Strategic Balance: Culture and Reward Systems as Drivers of Green Performance

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Abstract

This study examines the influence of behavioural control mechanisms, specifically organisational culture and reward systems, on green performance within Environmentally Sensitive Industries (ESIs). Grounded in Simons' Levers of Control framework, the research adopts a quantitative approach to explore how these behavioural controls contribute to sustainability outcomes. Data were collected through survey questionnaires from 142 respondents and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The results demonstrate that both organizational culture and reward systems significantly enhance green performance, underscoring complementary roles in fostering environmental responsibility. These findings offer valuable insights for managers seeking to strengthen sustainability practices by strategically aligning behavioural control systems with environmental objectives. The study further emphasizes the strategic role of management accounting in supporting sustainability-driven decision-making, highlighting how an integrated approach to cultural values and performance-based rewards can drive superior environmental outcomes. By advancing understanding of behavioral controls in ESIs, this research contributes to the broader discourse on management control systems (MCS) and sustainability, offering practical implications for organisations aiming to achieve competitive advantage through responsible environmental performance.

Keywords: behaviour controls; environmentally sensitive industries (ESIs); green performance; organisation culture; reward systems; sustainability

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INTRODUCTION

In today's dynamic business landscape, organisations that prioritise sustainability and green performance have experienced significant growth across various industries. Management practices are evolving beyond traditional control systems to incorporate behavioural factors that influence performance, particularly in response to increasing stakeholders' pressures. Top management plays a crucial role in cultivating green commitment and embedding a green culture to enhance organisational green performance (Gull et al., 2023; Subramanian & Suresh, 2023). Furthermore, stakeholders' awareness of the adverse consequences of environmental degradation has been increasing. Hence, organisations operating in environmentally sensitive industries (ESIs) should place greater emphasis on behavioural control mechanisms, specifically, organisational culture and reward systems. These controls are instrumental in shaping employee behaviour and aligning it with organisational sustainability objectives. Empirical evidence suggests that a strong, green-oriented culture, supported by well-designed reward systems, can significantly improve both environmental outcomes and overall organisational performance (Dess et al., 2023).

Organisations need to bring about cultural transformation to sustain competitive advantage in an evolving business environment (Aggarwal & Aggarwal, 2025). As a key control mechanism, organisational culture fosters the development of a sustainability-oriented mindset among employees. For ESIs, embedding sustainability strategies within organisational culture can motivate employees to engage in environmentally responsible behaviours such as energy conservation, waste reduction, and efficient resource utilisation. This integration creates a self-reinforcing cycle in which sustainability becomes integral to the organisation's identity. A positive culture characterised by high engagement, satisfaction, and morale enhances the effectiveness of organisational control systems (Qasim et al., 2023). This is explicitly evident in agile organisations adapting immediately to the changes in the business environments, underscoring the importance of culture alignment with strategic objectives (Mardian, 2024). Moreover, cultivating employee involvement in green initiatives strengthens their commitment to environmental preservation (Masri & Jaaron, 2017). Ultimately, greening organisational strategies can be achieved through greening people within the organisation (Berisha et al., 2025; Wehrmeyer, 1996).

Reward systems that integrate both monetary incentives (such as bonuses and promotions) and non-monetary incentives (such as recognition, awards, and career development opportunities) play a crucial role in fostering environmentally responsible behaviour among employees (Marrucci et al., 2024). In the context of ESIs, aligning rewards with specific sustainability targets can effectively promote the achievement of green objectives while reinforcing employees' sense of contribution to broader environmental goals. Green reward systems have been recognised as a vital mechanism in motivating employees to actively engage in environmental management and performance improvement (Rawashdeh, 2018). By recognising and rewarding behaviours that support strategic sustainability goals, organisations can enhance employee motivation and commitment and build a culture of shared accountability for environmental outcomes (Malmi and Brown 2008). In this sense, reward systems not only serve as tools for performance evaluation but also function as motivational levers that encourage employees to internalise environmental values and translate them into daily work practices.

