

Incentivizing Employee Pro-Environmental Behaviour: Harnessing the Potential of Green Rewards

Grace Mwamburi Odhiambo¹
Esther Wangithi Waiganjo²
Alice Nanjala Simiyu³

¹wawudagmwamburi@gmail.com

²ewaiganjo@jkuat.ac.ke

³asimiyu@apd.jkuat.ac.ke

¹<https://orcid.org/0000-0001-8878-154X>

²<https://orcid.org/0000-0001-8881-4743>

³<https://orcid.org/0000-0002-8410-2973>

^{1,2,3}School of Business and Entrepreneurship, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

ABSTRACT

The global ecosystem is experiencing swift degradation as a result of climate change propelled by human actions. This degradation has given rise to resource scarcity, a decline in biodiversity, and global warming. There is scientific consensus that climate change is anthropogenic (caused by humans) and that the power to mitigate it lies in human behaviour change. As the overseer of human resources in every organisation, the HRM function is facing mounting pressure to align its practices with environmental management in order to effectively address and reduce the organisation's carbon footprint. Consequently, this study aimed to investigate the influence of green employee rewards on employee pro-environmental behaviour in public universities in Kenya. The study developed a measurement model based on the Green Five Taxonomy to evaluate diverse employee green behaviours. It utilised multi-stage sampling, where the purposive sampling technique was used to select three public universities that embraced green HRM practices, followed by stratified random sampling to draw 123 participants from three strata: top management, middle-level management, and others (teaching and non-teaching). The research employed a correlational design, combining quantitative and qualitative methods, with data collected through online questionnaires. Results revealed a moderately strong, positive correlation between green employee rewards and employee pro-environmental behaviour ($r = .545, p < .01$), indicating a significant, positive link between the two. Additionally, ANOVA results showed that green employee rewards significantly and positively predict pro-environmental behaviour among employees ($F(1, 88) = 37.126, p < .001$). The study concluded that green employee rewards have a notable and positive influence on employee pro-environmental behaviour. However, it identified gaps in acknowledging and incentivizing environmental efforts among employees. Nonetheless, respondents still exhibited significant pro-environmental behaviour, even in the absence of explicit green rewards, an indication of employees' private green activism rooted in intrinsic motivation. The study made key recommendations among them: cash incentives, eco awards, eco-sponsorships, green recognition boards, and sustainable branded corporate gifts to nurture a sustainability culture.

Keywords: Climate Change, Employee Pro-Environmental Behaviour, Green Employee Rewards, Green Five Taxonomy, Green Human Resource Management Practices

I. INTRODUCTION

The life-supporting ecological systems crucial for human survival are currently facing a crisis, and human behaviour has been cited as the fundamental root cause (Amel et al., 2017). This behaviour had, by 2017, caused an approximately 1.0°C rise in global warming above pre-industrial levels, with a likelihood of reaching 1.5°C between 2030 and 2052, with catastrophic implications if not checked (IPCC, 2018). Climate change scientists unanimously agree that human actions are responsible for the crisis (Cook et al., 2014) and that the power to mitigate its effects lies within human behaviour change (Beckage et al., 2018; Walton, 2016; Heberlein, 2012; FAO, 2008). McCowan (2020) concurs that indeed, the roots of climate change are human, hence the need for a human solution. Africa seems to be the greatest casualty of climate change and has been classified as the world's most vulnerable region to the impacts of climate change due to the continent's poor adaptive capacity (Awojobi, 2017). The devastating impacts of climate change on the continent have significantly affected economic sectors, natural resources, ecosystems, livelihoods, and human health, primarily due to human maladaptive behaviour (Ifegbesan et al., 2022).

Organisations are increasingly under pressure from regulatory, normative, and social influences to adopt more

environmentally responsible practices (Norton, 2016). This pressure stems from their significant contributions to climate change through their operations, products, services, and interactions with various stakeholder groups (Ashraf & Singh, 2013). Nonetheless, it is essential to recognise that the effectiveness of organisations in addressing climate change depends on the actions of the individuals working within them (Bartlett, 2011; Dumitru, 2015). Consequently, the ability to mitigate climate change ultimately hinges on changing human behaviour (Robertson & Barling, 2015; Swim et al., 2011). Ability, Motivation, and Opportunity (AMO) theory demonstrates that employees perform well when motivated, often through the rewarding of appropriate behaviour (Rayner & Morgan, 2018). Renwick et al. (2013) also stress the need to align pro-environmental activities with employee rewards to facilitate the achievement of environmental goals, proposing a range of incentives, both monetary and non-monetary.

Universities, like other organisations, are complex entities with a wide array of stakeholders. They consume substantial resources for administrative tasks, educational materials, research initiatives, and community engagement (Findler et al., 2019), contributing significantly to climate change through the production of substantial carbon emissions, waste, and pollution (McCowan, 2020). Nevertheless, many of these institutions are struggling with the concept and implementation of "university greening" (Mtembu, 2017; Malay et al., 2013), reflecting the broader environmental challenges facing society today (Thondhlana & Hlatshwayo, 2018). Given that their role must be enacted through the people working within them, this study sought to investigate whether green rewards had any influence on employee pro-environmental behaviours among university staff in Kenya's public universities.

1.1 Research Objective

The study's objective was to investigate the influence of green employee rewards on employee pro-environmental behaviour in public universities in Kenya.

