The influence of board gender diversity, cultural background, expertise, and experience on product responsibility performance and its implications for company growth: A study in 5 ASEAN countries

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Abstract: *The study underscores the critical role of board characteristics in shaping product responsibility performance and, ultimately, firm growth, highlighting the nuanced dynamics within corporate governance. By leveraging data from the Refinitiv Database spanning five prominent ASEAN economies—Indonesia, Malaysia, the Philippines, Singapore, and Thailand- the research comprehensively analyzes 100 companies during 2022. Employing Structural Equation Modeling (SEM) via Smart PLS, the study presents compelling evidence that board gender diversity and expertise are pivotal factors that enhance product responsibility performance. This suggests that diverse perspectives and specialized knowledge within the boardroom can drive more responsible product strategies, fostering firm growth. Interestingly, the study finds that board cultural background and experience do not significantly influence product responsibility, pointing to the importance of specific skill sets over-generalized experience. Furthermore, the findings reveal that product responsibility performance significantly contributes to firm growth, indicating that companies prioritizing responsible production practices can achieve superior growth trajectories. Among various control variables examined, firm size emerges as a significant influencer of product responsibility performance, while social and environmental risks do not exhibit notable effects. This research advances the understanding of corporate board dynamics and emphasizes the strategic advantage of integrating diverse and skilled leadership to enhance organizational sustainability and growth.*

Keywords: Good corporate governance, corporate social responsibility, board characteristics, product responsibility performance, firm growth.

Introduction

Companies with effective governance are often distinguished by their commitment to accountability, responsibility, and transparency, along with implementing robust Corporate Social Responsibility (CSR) initiatives (Aguilera & Cuervo-Cazurra, 2012). CSR is vital as it aids in establishing a positive corporate image and fostering company growth (Maury, 2022; Nyame-Asiamah & Ghulam, 2020; Cho et al., 2019). A pivotal component of CSR is product responsibility, which focuses on ensuring consumer safety by producing responsible products and services (Pandey & Hassan, 2020). However, in ASEAN countries, there is a noted disparity in practices related to product responsibility, indicating a need for improved corporate governance to bolster the significance of product responsibility in supporting corporate growth.

The importance of effective corporate governance highlights the critical influence of board composition on the direction and caliber of governance. According to Upper Echelons Theory (UET), the personal attributes of board members, such as gender, cultural background, expertise, and experience, directly influence corporate strategies and performance (Hambrick & Mason, 1984). Thus, several research hypotheses are put forward: (1) board gender diversity significantly impacts product responsibility performance, (2) board cultural background significantly impacts product responsibility performance, (3) board expertise significantly impacts product responsibility performance, (4) board experience significantly impacts product responsibility performance, and (5) product responsibility performance significantly impacts company growth.

Although previous studies have identified links between board characteristics and product responsibility performance as aspects of CSR, inconsistencies remain, with insufficient research directly investigating the influence of board characteristics on product responsibility performance and its subsequent effects on company growth. Consequently, this study examines the impact of board gender diversity, cultural background, expertise, and experience on product responsibility performance and its implications for company growth across five ASEAN countries: Indonesia, Malaysia, Philippines, Singapore, and Thailand. By focusing on businesses in ASEAN, the research strives to provide valuable insights into a region with a distinctive cultural landscape compared to other global regions (Yao Ken Yin, 2023). Hence, this study is titled "The Influence of board gender diversity, Cultural Background, expertise, and Experience on Product Responsibility Performance and its Implications for company growth: A study in 5 ASEAN countries."

Research Methodology

The study rigorously employs a quantitative methodology to delve into and elucidate the relationships embedded within the data collected. This data, meticulously obtained as secondary data from the Refinitiv Database for the year 2022, is comprehensive and encompasses a variety of pivotal variables pertinent to the study's research focus. These variables include board gender diversity, cultural background, board expertise, board experience, product responsibility performance, and corporate growth. Each variable is expected to provide insightful contributions to understanding the dynamics of corporate governance and performance. The study further strengthens its analytical framework by incorporating control variables such as firm size, social risk, and environmental risk. These controls are crucial in ensuring the robustness of the study's findings by accounting for external factors that could potentially skew the results, thereby enhancing their validity. This thorough approach offers a nuanced understanding of the interactions between these variables and their impact on corporate performance, paving the way for informed decision-making and policy formulation in corporate governance.