The organisational culture and reward systems can be integrated in creating a coherent strategy that drives performance. When these elements are aligned, they send consistent signals to employees about expected behaviours and values. Nevertheless, misalignment can lead to confusion and disengagement, reducing overall effectiveness (Kaur et al., 2016). Thus, it suggests to the human resources in ESIs to ensure that cultural values are reflected in reward structures to promote desired behaviours across the organisation (Tourky et al., 2023). Together, these behavioural controls drive employee behaviour towards enhanced green performance. This aligns with Simons' (1995) Levers of Control framework, which views both culture and reward systems as mechanisms that shape how employees think and act in relation to sustainability. Flamholtz et al. (1985) also highlighted that control systems not only manage short-term behaviour but can serve as a source of long-term competitive advantage, increasingly valued by stakeholders. A well-designed control system provides clear expectations and feedback, helping employees understand what is required to achieve success. Mahmoudian et al. (2022) also claimed that an effective control system that emphasises sustainability can improve environmental outcomes and create a competitive edge. Organisations must manage environmental risks more effectively to reduce costs, enhance their reputation, and access new markets, aligning with market trends, meet regulatory requirements, and meet stakeholder expectations.

This study focuses on ESIs in Malaysia, as these industries have a potentially greater impact on the environment. Companies categorised in the ESIs are those involved in chemical and heavy manufacturing, construction, infrastructure, industrial products, plantation and properties, mining, oil & gas, and petroleum (Nazli Nik Ahmad & Salat Ahmed Haraf, 2013). This study focuses on four types of industries in ESIs, i.e., manufacturing, plantation, oil and gas, and construction industries. Investigating how these industries manage their environmental activities through behavioural control systems provides insights into their sustainability efforts.

This study aims to examine to what extent that culture and reward systems influence green performance, offering both theoretical and practical implications for managers and strategists. Specifically, this research hypothesised that organisational culture and reward systems may positively influence green performance. The remainder of this paper presents the literature review and hypothesis development, followed by the research design, results, discussion, and conclusion, along with suggestions for future research.

LITERATURE REVIEW

Theoretical Background

Simons (1995) introduced the Levers of Control (LoC) framework, which addresses the balance between control and flexibility in strategic management. This framework emphasises that organisations must navigate the tension between enforcing control and encouraging creativity. Diagnostic and boundary systems are used to monitor and limit behaviours, while belief and interactive systems foster innovation, strategic adjustments, and long-term alignment with organisational goals. In the context of this study, organisational culture aligns with the belief system, as it cultivates values that promote sustainability and motivate employees to view green practices as part of the company's purpose. On the other hand, reward systems are linked to the diagnostic

system, where employees are incentivised based on the achievement of key environmental performance metrics. These metrics, such as energy use, emissions reduction, and waste management efficiency, could serve as benchmarks for green performance, allowing diagnostic controls to effectively track progress and reward employees for meeting sustainability targets.

Culture and Green Performance

In today's competitive and increasingly complex business environment, the need for flexibility and rapid responsiveness has become more challenging. This highlights the importance of effective behavioural controls, with culture alignment playing a critical role in connecting individual and organisational goals (Dess et al., 2023). For organisations within ESIs, fostering a culture focused on "doing things right" can enhance efficiency, while reward systems act as reflections of job performance. Porter et al. (2016) highlighted that adopting sustainable practices fosters the development of a green organizational culture within firms.

Qasim et al. (2023) emphasise that beliefs, values, and environmental culture are significant in improving environmental performance. An organisation cannot truly thrive unless it motivates employees and instills values that promote a strong environmental culture, ultimately contributing to sustainable goals (Al Halbusi et al., 2022; Ismail et al., 2018). Cultivating a green culture takes time, as green behaviours emerge from a deeply embedded green mindset (Ahmed et al., 2021). As Kousar et al. (2022) claimed that employees who possess a sense of cultural, social, or moral responsibility toward the environment are likely to achieve better environmental outcomes. Besides, green culture has the capability of transforming the behavior of employees and focuses on implementation of green practices in the organization (Roscoe et al., 2019).