1.2 Research Hypothesis

To determine the influence of green employee rewards on employee pro-environmental behaviour in public universities in Kenya, the following was hypothesized:

H0: *Green employee rewards have no significant influence on employee pro-environmental behaviour in Public Universities in Kenya.*

II. LITERATURE REVIEW

2.1 Theoretical Review

The Ability, Motivation, and Opportunity (AMO) theory, originally proposed by Appelbaum in 2000, posits that the performance of an organization is influenced by three key factors: employees' ability, motivation, and the opportunity to participate. According to Unsworth and Tian (2018), the AMO framework views HRM systems as consisting of bundles of HRM practices aimed at enhancing employees' ability, motivation, and opportunities for effective performance. In the context of this framework, the "A" signifies ability and suggests that rigorous recruitment, selection, and training are among the HR practices that can enhance employees' skills. The "M" represents the bundle of practices responsible for motivating discretionary employee efforts and behaviours. Motivating environmentally responsible employees involves the establishment of company-wide environmental performance standards and conducting green information audits to gather valuable data on environmental performance. Notably, in line with a strategic reward management approach that aligns compensation practices with corporate objectives, there is growing evidence that organisations are designing reward systems to incentivize environmental management. Finally, the "O" encompasses opportunity-enhancing HR practices, such as involving employees in decision-making, promoting information-sharing, fostering teamwork, and offering flexible job design. These practices aim to provide motivation-driven opportunities that encourage employees to contribute to the achievement of organisational objectives.

In summary, the AMO theory can be seen as a facilitator of the HRM function by enhancing employees' abilities through the attraction and development of high-performing individuals, increasing their motivation and commitment through practices like contingent rewards and effective performance management, and providing employees with opportunities to engage in knowledge sharing and problem-solving activities through employee involvement programs. The theory suggests that employees excel when they possess the required skills and knowledge, are rewarded for their contributions, and receive the necessary support and facilitation (Rayner & Morgan, 2018).

2.2 Conceptual Framework

The independent variable was operationalized using three indicators conceptualising employee motivation through green rewards. Employee pro-environmental behaviour formed the dependent variable, which was operationalized with indicators depicting an array of pro-environmental behaviours. It is from this model that the study derived its conceptual framework, as presented in Fig. 1.

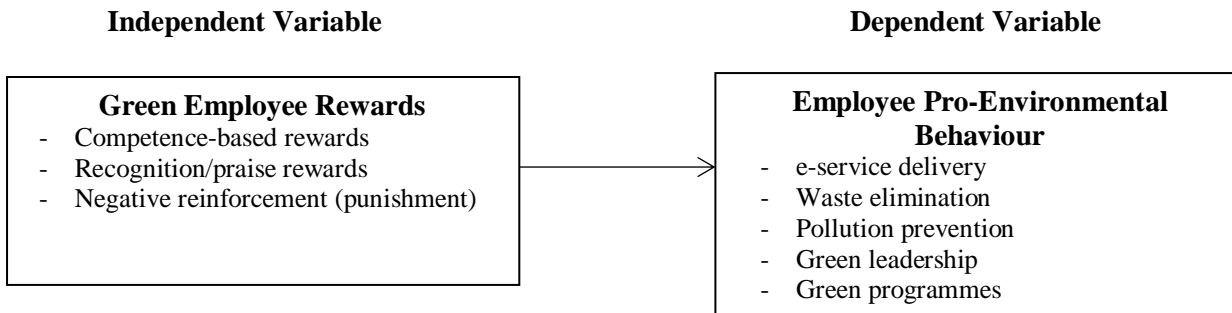


Figure 1
Conceptual Framework

2.3 Literature Review

2.3.1 Green Employee Rewards

AMO theory has indicated that employees will perform well when, among other things, they are motivated to do so, for instance, by rewarding appropriate behaviour (Rayner & Morgan, 2018). Dumont et al. (2017) agree on the organisation’s need to appropriately appraise employee green behaviour and link it to promotional opportunities and pay in order to encourage them to participate in green initiatives. Compensation is considered the most powerful means of linking employees’ interests to those of the organisation; hence, it is key to supporting environmental sustainability (ES) initiatives (Aburahma et al., 2020; Jabbour & De Sousa Jabbour, 2016). Jackson and Seo (2010) see compensation as the vehicle for establishing a “personal line of sight” that connects organisational and personal interests. Haque (2017) agrees that pay and rewards are deemed influential in aligning employees’ performance with corporate objectives. Renwick et al. (2013) concur that there is a need to align pro-environmental activities with employee rewards to facilitate the achievement of set environmental goals. They propose a range of incentives, both monetary and non-monetary.

As one of the GHRM practices, Green Employee Rewards (GRE) have been proposed in literature as being key to encouraging employee pro-environmental behaviour, hence the need to embed them into the organisation’s reward system. Mandip (2012) asserts that employees should be rewarded for changing behaviour if specific ES initiatives are to be realized. For instance, behaviours that may lead to waste reduction or successful green suggestions that would result in cost savings ought to be rewarded to propagate such behaviour. A range of pro-environmental activities aligned with employee rewards and compensation and aimed at promoting the achievement of green goals have been identified by Renwick et al. (2013). They include both incentives (monetary: bonuses, tax exemptions, and profit shares) and nonmonetary-based: recognition and praise, as well as disincentives (negative reinforcements) (Mandip, 2012; Zibarras & Coan, 2015).