The research meticulously targets a well-defined population of all public companies within the ASEAN region, an economically diverse and dynamic Southeast Asian area. The study utilizes a purposive sampling technique, a non-random method often employed when specific criteria are needed to ensure the sample reflects the study’s objectives. The selection criteria for the companies include two vital conditions: firstly, the companies must be publicly listed in ASEAN on the Refinitiv Eikon platform as of 2022, ensuring that the data collected is up-to-date, reliable, and relevant to the current market dynamics. Secondly, these companies must disclose their board of commissioners' profiles, which is crucial for a nuanced analysis of the independent variables. These variables include gender diversity, which examines the representation of different genders in leadership roles; cultural background, which looks at the diversity of cultural influences within the board; and expertise and experience, which assess the board members' professional backgrounds and their potential impact on decision-making. Furthermore, the study incorporates an intermediary variable: product responsibility performance, which relates to how these companies manage their obligations to society and the environment through their products. Including this variable helps us understand the broader implications of board diversity on corporate responsibility. This rigorous approach has resulted in a sample of 100 companies, providing a substantial base for comprehensive analysis and yielding insights that are likely to represent and be significant to corporate governance within the ASEAN region.

The study leverages a sophisticated methodological framework by employing Structural Equation Modeling (SEM) in conjunction with descriptive statistical analysis via the Smart PLS software, enhancing the exploration of intricate relationships within the dataset. SEM involves a sequential and meticulous process, including testing inner models and evaluating effect sizes, allowing for a comprehensive validation of the proposed hypotheses about variable interactions. This approach enables an in-depth understanding of corporate growth determinants by examining pivotal factors such as board characteristics and product responsibility. Through SEM, the study can dissect and analyze the underlying complex dynamics and interdependencies between variables that traditional statistical approaches might overlook. By employing this advanced statistical technique, the research strengthens the validity and reliability of its findings and amplifies its explanatory capacity, providing nuanced insights into the factors influencing corporate growth.

Results

Descriptive analysis

The study looks at companies in the ASEAN-5 region, which includes Indonesia, Malaysia, the Philippines, Singapore, and Thailand. It uses data from the Refinitiv Eikon database for 2022. This sample is significant because it provides insights into the diversity of corporate boards in terms of gender, culture, expertise, and experience, which are key for understanding governance and operations in these economies. Table 1 in the study shows differences in company representation from each country. Malaysian companies comprise the largest group at 46%, indicating Malaysia's strong presence in the sector, possibly due to favorable business conditions or regulations. Indonesia follows with 23%, reflecting its growing role in the region. Singapore, a significant financial center, accounts for 16%, while Thailand and the Philippines make up 9% and 6%, respectively. This distribution highlights economic involvement in these countries and provides a basis for analyzing how board diversity affects corporate governance.

Table 1. Sample distribution

Country	Total Sample	% dari Total Sampel
Indonesia	23	23%
Malaysia	46	46%
Filipina	6	6%
Singapura	16	16%
Thailand	9	9%
Total	100	100%

Table 2 presents the descriptive statistics of board gender diversity across the ASEAN-5 countries: Indonesia, Malaysia, the Philippines, Singapore, and Thailand. The findings indicate significant variations in board gender diversity among these nations. Malaysia has the highest average percentage of female board members (27.80%), while Indonesia (13.57%) and the Philippines (13.67%) report the lowest mean percentages. Singapore (16.31%) and Thailand (23.04%) show moderate female representation in corporate boards. The ASEAN-5 aggregate mean stands at 21.41%, suggesting that, on average, female board representation remains relatively low but varies significantly across countries.

Table 2. Board Gender Diversity

Board Gender Diversity (X1)						
Country	**Indonesia**	**Malaysia**	**Filipina**	**Singapura**	**Thailand**	**ASEAN-5 Agregat**
N (Sample)	23	46	6	16	9	100
Mean	13.567	27.797	13.666	16.309	23.043	21.410
Maximum	33.333	45.455	22.222	33.333	36.364	45.455
Minimum	0.000	0.000	0.000	0.000	13.333	0.000
Std. Deviation	11.170	9.414	7.558	10.185	7.130	11.618

These findings highlight the disparity in gender diversity policies and practices among ASEAN-5 countries. While Malaysia demonstrates strong regulatory influence in increasing female board representation, other countries, particularly Indonesia and the Philippines, exhibit lower levels of board gender diversity, likely due to weaker enforcement mechanisms. The overall ASEAN-5 mean (21.41%) suggests that while there is progress, gender diversity in corporate governance remains an ongoing challenge. This variation in gender diversity can have implications for corporate performance, decision-making efficiency, and overall governance quality. Policymakers and corporate governance regulators in ASEAN-5 may need to implement more vigorous measures, such as board gender quotas or incentives for companies promoting diversity, to foster a more balanced and inclusive leadership environment in the region.