In the context of ESIs, promoting sustainable practices, green activities, and behaviour control is essential to nurturing an eco-friendly organisational culture (Agarwal & Kapoor, 2022). Employee attitudes and behaviours within the organisation can positively influence environmental performance and productivity (Berisha et al., 2025). The success of environmental performance in these industries relies heavily on environmentally committed employees, particularly those who engage in green committees and activities such as recycling (Umrani et al., 2022). Encouraging such participation not only strengthens employees' sense of passion and commitment, but also reinforce positive organisation values (Peng et al., 2021).

Moreover, corporate culture can only motivate employees when it genuinely reflects the organisation's mission, values, and goals, supported by all levels of leadership (Gull et al., 2023; Widener, 2006). In addition, employees' involvement in the decision-making process has been found to stimulate green behavior and significantly enhance the environmental performance (Mousa & Othman, 2020). Conversely, values and norms that are merely documented without being embraced by employees will fail to inspire meaningful change. Based on this discussion, the following hypothesis is proposed to assess whether these findings hold in the Malaysian ESI context:

  H1: There is a positive relationship between organisational culture and green performance.

Rewards and Green Performance

Reward systems serve as powerful levers to influence organisational culture and performance, especially in aligning efforts toward key objectives such as green performance (Henri & Journeault, 2010). By clearly defining eligibility and criteria for rewards, these systems provide a structured approach in guiding employee behaviour toward achieving environmental goals. When employees understand the specific metrics tied to rewards, they are more likely to focus their efforts on tasks that contribute directly to green performance, enhancing both individual motivation and organisational outcomes. Organisations that implement green reward systems, such as bonuses for reducing energy consumption or waste emissions, can effectively motivate employees to engage in environmentally friendly behaviours. Research indicates that such rewards are directly correlated with improved employee performance in sustainability initiatives (Paillé, et al., 2022; Aggarwal & Aggarwal, 2023).

Moreover, aligning reward systems with sustainability targets ensures that employees prioritise eco-friendly initiatives, thus reinforcing the organisation's broader environmental strategy (Malmi & Brown, 2008). Effective reward systems, whether monetary or non-monetary, can foster a positive working environment by ensuring fairness, transparency, and clarity, which are essential for maintaining high levels of engagement and productivity (Dube et al., 2023).

Research suggests that rewarding employees for their contributions to environmental outcomes encourages the adoption of sustainable practices (Marrucci et al., 2024). However, not all studies uniformly support this conclusion. For example, Marrucci et al. (2021) found that while rewards significantly influence economic performance, they may not always directly enhance environmental performance or contribute to a circular economy, potentially due to the different focuses of the organisation. Considering these insights, this study seeks to assess whether reward systems is effective drivers of green performance in the context of Malaysian ESIs. Thus, the following hypothesis is proposed:

   H2: There is a positive relationship between reward systems and green performance.

RESEARCH METHODOLOGY

Research design

This study employs a quantitative approach. A questionnaire survey was used as the tool for collecting primary data and was distributed to the heads of accounts or persons in charge responsible for environmental accounting practices within the organisations in the sample. This study collected data using self-administered questionnaires (i.e., delivered by hand, post and email). A pre-test of the survey instrument was conducted to allow the researcher to check the clarity of the directions to respondents and the flow of questions, thereby improving the comprehension of the instrument. Besides, with the aim of lessening the potential for errors and deficiencies, a pilot study was conducted over a representative convenience sample of 15 ESI companies.

Sampling Population and Size

The sampling frame of this study was derived from large-sized companies in the manufacturing, oil and gas, plantation, and construction industries. The size of the companies is determined based on sales turnover, which exceeds RM50 million or has 200 full-time employees or more for manufacturing; sales turnover which exceeds RM20 million or at least 75 full-time employees for oil & gas and plantation industries; and G7 companies with project values above RM10 million for the construction industry (CIDB 2017).

A total of 3886 companies were identified as the sampling frame. Using the G*Power software program, a minimum sample of 107 respondents was suggested to achieve a 95% statistical power, an R^2 value of 0.15, and a 5% chance of error probability (Hair et al., 2022). Based on the stratified random sampling method, a total of 972 questionnaires were distributed, 142 valid responses were received, and used for the data analysis.