Monetary-based environmental rewards may require incorporating a variable pay element into an organisation’s compensation system by linking pay to eco-performance. For instance, a portion of the cost savings resulting from a successfully implemented green suggestion should be shared with the employee or team responsible for the suggested idea. Performance-Related Pay (PRP) is a common phenomenon in some companies in the United States and Europe. US-based Du Pont, for instance, partly greened its executive compensation and bonus system for middle managers and senior officers, where up to 10% bonuses could be offered for any non-polluting product developed. 3M, on the other hand, rewards employees with environmentally-friendly suggestions that also increase the firm’s profitability (Mandip, 2012). Competence-based reward schemes may also be considered for frontline workers who acquire specific designated environmental competencies that can help the organisation mitigate against serious environmental accidents or illegal emissions (Renwick et al., 2013). However, as observed by Zibarras and Coan (2015), people are motivated by different ‘carrots and sticks’. The implication is that financial incentives, though effective, may not appeal to everyone, hence the need for non-financial rewards.

Research has shown that some employees may be more motivated by non-financial rewards such as recognition and praise (Aburahma et al., 2020). Nonmonetary rewards are believed to trigger the action of an activity for their inherent satisfaction, which is presumed to encourage employee behaviour change and promote environmental sustainability (Cairns et al., 2010; Lanzini, 2013; Young et al., 2015). Renwick et al. (2013) cite some US companies that use recognition-based rewards to motivate staff or teams that contribute towards reducing waste by giving them company-wide team excellence awards, opportunities to attend green events, paid vacations, time off, and gift certificates. Also suggested as pro-environmental incentives is encouraging carpooling among employees or rewarding workers with green points through an accrued point system for using alternative transportation (Mandip, 2012).

Literature suggests that it may also be necessary to incorporate negative reinforcement, such as suspensions or warnings, into a reward system to reprimand employees who fail to comply with set environmental standards. Some organisations have gone ahead to develop clear rules and regulations with reference to environmental protection, whose breach would result in disciplinary action (Arulrajah, 2015). According to McDonald (2015), negative incentives may be more effective than positive ones. Tang et al. (2018) agree that dis-benefits have a place in GHRM but are quick to add that extremely harsh negative warnings are likely to discourage employee support for environmental sustainability. Renwick et al. (2013) concur that they pose a danger in that workers may engage in self-protective behaviours by failing to disclose environmental problems at source. Bissing-Olson et al. (2013) add that they may also create a climate of negative affect that is likely to reduce levels of employee pro-environmental behaviour. Arulrajah and colleagues conclude that there would be a need to apply progressive discipline ranging from least to most severe based on the breach in question.

An employee green reward scheme would require management commitment. A study by Cantor et al. (2012) revealed that employees not only valued the presence of environmental rewards but also organisational support for ES initiatives. Dumont (2015) agrees that organisations have to explicitly endorse rewards to employees for demonstrating green behaviours; otherwise, the rewards would not accurately signal the organisation's intent. Unsworth (2015) observes that financial rewards tap into financial goals while recognition rewards tap into recognition and respect goals, hence the need to clearly determine an employee's goals for purposes of designing rewards around those goals.

2.3.2 Employee Pro-Environmental Behaviour

Pro-environmental behaviour (PEB) is defined by various scholars in different ways. Woo (2021) characterises it as actions and routines adopted by individuals to minimise their negative impact on the environment and promote sustainable practices. Ture and Ganesh (2014) view PEB as any activity, direct or indirect, undertaken by an employee to improve the natural environment at the workplace. Steg and Vlek (2009) define PEB as actions that harm the environment as little as possible or even benefit it. Kollmuss and Agyeman (2002) define PEB as behaviour that consciously seeks to minimise the negative impact of one's actions on the natural and built world. Mesmer-Magnus et al. (2012) see PEB as individual behaviours contributing to environmental sustainability. Examples of PEB include limiting energy and water consumption, minimising waste, recycling waste paper, using eco-friendly transportation, and more (Warrick, 2016). While much research on employee PEB has focused on single behaviours, such as resource re-use and recycling, Ones et al. (2018) propose a broader conceptualization. Their Green Five taxonomy encompasses a wider range of environmentally relevant employee behaviours, organised hierarchically into five meta-categories with subcategories.

The first meta-category, transforming behaviours, aims to adapt and change work products and processes for sustainability. Subcategories include creating sustainable products and processes (eco-innovation), embracing sustainable innovations, choosing responsible alternatives, and changing how work is done (Ones et al., 2018). Transforming behaviours are foundational to employee PEB and require adaptation and openness to change. Interface Company Limited provides an example of transforming behaviour. Concerns from customers prompted the founder, Ray Anderson, to initiate eco-friendly innovations to reduce greenhouse gas emissions and minimise the use of virgin materials (Luqmani, 2016; Kennedy et al., 2015). These innovations included closed-loop manufacturing, where post-consumer carpet tiles were recycled and reused, reducing landfill waste (Luqmani, 2016).

Conserving behaviours, another meta-category, focuses on promoting resource preservation by avoiding wastefulness. The "3 Rs" (reduce, reuse, recycle) are central to conserving behaviours. Reducing resource use is considered the most responsible for minimising environmental impact, followed by reusing and repurposing materials.

Recycling is the least desirable and a last resort. These behaviours conserve resources like paper, water, energy, and more. For instance, McDonald's increased cardboard recycling and energy savings through its "Planet Champion's" initiative (Sanyal & Haddock-Millar, 2018).