Table 3 presents the descriptive statistics of board cultural background across publicly listed companies in ASEAN-5 countries. The findings indicate significant variations in board cultural composition among these nations. The ASEAN-5 aggregate mean stands at 20.36%, suggesting that, on average, a fifth of board members across the sample exhibit cultural diversity, though the level varies across countries.

Table 3. Board Cultural Background

Board Cultural Background (X2)						
Country	**Indonesia**	**Malaysia**	**Filipina**	**Singapura**	**Thailand**	**ASEAN-5 Agregat**
N (Sample)	23	46	6	16	9	100
Mean	34.303	17.364	13.153	17.290	10.335	20.363
Maximum	100.000	45.455	20.000	37.500	20.000	100.000
Minimum	12.500	8.333	6.250	9.091	6.667	6.250
Std. Deviation	18.315	9.027	4.861	7.967	4.413	13.801

These findings highlight critical differences in how ASEAN-5 companies integrate cultural diversity into corporate leadership. Indonesia's significantly higher board cultural diversity may reflect its large and diverse business environment, where international business engagements and a multicultural workforce contribute to more diverse corporate boards. In contrast, lower diversity levels in Malaysia, Singapore, Thailand, and the Philippines may indicate a stronger preference for local leadership or structural barriers preventing higher cross-cultural representation.

Board cultural diversity can have significant implications for corporate governance and business decision-making. More culturally diverse boards often bring broader perspectives, enhanced innovation, and improved decision-making quality, particularly in companies operating in global markets. However, as observed in Thailand and the Philippines, low board cultural diversity may limit corporate adaptability in international business environments.

Table 4 presents the descriptive statistics of board expertise across publicly listed companies in ASEAN-5 countries. The ASEAN-5 aggregate mean stands at 50.12%, indicating that, on average, half of the board members in these companies possess specialized expertise. However, the distribution of expertise across countries varies significantly.

Tabel 4. Board Expertise

Board Expertise (X3)						
Country	**Indonesia**	**Malaysia**	**Filipina**	**Singapura**	**Thailand**	**ASEAN-5 Agregat**
N (Sample)	23	46	6	16	9	100
Mean	47.769	55.594	47.807	44.739	39.230	50.117
Maximum	100.000	87.500	57.143	80.000	58.333	100.000
Minimum	0.000	27.273	41.667	15.385	20.000	0.000
Std. Deviation	26.403	16.153	6.320	16.938	11.533	19.269

The findings highlight key differences in the professional expertise levels of corporate boards across ASEAN-5. Malaysia ensures that many board members have specialized knowledge, likely due to its corporate governance reforms and board qualification requirements. In contrast, Thailand has the lowest levels of board expertise, which may affect corporate decision-making effectiveness and risk management capabilities. A well-experienced board contributes to better financial oversight, strategic planning, and regulatory compliance. Companies with higher expertise tend to perform better in financial decision-making and risk mitigation. The significant variation observed in Indonesia suggests that while some firms prioritize expertise, others may lack structured board appointment criteria.

Table 5 presents the descriptive statistics of board experience across publicly listed companies in ASEAN-5 countries. The ASEAN-5 aggregate mean stands at 6.97 years, indicating that, on average, board members across the sample have approximately seven years of experience in corporate governance or executive leadership. However, there are significant differences in board experience levels across the countries analyzed. The findings suggest that ASEAN-5 companies could strengthen corporate governance by ensuring minimum board experience across all firms. Regulatory bodies may also consider implementing policies that promote experienced leadership, such as recommending minimum tenure requirements for board members. Additionally, firms could adopt succession planning strategies to cultivate and retain experienced board members, ensuring stability and long-term strategic alignment.

Tabel 5. Board experience

Board Experience (X4)						
Country	**Indonesia**	**Malaysia**	**Filipina**	**Singapura**	**Thailand**	**ASEAN-5 Agregat**
N (Sample)	23	46	6	16	9	100
Mean	6.648	6.290	10.859	7.517	7.658	6.966
Maximum	20.688	14.714	20.393	20.250	14.596	20.688
Minimum	2.250	0.875	5.609	3.682	3.839	0.875
Std. Deviation	4.165	3.016	4.754	3.775	3.178	3.735

Table 6 presents the descriptive statistics of product responsibility performance across publicly listed companies in ASEAN-5 countries. The ASEAN-5 aggregate mean stands at 55.23, indicating that, on average, companies in the region achieve a moderate level of product responsibility performance. However, significant variations exist among the countries analyzed. The findings highlight substantial disparities in product responsibility performance across ASEAN-5. While some firms demonstrate exceptional commitment to ethical production and consumer protection, others fail to meet the basic standards. Countries like Indonesia and Thailand show strong overall performance, but high variability suggests that regulatory enforcement and corporate policies may be inconsistent across firms.