Measurement of Variables

This study used a Likert scale questionnaire instrument developed by previous researchers. The questionnaire comprised three sections with a total of nine questions containing 28 items. Section A, consisting of six questions, focused on respondent profiles, ensuring their knowledge of the companies for reliable responses. Section B focuses on culture and reward controls. Five items were used to measure culture control. Three of the items were drawn from Widener (2006) to assess the 'beliefs system' construct. One item was adapted from Ouchi (1979) to assess the presence of clan control, and the remaining item was adopted from the construct formulated by Schein (2004) to assess if a company has a specific design to symbolise the importance of environmental values.

The assessment of culture control required respondents to indicate the extent to which the companies' beliefs, core values, mission, and vision are used to inspire and lead strategic decision-making. Companies need to establish values and feelings through rituals, ceremonies, and shared experience. They can use socialisation techniques to incorporate the interests of the people in the organisation. The formation of visible expressions, such as work-space design and dress codes, and the cultivation of a certain corporate culture will increase organisational performance. The Likert scale used ranged from 1 (strongly disagree) to 7 (strongly agree). A higher mean score indicates that culture control influences the environmental criteria in the organisation.

Meanwhile for the reward systems, there are consists of five items. Two items assessing the integration of environmental criteria in the reward systems were adapted from Henri and Journeault (2010), and the other three items were adapted from Flamholtz et al. (1985). To measure the reward systems, respondents were required to indicate the extent to which the company's reward scheme influences the control mechanism. The Likert scale used ranged from 1 (strongly disagree) to 7 (strongly agree). A higher average score explains that there is integration of environmental criteria in the reward scheme.

The green performance contains 12 items adapted from Wagner and Schaltegger

(2004). Respondents were required to specify to what point environmental management has contributed to the reduction of various impacts on the environment over the past 12 months. The items were assessed using the same Likert scale as the eco-capability items. A higher mean score for the 12 items indicates a better environmental performance.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) software version 29 was used for preliminary data analysis, including data screening and cleaning. The developed hypotheses were tested using the partial least squares of structural equation modelling (PLS-SEM). SmartPLS 4 (Ringle et al., 2024) was employed to perform the analysis from the model measurement validation to the structural model evaluation, including path analysis and a 10,000-bootstrapping approach (Hair et al., 2022).

RESULTS AND DISCUSSION

Respondents' Demographic Analysis

Table 1 presents the profiles of the respondents. The study's respondents comprised mainly managerial level personnel, with 54% serving as accountants, 9% were project managers, and 19% were senior management. Most respondents (73%) are experienced key personnel as they have worked at their companies for 6-10 years (24%), 11-15 years (21%), or 16 years and above (28%). Thus, this indicates a good sign of their capacity to provide more convincing feedback and reliable information to this study. In terms of industry representation, 32% from the manufacturing sector, 22% from oil and gas, 30% from construction, and 17% from the plantation industry. Most of the companies (56%) have been in their respective industry for at least 16 years. Meanwhile, 17% have been in the industry for 11-15 years, 19% have been operating for 6-10 years, and the remaining 8% have only been in the industry for 1-5 years. This distribution reflects the stability and maturity of the participating firms, supporting the reliability and credibility of the data collected for this study.

In terms of company size, 46% of the participating firms reported annual sales exceeding RM 51 million, while 11% recorded RM 31-50 million, 13% had RM 21-30 million, and 30% reported RM1-20 million, reflecting their industry experience and financial stability. Regarding employment size, most of the firms have substantial operational capacity and workforce strength.

