GREEN CORPORATE GOVERNANCE, REGULATORY COMPLIANCE AND ENVIRONMENTAL RESPONSIBILITY OF PEZA COMPANIES FOR CALAMBA'S SUSTAINABLE CITY VISION

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ABSTRACT

The study analyzed the relationship between green corporate governance, environmental compliance, and corporate responsibility. It offered insights into how these elements are interrelated and how they collectively influence Calamba's vision of becoming sustainable city. It examined the relationship between green corporate governance, regulatory compliance, and environmental responsibility through a descriptive-correlational study involving 49 pollution control officers of Philippine Economic Zone Enterprise (PEZA) companies, with a total population of 167. The key findings indicated that green corporate governance practices yielded a" strongly agree" with an average weighted mean of 3.46, the level of regulatory compliance resulted to a "very high" with an average weighted mean of 3.37, while the environmental responsibility of the selected PEZA companies yielded a "strongly agree" with an average weighted mean of 3.40. There was a significant relationship between green corporate governance practices and regulatory compliance, while the relationship between the green corporate governance and environmental responsibilities were found to have a significant relationship. Moreover, there was also a significant relationship between regulatory compliance and environmental responsibilities of selected PEZA companies. Green corporate governance practices along process accounted for 86.4% (F=42.237; t=3.346) of the variability of the dependent variable, environmental responsibility. Results also showed that for every one -unit increase in green corporate governance practices along process, there is a 0.357 increase in the environmental responsibility.

Keywords: Governance, green corporate governance, environmental compliance, corporate responsibility, environmental responsibility, sustainability

INTRODUCTION AND RELATED LITERATURE

Industrialization has significant environmental consequences, especially with air and water pollution (Wang et al., 2021). Escalating industrial output has augmented greenhouse gas emissions, exacerbating climate change and detrimental effects on ecosystems and human health. The IPCC (2020) indicates that industries account for over 40% of global carbon emissions, predominantly from the industrial, energy, and transportation sectors, resulting in increased temperatures, elevated sea levels, and extreme weather phenomena. Corporate Governance (CG) emerged to enhance accountability and transparency in large organizations, as seen in the UK's Cadbury Report (1992) and the U.S. Sarbanes-Oxley Act (2002), which strengthened board accountability and financial integrity. Green Corporate Governance (GCG) extends traditional governance by embedding sustainability into corporate strategies

to mitigate environmental degradation and climate risks (Timoshenko et al., 2020). Unlike Corporate Social Responsibility (CSR), Green Corporate Governance (GCG) integrates environmental responsibility into business operations. In the Philippines, the Philippine Economic Zone Authority (PEZA) promotes investment in special economic zones, where GCG is essential to aligning corporate sustainability with international frameworks like the United Nations Sustainable Development Goals (SDGs) (PEZA, 2022). The Purpose, People, Process, and Performance dimensions of GCG are critical for fostering sustainability in PEZA enterprises. Purpose aligns corporate vision with sustainability goals, attracting environmentally conscious investors (Chengbo et al., 2023). People emphasize leadership commitment and organizational culture, where transformational leadership drives sustainable initiatives (Zaid & Yaqub, 2024). Process entails structured systems such as Environmental Management Systems (EMS) and ISO 14001 certification to enhance resource efficiency and compliance (Todaro et al., 2019). Performance focuses on sustainability reporting and governance mechanisms, including board diversity and ESG committees, which improve environmental accountability and CSR transparency (Lu & Wang, 2021). By integrating these principles, GCG enhances corporate accountability, reinforces environmental responsibility, and ensures the long-term sustainability of economic zones.