Table 6. Product Responsibility Performance

Product Responsibility Performance (Z)						
Country	**Indonesia**	**Malaysia**	**Filipina**	**Singapura**	**Thailand**	**ASEAN-5 Agregat**
N (Sample)	23	46	6	16	9	100
Mean	60.257	52.973	53.620	51.326	61.965	55.233
Maximum	99.616	99.609	78.090	96.547	98.544	99.616
Minimum	0.000	0.000	27.340	11.979	10.769	0.000
Std. Deviation	28.714	27.093	15.190	26.923	29.731	27.414

Table 7 presents the descriptive statistics of company growth across publicly listed firms in ASEAN-5 countries. The ASEAN-5 aggregate mean stands at 18.96%, suggesting that, on average, firms in the region experience moderate growth. However, the distribution of growth rates across countries reveals significant disparities. The findings highlight considerable disparities in company growth trends across ASEAN-5. The Philippines and Malaysia exhibit the highest average growth rates, suggesting a strong business environment that supports expansion. However, Malaysia also experiences extreme volatility, as indicated by the highest standard deviation and the most significant gap between maximum and minimum growth rates. This suggests that while some firms thrive, others face severe financial distress.

Table 7. Company growth

Company growth (Y)						
Country	**Indonesia**	**Malaysia**	**Filipina**	**Singapura**	**Thailand**	**ASEAN-5 Agregat**
N (Sample)	23	46	6	16	9	100
Mean	18.407	21.102	25.304	17.287	6.954	18.964
Maximum	98.268	326.800	39.080	79.559	47.027	326.800
Minimum	-9.074	-72.062	4.396	-57.762	-42.857	-72.062
Std. Deviation	26.458	54.058	12.878	34.479	22.117	41.997

SEM-PLS aggregate data

This study employs Structural Equation Modeling-Partial Least Squares (SEM-PLS) to examine how board gender diversity, cultural background, expertise, and experience influence product responsibility performance and how product responsibility performance affects company growth in five ASEAN countries (Indonesia, Malaysia, the Philippines, Singapore, and Thailand). Additionally, firm size, social risk, and environmental risk are included as control variables.

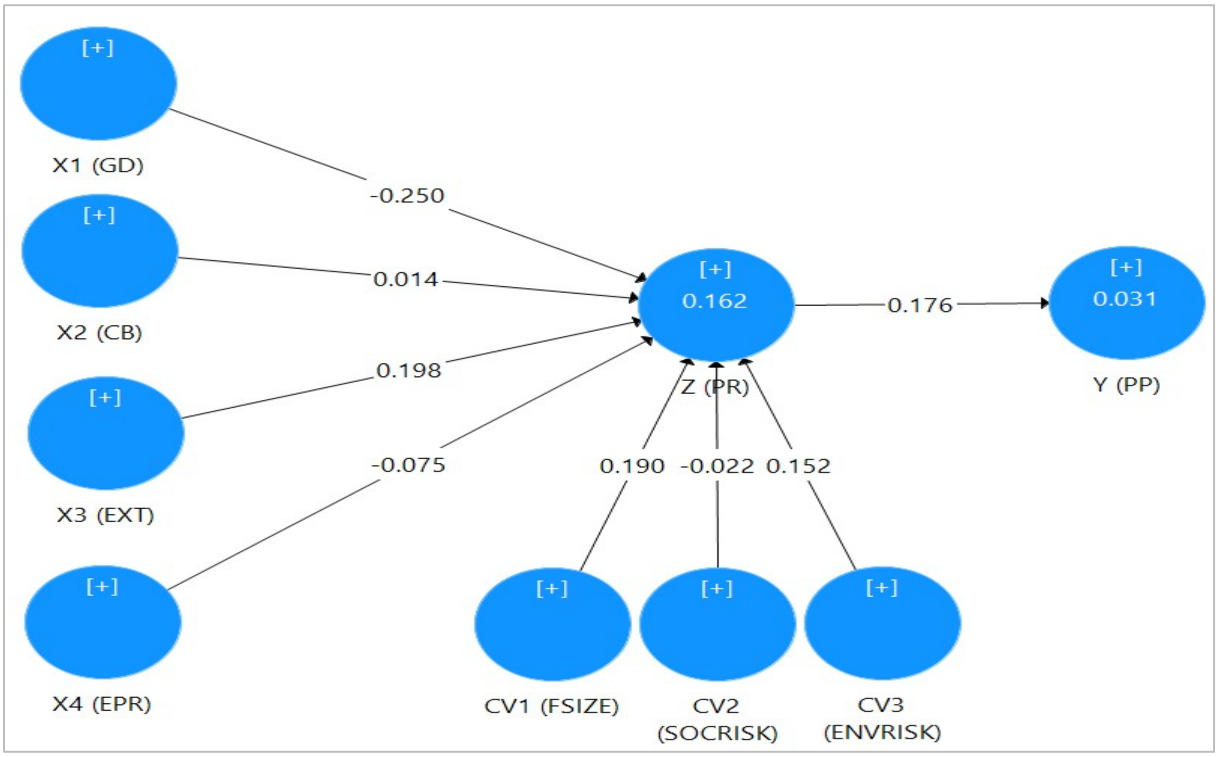
The findings in Table 8 and Figure 1 indicate varying degrees of influence among the board characteristics, control variables, and dependent variables. Regarding the impact on product responsibility performance, board gender diversity exhibits a significant negative effect (coefficient = -0.250, p = 0.015), suggesting that greater gender diversity in the board is associated with declining product responsibility performance. This might be due to conflict in decision-making processes, risk preference variations, or other structural challenges in ASEAN-based firms. The confidence interval (-0.402 to -0.065) confirms this effect is statistically significant.