"Avoiding harm" behaviours target inhibiting negative environmental actions, reducing impact, and mitigating environmental damage. Subcategories include pollution prevention, monitoring environmental impacts, and strengthening ecosystems. Interface's "Net-Works" initiative, for example, involved collecting discarded fishing nets to clean up the environment and strengthen the ecosystem (Kennedy et al., 2015).

Green leadership behaviours aim to influence others to adopt sustainability practices. Subcategories include leading, encouraging, and supporting others in pro-environmental actions. Managing, facilitating, and coordinating behaviours involve providing resources and coordination for green behaviours. Educating and training behaviours enhance environmental knowledge, among others. These behaviours can be directed towards subordinates, co-workers, superiors, and external parties (Dilchert & Ones, 2012). Green programmes may arise from personal initiative and involve proactive, entrepreneurial, and potentially sacrificial behaviours. Subcategories include initiating programmes and policies, lobbying and activism (green voice), and putting environmental interests ahead of personal interests. Interface's "Mission Zero" is an example of a programme initiated to promote sustainability at the expense of profit (Luqmani, 2016).

This comprehensive Green Five taxonomy provides a more inclusive framework for understanding the range of environmentally relevant employee behaviours (Ones et al., 2018). It encompasses transforming, conserving, avoiding harm, green leadership, and green programme behaviours, illustrating the diversity and complexity of pro-environmental behaviour in the workplace.

III. METHODOLOGY

The study employed a correlational research design with the aim of examining the relationships between variables without intervention or manipulation (Stangor, 2011; Meissner et al., 2011). It utilised both quantitative and qualitative approaches. In terms of research philosophy, the study adopted a pragmatic approach, emphasising problem-solving and practical solutions. Multi-stage sampling was used to draw the sample. In the first stage, the purposive sampling technique was used to select three public universities that had embraced GHRM practices. Secondly, stratified random sampling was used to select respondents from the three (3) strata: top management, middle-level management, and others (teaching and non-teaching). Finally, a sample of 123 respondents was drawn using computer-generated random numbers from each stratum. The sample size of 123 respondents, as depicted in Table 1, was calculated using the Yamane (1967) formula. Moreover, stratification was applied within each university to ensure that samples represented various management levels and staff categories.

Table 1
Sample Size

University	Top Level Management	Middle Level Management	Others (Teaching & Non-Teaching Staff)	Total
University A	1	3	56	60
University B	1	3	50	54
University C	1	1	7	9
Total	3	7	113	123

The study employed an online questionnaire to gather primary data from 123 participants. The research instrument consisted of a combination of open-ended, closed-ended, and matrix questions, allowing for the collection of both qualitative and quantitative data. Matrix questions were employed to assess the degree to which respondents agreed or disagreed with a statement or series of statements. Responses were rated on a five-point scale, ranging from "strongly agree" to "strongly disagree," using a scale of 1–5, where 5 represented "strongly agree," 4 for "agree," 3 for "neither agree nor disagree," 2 for "disagree," and 1 for "strongly disagree." The utilisation of the Likert scale was considered appropriate for the study since it offers a multi-indicator measure, addressing the limitation of relying on a single indicator (Bryman & Bell, 2015).

IV. RESULTS & DISCUSSIONS

4.1 Response Rate

Out of the 123 online questionnaires distributed to respondents, 90 were successfully completed, indicating a response rate of 73.17%. This response rate was considered satisfactory as per the standards outlined by Mellahi and Harris (2016). In HRM and business management research, a response rate exceeding 50% is generally regarded as favourable. Therefore, achieving a response rate of 73.17% was considered a robust foundation for conducting data analysis and formulating conclusions.

4.2 Descriptive Findings

4.2.1 Descriptive Findings for Green Employee Rewards

The study employed six statements designed to capture participants' opinions and aimed to evaluate the effect of green employee rewards on employee pro-environmental behaviour. The results presented in Table 2 indicated that, across the surveyed groups, University A (mean =1.9444, SD =.4346, N = 36), University B (mean =2.0926, SD =.4918, N = 45), and University C (mean =2.4815, SD =.2693, N = 9), as well as the overall mean score of 2.0722 (SD =.4734, N = 90), the majority of respondents believed that green employee rewards were lacking in their respective institutions.

Table 2

Green Employee Rewards across Institutions

University	Mean	Others (Teaching & Non-Teaching Staff)	Total
University A	1.9444	36	.43461
University B	2.0926	45	.49180
University C	2.4815	9	.26932
Total	2.0722	90	.47342

The descriptive results of the study portray a common belief among respondents from the surveyed universities. Specifically, the majority of participants from University A, University B, and University C, as well as the overall group, believed that their respective institutions did not have green employee reward programmes in place. This suggests that, according to the respondents, there was a perceived absence of incentives or rewards within these universities to encourage pro-environmental behaviour among employees. The findings suggested that the institutions had yet to effectively develop their reward systems to achieve maximum results in influencing employee pro-environmental behaviour through rewards. Haque's (2017) research revealed that pay and rewards were considered influential in aligning employee performance with corporate objectives. The institutions did not seem to fully exploit the power of rewards, potentially hindering their ability to tap into their employees' full potential in promoting environmental sustainability. Renwick et al.'s (2013) study confirmed the need to align pro-environmental activities with employee rewards to facilitate the achievement of set environmental goals.