Table 1: Respondents' Profile analysis

	Measures	Frequency (n=142)	Per cent (%)
Position	Accountant	76	54
	Project manager	13	9
	Senior management	27	19
	Others	26	18
Working Experience	1-5 years	38	27
	6-10 years	34	24
	11-15 years	30	21
	16 years above	40	28
Industry type	Manufacturing	45	32
	Oil & gas	31	22
	Construction	42	30
	Plantation	24	17
Industry experience	1-5 years	11	8
	6-10 years	27	19
	11-15 years	24	17
	16 years above	80	56
Sales	1-20 million	42	30
	21-30 million	19	13
	31-50 million	16	11
	51 million and above	65	46
No of employees	Less than 74	35	25
	Between 75-200	27	19
	Between 201-500	31	22
	Between 501-1000	19	13
	1001 and above	30	21

Measurements model assessment

The measurement model should meet all four PLS-SEM criteria: indicator reliability, internal consistency, convergent validity, and discriminant validity. The indicator reliability identifies item loadings of 0.708 or more to ensure that the item is reliable (Hair et al., 2022). As Table 2 demonstrates, all item loadings are above 0.708; thus, the result aligns with the threshold values.

Table 2 also shows that the composite reliability (CR) used to measure the internal consistency for the measurement model ranges from 0.926 to 0.950, indicating that they are above the cut-off of 0.70 (Hair et al., 2022). Finally, the third assessment for the measurement model, which is used to ascertain construct validity, is demonstrated by AVE ranging from 0.612 to 0.726. Similarly, the AVE values exceed the recommended value of 0.5 (Hair et al., 2022), demonstrating that, on average, all variables have explained more than half of the variability in their visible measurement items.

Table 2: Analysis of Validity and Reliability of Instruments for Culture and Reward Systems as a Driver of Green Performance

Construct	Items	Loadings	AVE	CR
Culture	Cult_a	0.838	0.714	0.926
	Cult_b	0.877		
	Cult_c	0.860		
	Cult_d	0.858		
	Cult_e	0.789		
Reward systems	Rwd_a	0.819	0.726	0.930
	Rwd_b	0.810		
	Rwd_c	0.900		
	Rwd_d	0.839		
	Rwd_e	0.890		
Green performance	Env_a	0.709	0.612	0.950
	Env_b	0.767		
	Env_c	0.738		
	Env_d	0.771		
	Env_e	0.812		
	Env_f	0.773		
	Env_g	0.832		
	Env_h	0.860		
	Env_i	0.808		
	Env_j	0.789		
	Env_k	0.806		
	Env_l	0.706		

The heterotrait-monotrait ratio of correlations (HTMT) was used to assess the discriminant validity based on the multitrait-multimethod matrix proposed by Henseler et al. (2015). The HTMT method calculates the actual correlation between two accurately measured constructs (Henseler et al., 2015). In the opinion of Henseler et al. (2015), a value of the HTMT exceeding 0.85 and 0.90 indicates the absence of discriminant validity. Table 3 in the 95% column is lower than the threshold values, indicating that all HTMT values are significantly lower than 0.85 and 0.90, respectively, thus signifying that discriminant validity has been met. Overall, the findings from the measurement model demonstrated that each measuring item demonstrates adequate reliability, as well as satisfactory convergent and discriminant validity.

Table 3: Analysis of Discriminant Validity using Heterotrait-Monotrait Ratio (HTMT) of the measurement model

	Original sample (O)	Sample means (M)	Bias	5.0%	95 %
Green Performance <-> Culture	0.575	0.575	0.000	0.451	0.679
Reward Systems <-> Culture	0.699	0.700	0.001	0.592	0.790
Reward Systems <-> Green Performance	0.530	0.529	0.000	0.399	0.638

Structural model assessment

The coefficient of determination (R^2), path coefficient (β), and effect size (f^2) are used to evaluate the study's structural model. This structural model determined the testing of the hypotheses. The findings of the path analysis and hypothesis testing are shown in Figure 2 and Table 4.

Table 4: Structural Model of Culture and Reward Systems as a Driver of Green Performance

		Std. Beta	t-value	Decision	f^2	VIF
H1	Culture -> Green Performance	0.369	3.848	Supported	0.051	1.695
H2	Reward Systems -> Green Performance	0.267	2.733	Supported	0.121	1.695

According to the suggestion of Hair et al. (2022), 10,000 re-samples were used to construct the path coefficients and the accompanying t-values using the SmartPLS bootstrapping method. The results revealed that culture significantly influences green performance ($\beta = 0.369$, t-value = 3.848) at a $p < 0.01$ significance level, suggesting that H1 is supported. In addition, H2, which theorised that reward systems significantly influence green performance ($\beta = 0.267$, t-value = 2.733), is also supported at a $p < 0.01$ significance level. Thus, H1 and H2 are supported.