Table 8. SEM-PLS Output aggregate data

	Path Coefficient	**Standard Deviation**	**T Statistics**	**P Values**	**Confidence Interval**	
					5%	**95%**
X1 (GD) → Z (PR)	-0.250	0.102	2.441	0.015	-0.402	-0.065
X2 (CB) → Z (PR)	0.014	0.111	0.122	0.903	-0.147	0.220
X3 (EXT) → Z (PR)	0.198	0.104	1.900	0.058	0.023	0.365
X4 (EPR) → Z (PR)	-0.075	0.083	0.904	0.366	-0.222	0.048
Z (PR) → Y (PP)	0.176	0.079	2.240	0.025	0.041	0.298
FSIZE → Z (PR)	0.190	0.105	1.809	0.071	0.013	0.360
SOCRISK → Z (PR)	-0.022	0.127	0.174	0.861	-0.218	0.200
ENVRISK → Z (PR)	0.152	0.129	1.183	0.237	-0.071	0.343
			R Square			
Y (PP)			0.031			
Z (PR)			0.162			
Total Observations			100			

In contrast, the impact of cultural background on product responsibility performance is insignificant (coefficient = 0.014, p = 0.903), implying that cultural diversity on the board does not directly influence product responsibility in ASEAN-5 firms. This may indicate that cultural differences do not majorly shape board decisions related to product responsibility. Board expertise, however, has a marginally significant positive effect (coefficient = 0.198, p = 0.058). Although the p-value is slightly above the 0.05 threshold, the confidence interval (0.023 to 0.365) suggests a probable positive impact. This finding implies that directors with specialized expertise contribute to better product responsibility practices, possibly due to their knowledge of compliance, industry standards, and strategic decision-making.

Figure 1. Path Diagram PLS-SEM



Board experience does not significantly affect product responsibility performance (coefficient = -0.075, p = 0.366), suggesting that years of experience alone do not necessarily enhance product responsibility efforts. Firm size shows a marginally significant positive effect on product responsibility (coefficient = 0.190, p = 0.071). Larger firms may have better resources to implement responsible product policies, but the effect is insignificant. Meanwhile, social and environmental risks do not significantly affect product responsibility performance, as indicated by their coefficients (-0.022 and 0.152) and high p-values (0.861 and 0.237, respectively). This suggests that factors like reputational concerns, labor issues, or community relations do not strongly shape product responsibility initiatives.

Regarding the impact on company growth, product responsibility performance has demonstrated a significant positive effect, with a coefficient of 0.176 and a p-value of 0.025. This statistical evidence suggests that companies that prioritize and invest in responsible practices related to their products see a marked improvement in their growth metrics. The confidence interval, ranging from 0.041 to 0.298, provides additional support, indicating that the effect is reliable and robust. These findings are consistent with theoretical frameworks that propose ethical and responsible business practices are instrumental in fostering consumer trust and enhancing brand reputation. By adopting such practices, companies improve their standing in the eyes of consumers and potentially boost their financial performance, thereby contributing positively to their overall growth trajectory.

The R^2 value for company growth (PP) is 0.031, indicating that product responsibility performance alone explains only 3.1% of the variance in company growth. This suggests that other external factors (e.g., market conditions, financial policies, innovation) may influence company growth more strongly than product responsibility. The R^2 value for product responsibility performance (PR) is 0.162, meaning that the included independent variables explain 16.2% of the variance in product responsibility performance. While relatively low, this suggests that factors beyond board characteristics, such as corporate policies, regulatory pressures, and consumer expectations, may play significant roles.