Results of the content analysis revealed that a significant majority (57%, 51) expressed their desire for the introduction of cash incentives since, at the time, they appeared to be non-existent. Additionally, 14% (13) proposed the implementation of annual eco awards to recognise employees or departments that exceeded environmental performance expectations. Another 13% (12) believed that eco-sponsorships for attending environmental-themed conferences and events would serve as a motivational factor (Nguyen-Van et al., 2021). Furthermore, 9% (8) suggested pictorial recognition of exemplary employees, such as featuring pro-environmental champions in monthly publications (for example, "employee of the month") or displaying the pictures of exceptional performers on a designated "Green Wall of Fame" frequently visited by members of the university community.

Drawing on the concept of social influence, which pertains to how individuals adapt their attitudes and behaviours in response to social environmental pressures, the idea of creating green "halls of fame" where pictures of exemplary environmental champions are displayed could inspire pro-environmental behaviours in others while reinforcing the behaviour of those recognised (social incentives). A study by Nguyen-Van and colleagues had previously indicated a positive and significant impact of external social influence on pro-environmental behaviours. Finally, 7% (6) of the respondents suggested the use of branded corporate gifts as rewards for environmental champions.

4.2.2 Descriptive Findings for Employee Pro-Environmental Behaviour

Table 3

Employee Pro-Environmental Behaviour across Institutions

University	Mean	Others (Teaching & Non-Teaching Staff)	Total
University A	2.9063	36	.46519
University B	3.4528	45	.48726
University C	3.6111	9	.26842
Total	3.2500	90	.53919

Results in Table 3 indicate that University C exhibited the highest mean score (mean = 3.61) for pro-environmental behaviour, signifying that, on average, its employees demonstrated the most significant pro-environmental behaviours among the three universities. Following closely was University B, with a mean score higher than that of University A, implying a greater level of pro-environmental behaviour compared to University A. Examining the standard deviations sheds light on the variability of pro-environmental behaviour scores among respondents within each university. University C displayed the smallest standard deviation, indicating that its employees' behaviours were more consistent and clustered around the mean score, showcasing a more uniform agreement with pro-environmental statements. In contrast, University B and University A had slightly higher standard deviations, suggesting a somewhat greater variation in pro-environmental behaviours among their employees compared to University C. On the whole, there was a prevailing tendency towards consensus with pro-environmental statements in the total sample. The study's findings therefore imply that employees can exhibit pro-environmental behaviour even in the absence of explicit green rewards. This inclination may be attributed to intrinsic motivation, driven by a genuine concern for the environment and ethical values. This observation resonates with the findings of a study by Blazejewski et al. (2018), which reported that interviewed respondents felt more rewarded by accomplishing a green project or receiving positive feedback on green issues from colleagues than they were by receiving financial rewards or formal acknowledgement. Nevertheless, University A needs to focus on enhancing and promoting more environmentally friendly practices among its workforce.

4.3 Inferential Results

The study sought to assess the magnitude and direction of the linear association between the predictor variable (GRE) and the response variable (EPEB). The calculation of Pearson's Correlation Coefficient unveiled a moderate and positive connection between GRE and EPEB, denoted by the correlation coefficient ($r = .545$, $p < .01$).

Table 4

Pearson Product-Moment Correlation between GRE and EPEB

University	EPEB	GRE
EPEB	1	
GRE	.545**	1
Sig.	.000	

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

A regression analysis was conducted to assess the influence of green employee rewards on employee pro-environmental behaviour. Results displayed in Table 5 showed an R^2 value of .297, suggesting that 29.7% of the variation in employee pro-environmental behaviour could be attributed to green employee rewards. These findings suggest that rewards anchored on green initiatives may have a positive effect on employee pro-environmental behaviour.

Table 5

Model Summary for Green Employee Rewards

+	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.545 ^a	.297	.289	.45474

a. Predictors: (Constant), Green Employee Rewards

An ANOVA was conducted to assess the relationship between employee pro-environmental behaviour (EPEB) and green employee rewards (GRE). The results of the regression analysis indicated a significant positive relationship, as evidenced by the F-statistic of 37.126 ($p < 0.001$). The analysis found that the predictor, green employee rewards, explained a substantial portion of the variance in employee pro-environmental behaviour. These findings led the study to reject the null hypothesis that there was no significant relationship between green employee rewards and employee pro-environmental behaviour, thereby accepting the alternative that there is a relationship between green employee rewards and employee pro-environmental behaviour in public universities in Kenya. It was concluded that implementing green employee rewards could have a measurable and positive effect on employees' pro-environmental behaviours.

Table 6*ANOVA between EPEB and GRE*

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	7.677	1	7.677	37.126	.000 ^b
Residual	18.198	88	.207		
Total	25.875	89			

a. Predictors Variable: Employee Pro-Environmental Behaviour, b. Predictors: (Constant), Green Employee Rewards

Further examination of the regression coefficients revealed that green employee rewards significantly predicted employee pro-environmental behaviour (EPEB) ($B = 0.620$, $t = 6.093$, $p .001$). This finding implied that an increase in green employee rewards corresponded to a parallel increase in employee pro-environmental behaviour. In other words, for each additional unit of GRE, there was an estimated increase of 0.620 units in EPEB, even after considering other variables within the model. This aligned with the results of a study by Jabbar and Abid (2014), which similarly found a significant predictive relationship between green rewards and pro-environmental behaviour ($\beta = 0.343$, p -value .05). These findings, however, differed from those of Ojo et al. (2022), which indicated that reward had no significant association with the pro-environmental behaviours of IT professionals ($\beta = 0.007$, p -value .10). From the results in Table 7, this study showed that GRE exerted a substantial and positive influence on EPEB. Consequently, these findings led to the rejection of the null hypothesis and the acceptance of the alternative.