Green Corporate Governance (GCG) integrates sustainability into corporate strategies, aligning with legal frameworks and international standards to ensure environmental, social, and governance (ESG) compliance. In the Philippines, key legislation such as the Clean Air Act, Clean Water Act, Ecological Solid Waste Management Act, and Toxic Substances and Hazardous and Nuclear Wastes Control Act provide regulatory foundations for environmental sustainability (Coracero et al., 2021). Compliance is reinforced through governance codes and mandatory ESG disclosures (Aurellano, 2023). Effective compliance management requires internal controls, continuous monitoring, and periodic evaluation to mitigate risks and ensure regulatory adherence (Ni, 2023). Corporate governance enhances compliance by promoting transparency, accountability, and strategic decision-making, which reduce legal risks and foster stakeholder trust (Nour et al., 2020; Darmansyah et al., 2024). Strong environmental regulations drive corporate sustainability, compelling businesses to adopt green technologies and modify operations to comply with legal requirements (Cai et al., 2020; Trevlopoulos et al., 2021). In waste management, the Ecological Solid Waste Management Act addresses the increasing volume of waste, particularly plastics, necessitating improved law enforcement and community participation (Cariaso, 2023; Dela Cruz, 2023). Challenges in implementation, such as lack of incentives and monitoring, hinder full compliance (Camarillo & Bellotindos, 2021).

Similarly, the Philippine Clean Water Act protects water resources from pollution, though public awareness alone is insufficient for effective action (De Jesus et al., 2022; Mendiola, 2024). Air pollution remains a critical issue, with studies emphasizing the need for stronger enforcement of the Philippine Clean Air Act and a transition to renewable energy and low-carbon transportation (Tantengco& Guinto, 2022; Romarate et al., 2024). Additionally, e-waste poses environmental and health risks, necessitating stricter management strategies (Rautela et al., 2021; Herat, 2020). The Department of Environment and Natural Resources (DENR) plays a vital role in regulating hazardous chemicals through Chemical Control Orders to protect public health and the environment (DENR, 2019). Strengthening governance mechanisms, regulatory compliance, and environmental responsibility is essential for sustainable corporate operations and long-term economic and ecological stability.
PEZA companies implement various environmental initiatives to foster sustainability, reduce carbon footprints, and enhance corporate responsibility, aligning with the "triple bottom line"

of people, planet, and profit (PEZA, 2022; Wang & Li, 2024). While corporate environmental responsibility (CER) is linked to reputation and long-term profitability, its financial impact remains debated (Naidoo & Gasparatos, 2018). PEZA enforces strict environmental policies, including compliance with geohazard regulations and Environmental Compliance Certificates (ECC) from the DENR (Plaza, 2020), and promotes sustainable practices through incentives like tax-free importation of solar panels (PEZA, 2022). Companies investing in renewable energy and eco-friendly materials enhance operational efficiency and financial performance (Li & Yu, 2021), while industry-specific strategies such as carbon offset initiatives and supply chain sustainability further reinforce CER (Tiyasa & Datta, 2024). PEZA's 2024 sustainability forum and collaborations with First Gen Corp. and Schneider Electric support renewable energy adoption and digital sustainability solutions (DTI, 2024; Talavera, 2023). Compliance monitoring is strengthened through the PEZA Information System for Compliance and Enforcement (PISCES), integrating waste management, chemical importation, and environmental reporting (PEZA, 2022). Sustainability reporting has gained traction, enhancing transparency and regulatory compliance, though excessive disclosure may invite scrutiny (Shad et al., 2019; Wang & Li, 2024). Ultimately, corporate environmental responsibility fosters competitiveness, innovation, and financial stability while reinforcing sustainability, with green governance and CSR programs enhancing employee engagement and public image (Soewarno & Tjahjadi, 2020; Kong et al., 2021; El-Mallah et al., 2019). PEZA's partnerships with the Department of Energy further integrate green technologies, ensuring long-term environmental resilience (Daily Tribune, 2023).

Despite the existing literatures and studies, several gaps were identified. One of these is that no research focused on green corporate governance, regulatory compliance and environmental responsibility of PEZA companies in the City of Calamba, Philippines. The study analyzed green corporate governance, regulatory compliance, and environmental responsibility among selected PEZA companies in Calamba City. It focused on the practices implemented in alignment with Calamba's Sustainable City Vision, focusing on purpose, people, process, and performance. This study also assessed regulatory compliance with key environmental laws, such as the Ecological Solid Waste Management Act of 2000, the Philippine Clean Water Act of 2004, the Philippine Clean Air Act of 2009, and the Toxic Substances, Hazardous, and Nuclear Waste Control Act of 1990. Additionally, it evaluated the environmental responsibility of these companies, analyzing their environmental policies, planning processes, implementation, and performance evaluation. The findings suggested strategic measures to strengthen the synergy between corporate governance, regulatory compliance, and environmental policies, planning processes, implementation, and performance evaluation. The findings suggested strategic measures to strengthen the synergy between corporate governance, regulatory compliance, environmental responsibility within PEZA companies.