The R² value of the model, as shown in Figure 2, indicates that 33.4% of the variance in green performance is explained by culture factors and reward systems. Table 4 displays the Variance Inflation Factor (VIF) values, all of which are below the recommended threshold of 5.00 (Hair et al., 2022), indicating that multicollinearity is not present in the model. This is important because high multicollinearity can make it difficult to determine the individual effect of each predictor variable on the dependent variable, leading to unreliable estimates. According to Cohen (1992), effect size (f^2) values of 0.35, 0.15, and 0.02 are considered large, medium, and small, respectively. The effect sizes (f^2) of culture and reward systems in this study are 0.051 and 0.121, indicating a small effect but meaningful influence on green performance.

Table 5: Analysis of predictive relevance (Q^2) of the model

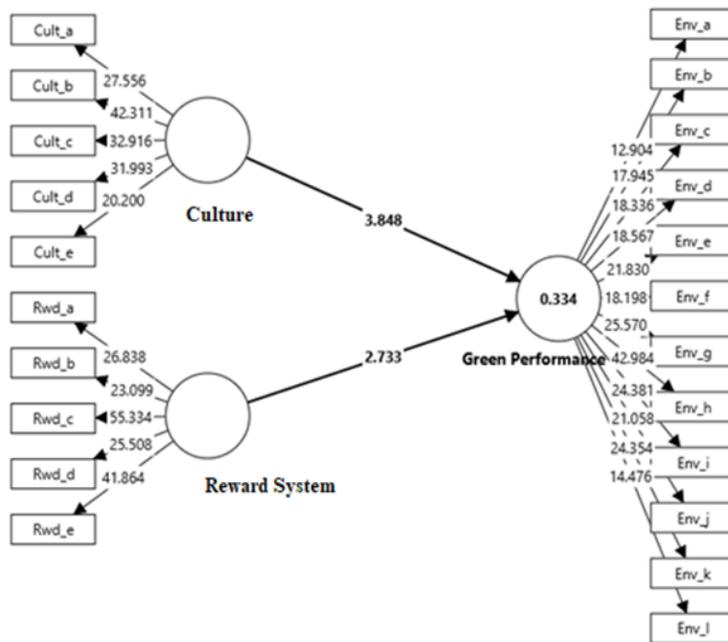|	Q²predict	PLS-SEM_RMSE	LM_RMSE
Env_a	0.139	2.021	2.137
Env_b	0.188	1.896	1.959
Env_c	0.236	1.999	2.098
Env_d	0.182	2.089	2.174
Env_e	0.092	2.153	2.253
Env_f	0.080	2.255	2.384
Env_g	0.236	1.934	2.039
Env_h	0.237	1.335	1.404
Env_i	0.248	1.970	2.058
Env_j	0.198	1.926	2.002
Env_k	0.191	1.956	2.038
Env_l	0.154	1.229	1.238

Figure 2: Structural model of Culture and Reward Systems as a Driver of Green Performance

The predictive power of the model can also be tested using a cross-validated redundancy measure called Q-Square (Q^2) (Geisser 1974; Stone 1974). If the value of Q^2 is greater than zero, it indicates that the model is predictive relevant. According to Hair et al. (2022), Q^2 values of 0.02, 0.15, and 0.35 indicate weak, moderate, and strong predictive relevance, respectively. Therefore, Q^2 is greater than 0.08, which indicates that the model has predictive relevance, and the value is mostly greater than 0.15, showing that the strength of this predictive relevance is moderate. A model with mostly moderate Q^2 values may indicate a good balance between complexity and predictive accuracy.