Table 7*Regression Coefficients between GRE and EPEB*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.964	.216		9.079	.000
	Green Employee Rewards	.620	.102	.545	6.093	.000

a. Dependent Variable: Employee Pro-Environmental Behaviour

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The ANOVA results confirmed the significant and positive influence of green employee rewards on employee pro-environmental behaviour. Moreover, the study's examination of the surveyed institutions revealed evident shortcomings in recognising and stimulating employees' environmental initiatives. Specifically, the absence of salary increments for environmental management skills, rewards for innovative achievements, bonuses for green competencies, public commendation for conservation efforts, and certificates of excellence for environmental protection illuminated a dearth of formal acknowledgment and incentives for environmentally responsible actions and creative problem-solving. Additionally, the absence of punitive measures for inappropriate environmental behaviour may suggest a preference for constructive approaches to addressing environmental issues. Despite this, the overall results tended towards consensus with pro-environmental statements in the total sample. In light of the respondents' acknowledgment of the absence of green rewards in their institutions, these outcomes could be attributed to employees' private green activism, rooted in intrinsic motivation that propels them to engage in pro-environmental

workplace behaviour. The results emphasised the significant benefits an organisation can derive from employees' personal green activism when they find intrinsic reward in their environmentally responsible actions.

5.2 Recommendations

To nurture an environmentally responsible workplace culture, several key recommendations were put forth. Firstly, the implementation of a cash incentive programme was proposed to reward employees who consistently demonstrated eco-friendly behaviours. Additionally, an annual Eco Awards ceremony was suggested to celebrate and acknowledge exceptional commitment to environmental preservation. To extend this commitment beyond the workplace, the study advised the establishment of eco-sponsorship opportunities, allowing employees to support green initiatives in their communities, thereby showcasing the institutions' dedication to sustainability. A "green" recognition board highlighting employees who consistently engage in pro-environmental actions was also recommended, as it was deemed to serve as a powerful tool for motivating others. Finally, offering branded corporate gifts made from sustainable materials to employees was recommended as a means of encouraging eco-conscious practices amongst employees.

REFERENCES

- Aburahma, I. A. M., Amuna, Y. M. A., & Aqel, A. M. (2020). *The Relationship between GHRM Practices and Organizational Performance " Case study : Gaza University*, 4(4, April), 1–8.
- Amel, E., Manning, C., Scott, B., & Koger, S. (2017). Beyond the roots of human inaction: Fostering collective effort toward ecosystem conservation. In *Science*, 356, (6335), 275–279. <https://doi.org/10.1126/science.aal1931>
- Appelbaum, E. (2000). *Manufacturing Advantage: Why High-performance Work Systems Pay Off*. Cornell University Press.
- Arulrajah, A. A. (2015). Green Human Resource Management Practices : A Review Literature Review on Green HRM Practices. *Sri Lankan Journal of Human Resource Management*, 5(1), 1–16.
- Ashraf, S. F., & Singh, S. (2013). Green Hr : a Study of Practices and Initiatives in Learning Organization in Jeddah , Ksa. *International Journal Of Applied & Behavioural Sciences*, 3(1), 30–42.
- Awojobi, O. (2017). The impacts of climate change in africa: A review of the scientific literature. *Journal of International Academic Research for Multidisciplinary Impact Factor*, 5(December), 1–52.
- Bartlett, D. (2011). Introduction: The Psychology of sustainability in the workplace. In Dean Bartlett (Ed.), *Going Green: The Psychology of Sustainability in the Workplace* (Issue February, pp. 1–5). British Psychological Society.
- Beckage, B., Gross, L. J., Lacasse, K., Carr, E., Metcalf, S. S., Winter, J. M., Howe, P. D., Fefferman, N., Franck, T., Zia, A., Kinzig, A., & Hoffman, F. M. (2018). Linking models of human behaviour and climate alters projected climate change. *Nature Climate Change*, 8(1), 79–84. <https://doi.org/10.1038/s41558-017-0031-7>
- Bissing-Olson, M. J., Iyer, A., Fielding, K. S., & Zacher, H. (2013). Relationships between daily affect and pro-environmental behavior at work: The moderating role of pro-environmental attitude. *Journal of Organizational Behavior*, 34(2), 156–175. <https://doi.org/10.1002/job.1788>
- Blazejewski, S., Gräf, A., Buhl, A., & Dittmer, F. (2018). Enabling green spillover: How firms can benefit from employees' private green activism. In D. W. S. Renwick (Ed.), *Contemporary Developments in Green Human Resource Management Research: Towards Sustainability in Action?* (New York, pp. 73–94). Taylor & Francis. <https://doi.org/10.4324/9781315768953>
- Bryman, A., & Bell, E. (2015). *Business Research Methods* (4th ed.). Oxford Oxford University Press.
- Cairns, S., Newson, C., & Davis, A. (2010). Understanding successful workplace travel initiatives in the UK. *Transportation Research Part A: Policy and Practice*, 44(7), 473–494. <https://doi.org/10.1016/j.tra.2010.03.010>
- Cantor, D. E., Morrow, P. C., & Montabon, F. (2012). Engagement in Environmental Behaviors Among Supply Chain Management Employees: An Organizational Support Theoretical Perspective. *Journal of Supply Chain Management*, 48(3), 33–51. <https://doi.org/10.1111/j.1745-493X.2011.03257.x>
- Cook, B. I., Smerdon, J. E., Seager, R., & Coats, S. (2014). Global warming and 21st century drying. *Climate Dynamics*, 43(9–10), 2607–2627. <https://doi.org/10.1007/s00382-014-2075-y>
- Dilchert, S., & Ones, D. S. (2012). Environmental Sustainability in and of Organizations. *Industrial and Organizational Psychology*, 5(4), 503–511. <https://doi.org/10.1111/j.1754-9434.2012.01489.x>
- Dumitru, A. (2015). *Sustainable behaviour in the workplace : the role of universities in promoting pro-environmental*