The study sought to evaluate the green corporate governance, regulatory compliance and environmental responsibilities of PEZA enterprises situated in Calamba City. The study's respondents consisted of key managers and pollution control officers accountable for the execution and adherence to environmental rules.

METHODOLOGY

The study employed the descriptive-correlational method of research with the help of survey questionnaires as the main source of data. Through this design, this study gave emphasis on the relationships between green corporate governance, regulatory compliance, and

environmental responsibilities of the PEZA Companies in Calamba City Laguna. The population comprised 167 Pollution control officers, with final sample of 49 PCOs from selected PEZA locators, determined using purposive sampling. The sample size was computed via the Raosoft calculator, ensuring a 90% confidence level and a 10% margin of error. These officers were specifically chosen for their direct role in implementing corporate governance practices, ensuring regulatory compliance, and managing environmental initiatives within their organizations.

The instrument was in the form of a four-point (4-point) scale to rate and promote convenience in answering the questions. The instrument was divided into three (3) parts. Part 1 dealt with green corporate governance practices of PEZA companies in Calamba City Laguna. Part 2 covered the level of regulatory compliance of PEZA companies in Calamba City laguna. Finally, Part 3 dealt with environmental responsibilities of PEZA companies in Calamba City Laguna. The content and appropriateness of the questionnaire were validated through consultation with the thesis adviser, ensuring its alignment with the study's objectives. To further ensure relevance, opinions from experts in the fields of business, research and statistics. Results of reliability test using Cronbach's Alpha Test included the following: for green corporate governance practices: .965, for regulatory compliance: .952 and for environmental responsibility: .979. The data gathered were tabulated and subjected to statistical treatment accordingly. The subsequent analysis and interpretation of the data aimed to derive meaningful insights and conclusions relevant to the objectives of the study.

RESULT AND DISCUSSION

The study assessed green corporate governance, regulatory compliance, and environmental responsibility among PEZA companies in Calamba City, guided by the problem statement for systematic analysis and interpretation.

Table 1
Composite Table of the Green Corporate Governance Practices of Selected PEZA companies for Calamba's Sustainable City Vision

Indicator	Weighted Mean	Verbal Interpretation	Rank
1. Purpose	3.61	Strongly Agree	1
2. People	3.48	Strongly Agree	2
3. Process	3.46	Strongly Agree	3
4. Performance	3.31	Strongly Agree	4
Overall Weighted Mean	3.46	Strongly Agree	

As presented in table 1, the green corporate governance practices of selected PEZA companies were rated as "strongly agree", with an average weighted mean of 3.46, indicating their active role in governance to support Calama City's sustainability vision. Best practices in green corporate governance involve strategic efforts across key areas: aligning environmental strategies with both global and local standards (purpose), appointing dedicated personnel for implementation (people), ensuring transparency in environmental goals (process), and fostering a culture of sustainability among employees (performance).

The result of the study is the same with the studies of Talal (2022) and Chengbo et al. (2023) which demonstrate that integrating sustainability frameworks is a fundamental strategic

component. By aligning objectives with international standards such as the United Nations Sustainable Development Goals (SDGs), companies enhance their global reputation, attract investors, and benefit the environment. Similarly, Zaid and Yaqub (2024) and Gutterman (2023) argue that transformational leadership is critical for driving sustainability, as it fosters a cohesive and motivated workforce. In addition, Zala (2021) and Huo (2023) contend that responsible, visionary leadership is essential for establishing a robust sustainability vision and mission, which in turn promotes teamwork, sustainable performance, and long-term competitive advantage.