Table 5 compares the RMSE values for both models across various green performance items (such as reductions in energy use, emissions, or waste). The results show that the PLS-SEM model produces smaller RMSE values compared to the linear model (LM), meaning that the PLS-SEM predictions are more accurate and closer to the actual values for all items of green performance. These results suggest that the model has strong predictive power, making it more effective for modelling the relationships between variables in this context. The PLS-SEM analysis outperforms the LM benchmark model, implying that it captures the complexity and interrelations among the green performance indicators more effectively.

Discussion on Findings

The findings of this study demonstrate that organisational culture plays a crucial role in enhancing green performance within environmentally sustainable initiatives (ESIs).

This culture is expressed through clear communication of environmental values via the mission statement, raising employee awareness, and promoting an informal code of conduct that emphasises sustainability as a core element of the organisation's ethos. When environmental values are deeply embedded in the company's identity and effectively conveyed to employees, it fosters a sense of responsibility and alignment with green objectives (Kousar et al., 2022). Moreover, a mission statement that motivates and engages employees on environmental issues can establish a strong culture foundation, driving sustainable behaviours throughout all levels of the organisation (Subramanian & Suresh, 2023; Widener, 2006).

Green performance outcomes, assessed through indicators such as reductions in water and energy consumption, non-renewable resource use, and emissions, further validate the impact of culture on tangible environmental improvements (Wagner and Schaltegger, 2004). By imparting environmental values through cultural mechanisms such as symbolic designs (Schein, 2004), emphasising sustainability or informal codes of conduct, ESIs can influence daily operational practices, leading to reductions in waste, emissions, and other environmental harms. This culture alignment with green goals highlights that when employees are motivated by shared values, they are more likely to contribute significant sustainability outcomes (Qasim et al., 2023). Additionally, the green performance outcome can be achieved with the support of the top management's green commitment in fostering and cultivating the green culture within the organisation (Gull et al, 2023; Subramanian & Suresh, 2023). This is very important as an organisation that cultivates a sustainable environment will be the most successful in the future.

Besides, green performance is also measured through indicators such as reductions in water use and toxic inputs to minimise landscape damage and noise pollution, thus demonstrating the multifaceted impact of culture on environmental management. A strong sustainability-oriented culture can produce widespread benefits across various dimensions of environmental performance, not only addressing immediate operational concerns but also contributing to long-term environmental risk reduction, such as minimising the risk of severe accidents. These findings align with the broader literature suggesting that organisational culture serves as a critical behavioural control mechanism (Des et al., 2023; Gull et al., 2023; Schein, 2004), influencing how employees perceive and respond to sustainability issues (Covas, 2019). By embedding environmental values into the organisation's culture, firms can ensure that green performance is a sustained and integrated part of the organisation's competitive strategy, rather than a short-term initiative.

Meanwhile, for the second hypothesis of this study, the result also indicates that reward systems play a significant role in influencing green performance in ESIs. The reward items used to measure this construct highlight several key factors that contribute to environmentally responsible behaviour among employees. These include the integration of environmental indicators into the reward system, the equal importance of eco-performance alongside economic performance, and recognising the motivational impact of rewards in promoting environmental responsibility. A key insight from these findings is the need to align the reward system with environmental goals. When environmental performance is treated as equally important as economic performance in determining rewards, employees are more likely to prioritise eco-friendly practices. This approach not only reinforces the significance of

sustainability but also ensures that employees feel recognised for their contributions to the organisation's green goals (Malmi & Brown, 2008). Reward and recognition can increase job satisfaction and retention rates (Atan et al., 2021; Tirta & Enrika, 2020). A commitment to both economic and environmental performance fosters a culture of responsibility and innovation.

Furthermore, rewards that are explicitly linked to environmental performance have a direct motivational impact on employee behaviour (Paillé, et al., 2022; Rupa et al., 2023). By tying tangible rewards to environmental outcomes, such as reductions in energy use or waste emissions, organisations can effectively encourage employees to adopt sustainable practices. Employees see these rewards as motivating and effective in shaping their actions and outcomes related to environmental performance. The impact of reward systems on green performance is especially noticeable in the continuous commitment to environmental responsibility (Rupa et al., 2023). As the study indicates, employees are not only motivated to engage in eco-friendly actions but are also encouraged to maintain these behaviours over time. This suggests that a well-designed reward system can create a sustainable culture of environmental responsibility, where good environmental practices become embedded in the organisational routine.

