tailed) = 0.000 < 0.01$) implying a strong relationship between employee outcomes and firm performance. Further, the results also show individual employee outcomes; competency, commitment and empowerment ($r = 0.522, 0.522, 0.843; p-value (sig. 2 tailed) = 0.000 < 0.01$) respectively are statistically significantly correlated with firm performance.
Establishing the Mediation Effect of Employee Outcome on the Relation Between Green HRM Practices and Firm Performance.

The study used the four causal path advanced by Baron and Kenny (1986) to establish the mediation effect. Step one aimed at establishing the total effect of green human resource management practices on firm performance. The results of this step showed that there was an effect that was statistically significant with a regression coefficient (1.019).

\[ Y = 0.696 + 1.019X \]

Where;

\( Y \) = firm performance
\( X \) = Green HRM Practices.

The second step focused on determining whether green HRM practices influence employee outcomes (mediator variable). Green HRM practices were regressed against employee outcomes and the results showed that the fitted model linking green HRM practices to employee outcomes was statistically significant \((F = 50.211, p-value = 0.000 < 0.05)\) (regression coefficient = 0.733, \(p-value = 0.000 < 0.05\)) at a 5% level of significance. The following model was formulated:

\[ M = 1.173 + 0.733X \]

Where;

\( M \) = Employee outcomes

1.173 = y intercept (constant term). Estimate value of employee outcomes green HRM practices are zero.

0.733 = Estimate of the expected increase in employee outcomes in response to a unit increase green HRM practices.

\( X \) = Green HRM practices.

Step three involved establishing whether employee outcomes affect firm performance. The results of this step showed that there was an effect that was statistically significant with a regression coefficient (0.905). Based on the findings the regression model for prediction of performance of firms listed on the NSE is as follows:

\[ Y = 0.383 + 0.905M \]

Where;

\( Y \) = Firm performance.
0.383 = y intercept (constant term). Estimate value of firm performance when employee outcomes are zero.

0.905 = Estimated increase in firm performance in response to a unit increase in employee outcome level.

\( M = \) Employee outcomes.

Finally, the fourth step involved establishing whether employee outcomes mediate the relationship of green HRM practices and firm performance. This was undertaken by conducting a multiple regression analysis with green HRM practices and employee outcomes predicting the outcome of firm performance. According to Baron and Kenny (1986), for full mediation to be seen to take place, the effect should be zero. The regression results are presented in Table 3.

Table 3: Green Human Resource Management Practices - Firm Performance Mediation Results

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.834a</td>
<td>.696</td>
<td>.682</td>
<td>.25238</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>6.694</td>
<td>2</td>
<td>3.347</td>
<td>52.545</td>
<td>.000b</td>
</tr>
<tr>
<td>1</td>
<td>Residual</td>
<td>46</td>
<td>.064</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9.624</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-.405</td>
<td>.440</td>
<td>-.920</td>
<td>.362</td>
</tr>
<tr>
<td>GHRMP</td>
<td>.735</td>
<td>.148</td>
<td>.580</td>
<td>.000</td>
</tr>
<tr>
<td>Employee Outcomes</td>
<td>.388</td>
<td>.145</td>
<td>.313</td>
<td>.010</td>
</tr>
</tbody>
</table>
Predictors: (Constant), Employee Outcomes, Green HRM Practices (GHRMP)

Dependent Variable: Firm Performance

Source: Primary data (2023)

Results in Table 3 (a) reveal that the coefficient of determination ($R^2$) is 0.696. This means that 69.6% of the variation in firm performance can be explained by the predictor variables (employee outcomes and GHRMP). The results in Table 3 (b) indicate that employee outcomes and green human resource management practices significantly influenced firm performance at a 5% level of significance ($F = 52.545, p \text{-value} = 0.000 < 0.05$).

The results presented in Table 3 (c) show a constant, and regression coefficients of green HRM practices and employee outcomes. A regression coefficient of 0.735 implies that keeping other factors constant, a unit increase in green HRM practices increases firm performance by a factor of 0.735. This indicates that the indirect effect of X on Y was statistically significant at a 5% level of significance ($p \text{-value} = 0.000 < 0.05$).

Therefore, the first step shows that the total effect of X on Y (without M) was (1.019). The direct effect of X on Y after taking into account the mediation (indirect) effect of M was (0.735) as shown in Table 3 (c). In addition, the mediation effect is the total effect minus the direct effect ($1.019 - 0.735 = 0.284$). Hence, this reveals the presence of mediation. According to Baron and Kenny (1986) evidence for mediation is strongest when there is an indirect effect but no direct effect “full mediation”. For partial mediation, the indirect effect is less than the direct effect through the mediator. The study revealed that the indirect effect through employee outcomes was less than the direct effect, implying partial mediation. Therefore, the null hypothesis $H_0$ employee outcomes have no statistically significant mediating effect on the relationship between green HRM practices and the performance of firms listed on the NSE was rejected.

The conclusion arrived at in this hypothesis can be explained on several fronts. Firstly, regarding the concerns of this study, the findings shed some light on the mediation role of employee outcomes on the relationship between green HRM practices and firm performance. The results establish that employee outcomes have a statistically significant mediating effect on the relationship between green HRM practices and the performance of firms listed on the NSE. The results further reveal that employee outcomes partially mediate that relationship.

Secondly, the results of this study can be explained in theoretical literature using the Guest model of HRM by David Guest (1997) which holds that HRM practices affect performance indirectly through employee outcomes. The results have demonstrated the existence of this indirect relationship between green HRM practices and firm performance. Finally, these findings are in agreement with Shafaei et al. (2020), Suchitra et al. (2019), Yazid, et al. (2017) and Purcell et al. (2003) who have all identified that employee outcomes are an intermediate product of HRMP and an antecedent of firm performance. However, the findings contrast Sagwa (2015) and Ambula
(2016) who established that employee outcomes do not mediate the relationship between human resource management practices and firm performance.

CONCLUSION, RECOMMENDATIONS, FURTHER RESEARCH AREAS AND CONTRIBUTION.

In conclusion, the study sought to establish the mediating effect of employee outcomes on the relationship between green HRM practices and the performance of firms listed on the NSE. To determine this, it tested the null hypothesis. The results indicated the presence of a mediation effect (mediation effect equals total effect minus direct effect \( 1.019 - 0.735 = 0.284 \)), implying that employee outcomes partially mediate the relationship between green HRM practices and firm performance. Therefore, the null hypothesis that employee outcomes have no statistically significant mediating effect on the performance of firms listed on the NSE was rejected. The study recommends that firms should introduce green HRM practices to realize employee outcomes that engrave an eco-culture among employees linked to sustainable performance.

Based on the research findings and implications the study recommends; a study exploring the mediating role of other employment outcomes on the relationship between green HRM practices and firm performance. The study contributes to green HRM research theory and practice and offers a platform for further research by HR students, scholars, and researchers. Finally, the findings offer a guide to Human Resource Managers as they institute green HRM practices in their organisations.

REFERENCES


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