Tabel 9. Hypothesis testing summary

Hypothesis Statement	T Statistics	T Table	P Values	Conclusion
Board gender diversity significantly affects product responsibility performance (H1)	2.441	1.96	0.015	Accepted
Board cultural background significantly affects product responsibility performance (H2)	0.122	1.96	0.903	Rejected
Board expertise significantly affects product responsibility performance (H3)	1.9	1.96	0.058	Accepted
Board experience significantly affects product responsibility performance (H4)	0.904	1.96	0.366	Rejected
Product responsibility performance significantly affects company growth (H5)	2.24	1.96	0.025	Accepted

Effect Size Analysis

Effect size measures (Table 10) the magnitude of an independent variable's impact on a dependent variable. This study uses Cohen's F^2 values to assess the strength of relationships between board characteristics, product responsibility performance, and company growth. Board gender diversity (GD) has an F^2 value of 0.065, falling within the weak effect range (0.02 – 0.15). This indicates that while gender diversity on the board has a statistically significant negative effect on product responsibility performance, the magnitude of its impact remains negligible. This suggests that gender diversity alone is not a significant determinant of product responsibility, and its influence may depend on additional governance mechanisms or firm-specific factors.

The board cultural background (CB) has an F^2 value of 0.000, indicating no effect on product responsibility performance. This aligns with the statistical findings, which show that cultural background did not have a significant impact. The absence of effect suggests that cultural diversity in board composition does not necessarily translate into improved product responsibility practices, possibly due to a lack of integration of cultural perspectives in decision-making processes or homogeneous governance practices across ASEAN firms.

Tabel 10. Effect Size

	F Square	Cohen F Square Range	Effect Size
X1 (GD) → (PR)	0.065	0.02 – 0.15	Weak
X2 (CB) → (PR)	0.000	< 0.02	No Effect
X3 (EXT) → (PR)	0.039	0.02 – 0.15	Weak
X4 (EPR) → (PR)	0.006	< 0.02	No Effect
Z (PR) → (PP)	0.032	0.02 – 0.15	Weak
FSIZE → (PR)	0.036	0.02 – 0.15	Weak
SOCRISK → (PR)	0.000	< 0.02	No Effect
ENVRISK → (PR)	0.016	< 0.02	No Effect

Board expertise (EXT) has an F^2 value of 0.039, which also falls within the weak effect category. While board expertise was found to have a marginally significant effect on product responsibility performance, its effect size remains relatively small. This implies that while having expertise on the board is beneficial, other structural and regulatory factors may play a more dominant role in influencing product responsibility outcomes.

Board experience (EPR) has an F^2 value of 0.006, which categorizes it as having no effect on product responsibility performance. This suggests that simply having experienced board members does not necessarily lead to improved product responsibility practices. The absence of effect might be due to the possibility that experience alone does not guarantee proactive decision-making regarding corporate responsibility, as experience does not always equate to progressive or innovative governance approaches.

The relationship between product responsibility performance (PR) and company growth (PP) has an F^2 value of 0.032, which is classified as a weak effect. This indicates that while PR has a significant positive effect on company growth, its contribution is relatively small. This suggests that while ethical and responsible product practices contribute to long-term business success, other factors, such as market expansion, financial management, and innovation, may play a more substantial role in determining company growth.

Firm size (FSIZE) has an F^2 value of 0.036, indicating a weak effect on product responsibility performance. This implies that larger firms may have more resources to implement responsible product practices, but the effect is not substantial. Variations in corporate strategies, regulatory pressures, or industry-specific factors could influence the extent to which larger firms prioritize product responsibility.

Social risk (SOCRISK) is characterized by an F^2 value of 0.000, indicating that it exerts no notable influence on product responsibility performance. This finding implies that various social risks—ranging from reputational concerns that affect public perception, to the dynamics of community relations that can impact local support, and even persistent labor issues that may arise within workplaces—fail to drive significant changes in the practices related to product responsibility among firms operating within the ASEAN region.

Environmental risk (ENVRISK) has an F^2 value of 0.016, which also falls into the no-effect category. This finding indicates that exposure to environmental risks does not significantly influence how companies approach product responsibility. It may suggest that firms in ASEAN-5 countries are not yet fully integrating environmental risk factors into their product responsibility strategies. They may address these risks through separate sustainability initiatives rather than incorporating them into product governance.