- behaviour* (PhD Thesis, Universidade da Coruña).
- Dumont, J. (2015). *Green Human Resource Management and Employee Workplace Outcomes* (Thesis, University of South Australia).
- 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. <https://doi.org/10.1002/hrm.21792>
- Findler, F., Schönherr, N., Lozano, R., Reider, D., & Martinuzzi, A. (2019). The impacts of higher education institutions on sustainable development: A review and conceptualization. *International Journal of Sustainability in Higher Education, 20*(1), 23–38. <https://doi.org/10.1108/IJSHE-07-2017-0114>
- Haque, F. (2017). *The effects of board characteristics and sustainable compensation policy on carbon performance of UK firms*. *British Accounting Review*. <https://doi.org/10.1016/j.bar.2017.01.001>
- Heberlein, T. A. (2012). Navigating environmental attitudes. *Conservation Biology, 26*(4), 583–585. <https://doi.org/10.1111/j.1523-1739.2012.01892.x>
- Ifegbesan, A. P., Rampedi, I. T., Ogunyemi, B., & Modley, L. A. (2022). Predicting Pro-Environmental Behaviour amongst Citizens in African Countries: A Cross-National Study amongst Six African Countries. *Sustainability (Switzerland), 14*(15). <https://doi.org/10.3390/su14159311>
- IPCC. (2018). *Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to*. https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf
- Jabbar, M. H., & Abid, M. (2014). GHRM: Motivating Employees towards Organizational Environmental Performance. *MAGNT Research Report, 2*(4), 267–278. <https://doi.org/10.14831/1444-8939.2014/2-4/MAGNT.34>
- Jabbour, C. J. C., & De Sousa Jabbour, A. B. L. (2016). Green Human Resource Management and Green Supply Chain Management: Linking two emerging agendas. *Journal of Cleaner Production, 112*, 1824–1833. <https://doi.org/10.1016/j.jclepro.2015.01.052>
- Jackson, S. E., & Seo, J. (2010). The greening of strategic HRM scholarship. *Organisation Management Journal, 7*(4), 278–290. <https://doi.org/10.1057/omj.2010.37>
- Kennedy, S., Whiteman, G., & Williams, A. (2015). Sustainable Innovation at Interface: Workplace Pro-Environmental Behavior as a Collective Driver for Continuous. In J. L. Robertson & J. Barling (Eds.), *The Psychology of Green Organizations* (pp. 351–377). Oxford University Press.
- Killmann, W. (2008). Climate change and food security: A framework document. In *Food and Agriculture Organization of the United Nations*. <http://rstb.royalsocietypublishing.org/content/360/1463/2139.short>
- Kollmuss, A., & Agyeman, J. (2002). Mind the Gap. *Environmental Education Research, 8*(3), 239–260. <https://doi.org/10.1080/13504620220145401>
- Lanzini, P. (2013). The Effects of Rewards on Spillover in Environmental Behaviours: Monetary vs Praise Rewards. *Proceedings from The 50th Societas Ethica Annual ...*, 98, 163–177. <http://www.ep.liu.se/ecp/098/ecp13098.pdf#page=171>
- Luqmani, A. (2016). Sustainability and Innovation: The Case of a Global Carpet Manufacturing Company. *PQDT - Global*.
- Malay, D., Zhonghua, G., Deo, P., & Fengting, L. (2013). Greening universities toolkit: Transforming universities into Green and Sustainable Campuses: A Toolkit for Implementers. *United Nation Environment Programme, 1*, 93. [https://www.unenvironment.org/resources/toolkits-manuals-and-guides/greening-universities-toolkit-v20%0Ahttps://wedocs.unep.org/bitstream/handle/20.500.11822/11964/Greening University Toolkit V2.0.pdf](https://www.unenvironment.org/resources/toolkits-manuals-and-guides/greening-universities-toolkit-v20%0Ahttps://wedocs.unep.org/bitstream/handle/20.500.11822/11964/Greening%20University%20Toolkit%20V2.0.pdf)
- Mandip, G. (2012). Green HRM: People Management Commitment to Environmental Sustainability. *Research Journal of Recent Sciences, 1*, 244–252.
- McCowan, T. (2020). The impact of universities on climate change: a theoretical framework. (*Transforming Universities for a Changing Climate, Working Paper Series 1*). *Climate-U, UCL Institute of Education: London, UK*. (2020) , 55. <https://www.climate-uni.com/resources>
- McDonald, F. V. (2015). Developing an integrated conceptual framework of pro-environmental behavior in the workplace through synthesis of the current literature. *Administrative Sciences, 4*, 276–303. <https://doi.org/10.3390/admsci4030276>
- Mellahi, K., & Harris, L. C. (2016). Response Rates in Business and Management Research: An Overview of Current Practice and Suggestions for Future Direction. *British Journal of Management, 27*(2), 426–437. <https://doi.org/10.1111/1467-8551.12154>
- Mesmer-Magnus, J., Viswesvaran, C., & Wiernik, B. M. (2012). The Role of Commitment in Bridging the Gap