Table 2
Composite Table of the Level of Regulatory Compliance of Selected PEZA companies for Calamba's Sustainable City Vision

Indicator	Weighted Mean	Verbal Interpretation	Rank
1. Ecological Solid Waste Management of 2000	3.45	Very High	1
2. Philippine Clean Water Act of 2004	3.40	Very High	2
3. Philippine Clean Air Act of 2009	3.26	Very High	4
4. Toxic Substances, Hazardous, and nuclear waste control act of 1990	3.39	Very High	3
Overall Weighted Mean	3.37	Very High	

As presented in table 2, it can be drawn from the data that the indicators concerning the level of regulatory compliance of selected PEZA Companies was revealed to be "very high" with an average weighted mean of 3.37.This means that the regulatory compliance of selected PEZA companies is a significant component of the sustainability efforts and plays a vital role in achieving Calamba City's vision. The company's level of regulatory compliance with the Ecological Solid Waste Management Act of 2000 is notable. It has implemented a system for segregating waste at the source, as mandated by the Act, and actively pursues initiatives to reduce waste generation and promote recycling practices. Regarding the Philippine Clean Water Act of 2004, the company regularly monitors and reports the quality of water discharges, ensuring adherence to the prescribed standards. Similarly, under the Philippine Clean Air Act of 2009, the company has installed efficient emission control systems to achieve compliance with air quality regulations. Finally, in alignment with the Toxic Substances, Hazardous, and Nuclear Waste Control Act of 1990, the company maintains a robust inventory and reporting system for all hazardous substances utilized or produced, demonstrative its commitment to responsible environmental management.

The study's findings are aligned with the studies of Dela Cruz 2023, and Camarillo and Bellotindos (2021) which discussed the importance of collaboration with the LGUs pertaining to solid waste management, to ensure compliance, the collaborations help address the gaps in information dissemination, enforcement, and community participation, it also supports the implementation of incentives for compliance and penalties for non-compliance. According to Alimen et al. (2020), the understanding and awareness of the public on environmental issues has a significant role in addressing and reducing air pollution. Thus, Rommarate et al. (2024) suggest that the key government agencies responsible for air quality management enhance their initiatives to inform the public, this may be a form of educational programs where it could help individual to take action.

Table 3
Composite Table of the Environmental Responsibility of Selected PEZA companies for Calamba's Sustainable City Vision

Indicator	Weighted Mean	Verbal Interpretation	Rank
1. Environmental Policy	3.44	Strongly Agree	1
2. Planning	3.41	Strongly Agree	3
3. Implementation and Operations	3.34	Strongly Agree	5
4. Performance Evaluation	3.42	Strongly Agree	2
5. Continual Improvement	3.38	Strongly Agree	4
Overall Weighted Mean	3.40	Strongly Agree	

As presented in table 3, it can be drawn from the data that the composite table of the environmental responsibility of selected PEZA companies was revealed to be "strongly agree" in environmental policy with an average weighted mean of 3.40.This means that the selected PEZA companies demonstrate environmental responsibility by adhering to environmental policies, engaging in planning, implementing sustainable operations, conducting performance evaluations, and continuously improving their environmental practices. Best practices in environmental responsibility involve key areas: maintaining policies aligned with regulations, setting long-term sustainable objectives, integrating environmental risks into management plans, implementing effective environmental practices, conducting regular performance evaluations, and fostering continuous improvement through innovation and leadership commitment.

The study of Naidoo and Gasparatos (2018) that show that environmental responsibility experience increased customer loyalty and corporate reputation, which in turn contribute to long-term profitability, aligned with the findings of the study above. Also, from a product standpoint, corporate environmental responsibility encompasses the creation of sustainable products and the mitigation of ecological effect attributed to current products, from a business policy perspective, companies must formulate new shared values, and integrate the "triple bottom line" (people, planet, and profit) into their corporate strategies, and underscores their importance for corporate advancement.