The effect size analysis reveals that while some factors, such as board gender diversity and board expertise, have a weak impact on product responsibility performance, several variables show no effect, including board cultural background, board experience, social risk, and environmental risk. Moreover, while product responsibility performance positively influences company growth, its effect size remains weak, indicating that other strategic and financial determinants play a more significant role.

Discussion

The analysis results underscore a significant negative relationship between board gender diversity and product responsibility performance, a phenomenon corroborated by earlier studies, such as those by Taufik & Oh (2023), Rohmah et al. (2022), and Simionescu et al. (2021). These studies suggest that cultural factors and ingrained gender biases prevalent in the ASEAN region undermine the roles of women in corporate environments. Such biases and stereotypes inhibit female board members' effective participation and contributions, potentially diminishing the overall positive impact they could have in promoting corporate responsibility. When women face obstacles or are not fully integrated within the board, the capacity of a company to uphold its product responsibilities is compromised. This situation highlights the critical need for addressing gender diversity barriers to enhance corporate governance and responsibility, ensuring that diverse perspectives contribute to the strategic and ethical oversight of a company's products and services. Addressing these barriers could foster an environment where all board members, regardless of gender, can contribute effectively to a company's success and accountability.

The findings that board cultural background does not significantly impact product responsibility performance align with prior studies, suggesting that cultural diversity within boards may not be a critical factor in enhancing a company's social responsibility metrics. This perspective aligns with the views of Hadya & Susanto (2018), who argue that individual board members contribute to their roles based on their responsibilities rather than their cultural heritage, thereby rendering cultural background a non-priority in achieving excellent product responsibility outcomes. However, the necessity for further research is underscored by the potential influence of unexamined variables, such as the educational level of board members. Shatnawi et al. (2022) and Katmon et al. (2019) have highlighted that a higher educational level among board members tends to reinforce a company's commitment to social responsibility, suggesting that educational background could be a more definitive factor affecting board performance. This insight opens avenues for future studies to explore how educational qualifications and other unexplored factors might impact the efficacy of board decisions regarding product responsibility and broader corporate social responsibility commitments.

Board expertise significantly impacts product responsibility performance due to the comprehensive knowledge and skills experienced board members bring to an organization. This expertise fosters a deeper understanding of corporate social responsibility (CSR), enabling the board to integrate innovative approaches and creative solutions into their strategic planning. Studies by Katmon et al. (2019), Mulazid et al. (2017), and Beji et al. (2021) corroborate these findings, highlighting the correlation between board expertise and enhanced CSR outcomes. By leveraging their experience, board members can effectively oversee corporate activities, ensuring that ethical standards are upheld and that the company remains accountable to its stakeholders. Moreover, the accumulated industry insights and strategic acumen of board experts facilitate robust monitoring and evaluation, ensuring that CSR initiatives are effectively implemented and aligned with the company's broader objectives. Consequently, board expertise does not just play a pivotal role in fostering social responsibility and driving sustainable business practices that contribute positively to the company's reputation and long-term success.

The study revealed that board experience does not significantly influence product responsibility performance, aligning with previous findings by Khan et al. (2019) and Hafsi & Turgut (2013). While it's often assumed that board tenure and experience enhance understanding and skills in oversight duties, Hafsi & Turgut emphasize that this assumption does not always hold, particularly in social and corporate responsibility. The influence of board experience on product responsibility may be overshadowed by other crucial factors, such as prior corporate social responsibility (CSR) experience and international exposure. Boards with past involvement in CSR decisions are likely to champion such initiatives, viewing them as avenues for improving company image and fostering growth, as noted by Al-Shammari et al. (2022) and Elmaghrabi (2021). Additionally, Zhuang et al. (2018) and Al-Mamun & Seamer (2021) highlight that board members' international experience—gained through work or education abroad—affects CSR performance, suggesting a broader, global perspective as a key factor in influencing corporate responsibility.

The research underscores the crucial role of product responsibility as a facet of corporate social responsibility (CSR) in driving company growth. By aligning with earlier findings from Maury (2022), Nyame-Asiamah & Ghulam (2020), and Cho et al. (2019), the study reinforces the view that CSR extends beyond ethical imperatives to serve as a pivotal business strategy that enhances revenue growth. This perspective challenges the conventional notion of CSR solely as a moral duty, presenting it as an integral approach that benefits the firm economically. The study further explores the dynamics of various independent and dependent variables, introducing control variables to ensure robust analysis. Among these, firm size emerged as a significant determinant positively impacting product responsibility performance. In contrast, social and environmental risks were found to have negligible effects on product responsibility, indicating that larger firms might possess more resources or incentives to implement product responsibility measures effectively. These insights suggest that companies strategically leveraging their size and CSR practices can potentially secure a competitive advantage, fostering sustainable growth and corporate success.