- Between Organizational Sustainability and Environmental Sustainability. *Managing Human Resources for Environmental Sustainability*, 155–186.
- Mtembu, V. N. (2017). *Green Human-Resource Management towards sustainable organizations: A case of KwaZulu-Natal higher education institutions. School of Management, IT and Governance College of Law and Management Studies* (Unpublished Thesis, University of Kwazulu-Natal).
- Nguyen-Van, P., Stenger, A., & Tiet, T. (2021). Social incentive factors in interventions promoting sustainable behaviors: A meta-analysis. *PLoS ONE*, 16(12 December). <https://doi.org/10.1371/journal.pone.0260932>
- Norton, T. A. (2016). *A multilevel perspective on employee green behaviour* (University of Queensland, Australia).
- Ojo, A. O., Tan, C. N. L., & Alias, M. (2022). Linking green HRM practices to environmental performance through pro-environment behaviour in the information technology sector. *Social Responsibility Journal*, 18(1), 1–18. <https://doi.org/10.1108/SRJ-12-2019-0403>
- Ones, D. S., Wiernik, B. M., Dilchert, S., & Klein, R. M. (2018). Multiple domains and categories of employee green behaviours: more than conservation. In V. K. Wells, D. Gregory-smith, & D. Manika (Eds.), *Research Handbook on Employee Pro-Environmental Behaviour* (pp. 13–38). Edward Elgar Publishing. <https://doi.org/10.4337/9781786432834>
- Rayner, J., & Morgan, D. (2018). An empirical study of ‘green’ workplace behaviours: ability, motivation and opportunity. *Asia Pacific Journal of Human Resources*, 56(1), 56–78. <https://doi.org/10.1111/1744-7941.12151>
- Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green Human Resource Management: A Review and Research Agenda*. *International Journal of Management Reviews*, 15(1), 1–14. <https://doi.org/10.1111/j.1468-2370.2011.00328.x>
- Robertson, J. L., & Barling, J. (2015). The role of leadership in promoting workplace pro-environmental behaviors. In *The psychology of green organizations*. (pp. 164–186). <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc11&NEWS=N&AN=2015-08003-008>
- Sanyal, C., & Haddock-Millar, J. (2018). Employee engagement in managing environmental performance: A case study of the planet champion initiative, McDonalds UK and Sweden. In D. W. S. Renwick (Ed.), *Contemporary Developments in Green Human Resource Management Research: Towards Sustainability in Action?* (pp. 39–56). Taylor & Francis. <https://doi.org/10.4324/9781315768953>
- Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology*, 29(3), 309–317. <https://doi.org/10.1016/j.jenvp.2008.10.004>
- Swim, J. K., Stern, P. C., Doherty, T. J., Clayton, S., Reser, J. P., Weber, E. U., Gifford, R., & Howard, G. S. (2011). Psychology’s Contributions to Understanding and Addressing Global Climate Change. *American Psychologist*, 66(4), 241–250. <https://doi.org/10.1037/a0023220>
- Thondhlana, G., & Hlatshwayo, T. N. (2018). Pro-environmental behaviour in student residences at Rhodes University, South Africa. *Sustainability (Switzerland)*, 10(8), 1–19. <https://doi.org/10.3390/su10082746>
- Unsworth, K. L., & Tian, A. (2018). Motivation and GHRM: Overcoming the paradox. In Douglas W.S. Renwick (Ed.), *Contemporary Developments in Green Human Resource Management Research: Towards Sustainability in Action?* (pp. 23–38). Taylor & Francis. <https://doi.org/10.4324/9781315768953>
- Walton, A. A. (2016). Positive organizational leadership and pro-environmental behavior: The phenomenon of institutional fossil fuel divestment. In *ProQuest Dissertations and Theses*. https://www.proquest.com/docview/1825281647?accountid=135034%0Ahttps://etd.ohiolink.edu/!etd.send_file?accession=antioch1464161682&disposition=inline
- Warrick, B. (2016). *Examining Employee Motivation , Environmental Systems , and Corporate Social Responsibility in Proenvironmental Behavior* (Doctoral Dissertation, Walden University).
- Woo, E. J. (2021). The Necessity of Environmental Education for Employee Green Behavior. *East Asian Journal of Business Economics (EAJBE)*, 9(4), 29–41.
- Yamane, T. (1967). *Statistics: an introductory analysis - 2nd ed.* In *TA - TT -*. Harper and Row New York. <https://doi.org/LK> - <https://worldcat.org/title/299725866>
- Young, W., Davis, M., McNeill, I. M., Malhotra, B., Russell, S., Unsworth, K., & Clegg, C. W. (2015). Changing Behaviour: Successful Environmental Programmes in the Workplace. *Business Strategy and the Environment*, 24(8), 689–703. <https://doi.org/10.1002/bse.1836>
- Zibarras, L. D., & Coan, P. (2015). HRM practices used to promote pro-environmental behavior: a UK survey. *International Journal of Human Resource Management*, 26(16), 2121–2142. <https://doi.org/10.1080/09585192.2014.972429>