Despite the positive influence of culture and reward systems on green performance, several challenges may constrain their effectiveness. Achieving a strategic balance between intrinsic cultural values and extrinsic reward mechanisms is inherently complex, as excessive reliance on one may weaken the other (Malmi & Brown, 2008). Additionally, issues such as resistance to change, insufficient managerial commitment, and resource limitations may hinder the institutionalization of sustainability-oriented practices (Ghose & Nair, 2021). Contextual factors, including regulatory inconsistencies and varying industry norms, also shape the extent to which these behaviour controls can effectively drive green outcomes. Recognising these challenges is essential for managers seeking to design robust and adaptable strategies that sustain environmental performance in the long term.

Theoretical and Practical Contribution

The study's findings contribute to management control systems (MCS) theory by demonstrating how the strategic alignment of organisational culture and reward systems can drive green performance, extending traditional MCS literature beyond economic outcomes to include sustainability goals. It highlights culture as an active driver of environmentally responsible behaviour and shows how behaviour controls jointly influence long-term environmental performance.

Practically, the study's findings provide actionable insight for managers and business strategies focusing on embedding sustainable culture into organisational practices. Aligning organisational culture with environmental values can foster stronger employee engagement and commitment toward sustainability goals. Companies can design targeted interventions such as sustainability-oriented training programs, sustainability-linked incentives, and recognition schemes, and integrate these values into daily operations. Managers should view culture and reward systems as complementary tools that reinforce green behaviour, enhance employee motivation, promote environmentally responsible actions, and strengthen organisational

competitiveness in sustainability-conscious markets.

CONCLUSIONS, LIMITATIONS, AND FUTURE STUDIES

This study examined the influence of culture and reward systems on green performance in ESIs, highlighting the strategic balance required to drive sustainability initiatives. The findings demonstrate that both organisational culture and reward systems significantly impact green performance, offering critical insights for managers and strategists in ESIs aiming to enhance their company's environmental outcomes. Embedding environmental values into the company culture helps make sustainability a key part of the organisation's identity. When employees share these values, they are more motivated to contribute to green initiatives, creating a positive cycle of sustainable behaviour. Additionally, aligning culture and reward systems with green performance and giving equal importance to both environmental and economic outcomes further drives employees to adopt and maintain environmentally responsible actions. By balancing these two behavioural control mechanisms, culture and rewards, ESIs can create a comprehensive framework that fosters environmental responsibility and improves green performance. This strategic approach not only leads to better environmental outcomes but also strengthens the company's competitive edge in a market that increasingly values sustainability.

This study offers valuable insights into the relationship between culture, rewards and green performance; however, several limitations should be acknowledged. First, the findings are based on a sample drawn exclusively from the Malaysian ESIs industry, which may limit the generalisability of the results to other national or regional contexts with differing regulatory frameworks, cultural norms and environmental priorities. Second, the cross-sectional research design limits the ability to establish causality, as it captures organisational behaviour and performance at a single point in time rather than observing changes over time. It is suggested that longitudinal studies could be more relevant for future research as they could provide deeper insights into the dynamic evolution of strategic control and its long-term impact on sustainability outcomes. Finally, despite careful attention being given to the measurement instruments, the use of self-reported survey data carries the risk of measurement error and social desirability bias, particularly on sensitive topics like environmental responsibility. Addressing these limitations could help to strengthen the validity, reliability and applicability of the findings across broader contexts in future research.

Future studies may explore additional behavioural factors, such as leadership styles or employee engagement, that may influence green performance. Examining how transformational or ethical leadership fosters an environmentally oriented culture may offer deeper insight into the mechanism linking behaviour control and sustainability outcomes. Future research could also investigate the mediating or moderating roles of employee engagement in translating cultural and reward-based control into tangible environmental achievements. Beyond behavioural aspects, the integration of technological advancements such as environmental performance metrics and an AI-driven feedback system could offer opportunities to strengthen the alignment between culture, reward, and sustainability targets.

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