Table 4
Relationship between the Green Corporate Governance Practices and Level of Regulatory Compliance of Selected PEZA companies for Calamba's Sustainable City Vision

Green Corporate Governance Practices	**Regulatory Compliance**			
	Ecological Solid Waste Management of 2000	Philippine Clean Water Act of 2004	Philippine Clean Air Act of 2009	Toxic Substances, Hazardous, and nuclear waste control act of 1990
Purpose	r=0.617** Moderate correlation p=0.000	r=0.597** Moderate correlation p=0.000	r=0.619** Moderate correlation p=0.000	r=0.645** Moderate correlation p=0.000
People	r=0.627** Moderate	r=0.587** Moderate	r=0.638** Moderate	r=0.688** Moderate

	correlation p=0.000	correlation p=0.000	correlation p=0.000	correlation p=0.000
Process	r=0.761** Moderate correlation p=0.000	r=0.646** Moderate correlation p=0.000	r=0.656** Moderate correlation p=0.000	r=0.717** Moderate correlation p=0.000
Performance	r=0.827** High correlation p=0.000	r=0.735** Moderate correlation p=0.000	r=0.753** Moderate correlation p=0.000	r=0.731** Moderate correlation p=0.000
**Significant @ 0.01				

As shown in the table 4 there was a significant relationship between green corporate governance practices and level of regulatory compliance of selected. PEZA companies. The study found a significant positive relationship between green corporate governance and regulatory compliance among selected PEZA companies. Green corporate governance dimensions—purpose, people, process, and performance—were strongly correlated with compliance across key environmental laws: the Ecological Solid Waste Management Act of 2000, Philippine Clean Water Act of 2004, Philippine Clean Air Act of 2009, and Toxic Substances, Hazardous, and Nuclear Waste Control Act of 1990 ($p < 0.01$). Higher adoption of green corporate governance practices corresponded with increased regulatory compliance, highlighting its critical role in promoting environmental accountability.

The findings align with Wang and Li (2024), who stress that clear environmental policies enhance compliance and sustainability integration. Saleem et al. (2022) highlight ethical leadership's role in fostering environmental stewardship, while Riva et al. (2021) emphasize HR measures like training in embedding compliance. Wang et al. (2021) found that EMS, including ISO 14001, strengthen compliance by integrating policies and controls into operations. Agama and Zubairu (2022) assert that transparent sustainability reporting enhances accountability and stakeholder trust. These findings suggest that PEZA companies with strong green governance exceed compliance standards, reinforcing sustainable development and global best practices

Table 5

Relationship between the Green Corporate Governance Practices and Environmental Responsibility of Selected PEZA companies for Calamba's Sustainable City Vision

Environmental Responsibility	**Green Corporate Governance Practices**			
	Purpose	People	Process	Performance
Environmental policy	r=0.729** Moderate correlation p=0.000	r=0.720** Moderate correlation p=0.000	r=0.782** Moderate correlation p=0.000	r=0.728** Moderate correlation p=0.000
Planning	r=0.512** Moderate correlation p=0.000	r=0.628** Moderate correlation p=0.000	r=0.775** Moderate correlation p=0.000	r=0.720** Moderate correlation p=0.000
Implementation and operations	r=0.707** Moderate correlation p=0.000	r=0.749** Moderate correlation p=0.000	r=0.854** High correlation p=0.000	r=0.799** Moderate correlation p=0.000

Performance evaluation	r=0.726** Moderate correlation p=0.000	r=0.718** Moderate correlation p=0.000	r=0.709** Moderate correlation p=0.000	r=0.787** Moderate correlation p=0.000
Continual improvement	r=0.638** Moderate correlation p=0.000	r=0.717** Moderate correlation p=0.000	r=0.817** High correlation p=0.000	r=0.815** High correlation p=0.000
**Significant @ 0.01				

As shown in the table 5 there was a significant relationship between green corporate governance practices and environmental responsibilities of selected PEZA companies. The study found a significant positive relationship between green corporate governance and environmental responsibility among PEZA companies ($p < 0.01$). Green corporate governance dimensions—purpose, people, process, and performance—were strongly correlated with environmental responsibility factors, including policy, planning, implementation, performance evaluation, and continual improvement. Higher adoption of green corporate governance practices enhanced environmental responsibility, reinforcing its role in promoting sustainable corporate practices.

The findings discussed is related to the study of Wang et al. (2021) that emphasize that purpose-driven governance ensures alignment between corporate goals and environmental policies, fostering proactive compliance. Agama and Zubairu (2022) highlight that integrating environmental legislation into governance structures strengthens corporate accountability and promotes sustainable practices. Camarillo and Bellotindos (2021) stress the importance of collaborative governance with key stakeholders, particularly in meeting PEZA regulations. Riva et al. (2021) underscore adaptive management's role in using performance evaluations to refine governance and environmental policies. Regular environmental assessments enhance stakeholder confidence and compliance (Agama & Zubairu, 2022), while performance metrics ensure alignment with legal and strategic objectives. Effective planning allows firms to allocate resources efficiently and set achievable environmental targets under EMS frameworks like ISO 14001.

Table 6
Relationship between the Level of Regulatory Compliance and Environmental Responsibility of Selected PEZA companies for Calamba's Sustainable City Vision

Environmental Responsibility	**Regulatory Compliance**			
	Ecological Solid Waste Management of 2000	Philippine Clean Water Act of 2004	Philippine Clean Air Act of 2009	Toxic Substances, Hazardous, and nuclear waste control act of 1990
Environmental policy	r=0.701** Moderate correlation p=0.000	r=0.602** Moderate correlation p=0.000	r=0.610** Moderate correlation p=0.000	r=0.701** Moderate correlation p=0.000
Planning	r=0.704** Moderate correlation p=0.000	r=0.610** Moderate correlation p=0.000	r=0.589** Moderate correlation p=0.000	r=0.646** Moderate correlation p=0.000
Implementation and operations	r=0.767** Moderate	r=0.709** Moderate	r=0.754** Moderate	r=0.790** Moderate correlation

	correlation p=0.000	correlation p=0.000	correlation p=0.000	p=0.000
Performance evaluation	r=0.701** Moderate correlation p=0.000	r=0.726** Moderate correlation p=0.000	r=0.756** Moderate correlation p=0.000	r=0.718** Moderate correlation p=0.000
Continual improvement	r=0.754** Moderate correlation p=0.000	r=0.723** Moderate correlation p=0.000	r=0.718** Moderate correlation p=0.000	r=0.700** Moderate correlation p=0.000
**Significant @ 0.01				

As shown in the table 6 there was a significant relationship between level of regulatory compliance and environmental responsibilities of selected PEZA companies. The study found a significant relationship between regulatory compliance and environmental responsibility among PEZA companies ($p < 0.01$). Environmental responsibility dimensions—policy, planning, implementation, performance evaluation, and continual improvement—were positively correlated with compliance across key environmental laws, including the Ecological Solid Waste Management Act (2000), Philippine Clean Water Act (2004), Philippine Clean Air Act (2009), and the Toxic Substances, Hazardous, and Nuclear Waste Control Act (1990). Higher regulatory compliance was associated with greater environmental responsibility, emphasizing the role of adherence to environmental regulations in fostering corporate sustainability.

The result of the study is the same with the study of Wang et al. (2021) that highlight that corporate environmental responsibility (CER) aligns organizational policies with legal requirements, such as waste separation and pollution control, while compliance frameworks like ISO 14001 enhance systematic environmental management, fostering accountability and transparency. Todaro et al. (2019) emphasize the role of planning in integrating compliance into environmental management systems, enabling measurable goals and efficient resource allocation, while Dela Cruz (2023) stresses collaboration with local authorities to address regulatory gaps and enhance community engagement. Camarillo and Bellotindos (2021) assert that operational policies on waste reduction, pollution control, and energy efficiency ensure compliance and improve environmental performance, with Wang and Li (2024) further highlighting how proactive policies and process-oriented governance drive long-term compliance and innovation. Agama and Zubairu (2022) argue that data-driven performance evaluation identifies compliance gaps and fosters continuous improvement, while reporting systems, such as the Global Reporting Initiative (GRI), enhance accountability. Riva et al. (2021) emphasize that adaptive strategies refine policies and operations through performance reviews and regulatory audits, ensuring compliance and innovation in sustainable practices.

Table 7
Regression Analysis between Green Corporate Governance Practices and Level of Regulatory Compliance taken Singly or in Combination of the Environmental Responsibility

Predictor	Dependent Variable	R^2	F	p-value	β	t	p-value
Purpose	Environmental	0.864	42.237	0.000	.103	1.036	0.305
People					.029	.257	0.798
Process					.357	3.346	0.002*

Performance	responsibility (Overall)				.153	1.407	0.165
Ecological Solid Waste Management of 2000					-.063	-.351	0.727
Philippine Clean Water Act of 2009					.040	.253	.801
Toxic Substances, Hazardous, and nuclear waste control act of 1990					.072	.539	.592
Overall Regulatory compliance					.323	.875	.386
*Significant @ 0.01							

As reflected in table 7, green corporate governance practices along process accounted for 86.4% (F=42.237; t=3.346) of the variability of the dependent variable, environmental responsibility. The results indicate that green corporate governance (GCG) practices along the process dimension significantly predict environmental responsibility (β = 0.357, p = 0.002). However, other GCG dimensions—purpose (β = 0.103, p = 0.305), people (β = 0.029, p = 0.798), and performance—did not show a statistically significant direct effect. This suggests that while purpose provides strategic direction and people contribute to leadership, their measurable impact on environmental responsibility is minimal. Similarly, regulatory compliance across key environmental laws, including the Ecological Solid Waste Management Act (β = -0.063, p = 0.727), Philippine Clean Water Act (β = 0.040, p = 0.801), and Toxic Substances, Hazardous, and Nuclear Waste Control Act (β = 0.040, p = 0.801), did not exhibit a significant direct effect. The overall model for regulatory compliance (β = 0.323, p = 0.386) was also not significant, implying that while compliance is essential, its influence on environmental responsibility may be indirect and dependent on integration into governance practices.

The findings discussed is related to the studies of Deyassa, (2019) and Voinea et al. (2020), which state that the companies with strong environmental management systems (EMS), such as ISO 14001, are better positioned to systematically address environmental concerns. The international organization for standardization released ISO 14001 as an internationally agreed standard that sets out the requirements for an environmental management system and it guides organization to improve their environmental performance to be more effective. It includes efficient use of resources and waste reduction among others giving them competitive advantage and trust of stakeholders. Thus, the effect of the EMS comprehensiveness on environmental performance and financial performance.

Based on the findings, several conclusions were drawn. PEZA companies play a crucial role in governance by actively practicing green corporate governance, contributing to the sustainability and realization of Calamba City's vision. Regulatory compliance among these companies is a key factor in sustainability efforts, reinforcing their commitment to environmental regulations. Additionally, PEZA companies demonstrate environmental responsibility by adhering to policies, engaging in strategic planning, implementing sustainable operations, conducting performance evaluations, and continuously improving

their environmental practices. In conclusion, it can be noted that a higher level of green corporate governance the greater regulatory compliance. The increased environmental responsibility is associated with stronger green corporate governance. Furthermore, companies that adopt green corporate governance tend to be more environmentally responsible. While regulatory compliance is integrated into governance practices, only the process component significantly predicts environmental responsibility, whereas other predictors—purpose, people, and performance—do not significantly contribute to regulatory compliance variance.

The implementation of the proposed action plan is essential to sustaining the synergy between corporate governance, regulatory compliance, and environmental responsibility within PEZA companies. Strengthening this alignment will reinforce efforts toward achieving Calamba City's sustainable vision. Strategic recommendations for Asian Businesses are proposed. Pollution Control Officers of PEZA companies should utilize the results to enhance environmental strategies, integrate stakeholder feedback, and strengthen partnerships with local government units to improve waste management and regulatory compliance while fostering a culture of environmental responsibility. PEZA company owners should address governance challenges by investing in sustainability, adopting emission controls, and implementing advanced systems for hazardous waste management in compliance with regulations. Managers should promote green corporate governance by diversifying board committees, developing employee incentives, and improving feedback mechanisms. The City Government of Calamba should support industrial partners by providing resources, incentivizing compliance, rewarding sustainable practices, and updating policies to address environmental challenges. Government and regulatory agencies, such as PEZA and DENR, may revise existing frameworks to enhance corporate environmental responsibility while offering financial and technical support for innovation in environmental management. Researchers can apply the study's insights to advance knowledge in green corporate governance, regulatory compliance, and environmental responsibility, while future researchers may expand on this study by exploring additional predictors, such as the financial performance of green corporate governance.

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