Conclusions

The results of the SEM-PLS analysis shed light on several crucial aspects regarding the relationship between board composition and product responsibility performance. Notably, it emphasizes the significant impact of board gender diversity and expertise on enhancing product accountability and quality. This finding suggests that a varied and knowledgeable board fosters a more comprehensive understanding of market needs and ethical standards, thereby improving product responsibility. Conversely, the analysis reveals that the cultural background and experience of board members do not significantly affect product responsibility performance. This suggests that while diversity in gender and expertise enriches decision-making processes, cultural diversity and prior experience may not directly translate into improved product outcomes, possibly due to the universal nature of ethical standards and product responsibility expectations across different markets.

Furthermore, the impact of product responsibility performance extends beyond mere compliance, acting as a critical driver for the company's growth. When a company demonstrates accountability and responsibility in its product offerings, it enhances customer satisfaction and trust and builds a strong brand reputation that differentiates it from competitors. This commitment to quality and ethical standards can lead to increased customer loyalty, positive word-of-mouth referrals, and heightened brand equity, significantly contributing to a company's expansion and success in the market. As consumers become more discerning and socially conscious, a company's proactive approach to ensuring that its products meet or exceed expectations regarding safety, efficacy, and environmental impact becomes a fundamental aspect of its growth strategy. Product responsibility performance is not just a compliance issue but a strategic asset that can drive sustainable growth and long-term profitability.

A deeper dive into the analysis indicates that the control variable, firm size, plays a pivotal role in influencing product responsibility performance. This observation underscores how larger firms are better positioned to allocate substantial efforts toward managing and enhancing their commitments to product responsibility due to their more excellent resources and often more complex organizational structures. These companies tend to have more comprehensive systems and processes to ensure product quality, safety, and compliance with regulatory standards, protecting their brand reputation and fulfilling their corporate social responsibility. Additionally, they often have dedicated teams and resources to drive initiatives and innovations in product responsibility, thus setting benchmarks for smaller companies to follow. Therefore, the correlation between firm size and product responsibility performance signifies that larger enterprises, with their expansive reach and influence, are strategically positioned to lead in product stewardship and sustainability practices.

In the context of corporate governance and sustainability, the role of social and environmental risks often comes into focus as companies strive to enhance their product responsibility performance. However, when used as control variables, the lack of a significant impact from these risks suggests a complex dynamic at play. This could indicate that companies may have established distinct management frameworks or strategies for addressing social and environmental risks separately from product responsibility initiatives. Alternatively, it could mean that the metrics and methodologies used to measure these risks do not capture their influence on product responsibility within the parameters of the current analysis. Corporate strategies often compartmentalize risk management to ensure tailored approaches for each risk type, which might limit the observable direct effects of social and environmental risks on product responsibility performance. This separation can lead to challenges in evaluating their interconnectedness and influence across broader corporate social responsibility goals. Thus, the findings prompt further exploration into how integrated risk management practices could reveal more nuanced impacts on product responsibility performance.

Implications

These findings have several important implications for corporate governance. The negative influence of board gender diversity on product responsibility contradicts prior studies arguing for the benefits of diverse decision-making. This may be due to challenges in implementing inclusive leadership structures in ASEAN firms, indicating a need for better integrating diverse perspectives in board discussions. The role of board expertise in driving product responsibility is evident, suggesting that appointing board members with relevant industry and regulatory knowledge is more effective than simply relying on demographic diversity. Furthermore, the lack of impact of cultural background and experience suggests that simply having diverse or long-tenured directors is not enough. Instead, firms should focus on targeted training, ethical leadership, and governance reforms.

From a business strategy perspective, the study highlights that product responsibility enhances company growth. The significant positive link between product responsibility and company growth supports the idea that ethical business practices drive long-term success. Companies should invest in sustainability, ethical sourcing, and consumer protection measures to strengthen their market position. Additionally, firm size is moderating, as larger firms tend to have better product responsibility outcomes, suggesting that resource availability is crucial for governance performance. Small and medium-sized enterprises (SMEs) may need additional regulatory support or incentives to enhance their corporate responsibility efforts.

The findings underscore the importance of prioritizing expertise in board appointments, suggesting that while diversity is crucial, it should not overshadow the need for skilled, knowledgeable individuals to drive a company toward sustainable success. Policymakers are encouraged to formulate guidelines that balance diversity and expertise, ensuring that board members not only bring a range of perspectives but also possess the necessary skills and experience to govern and strategize for the future effectively. Meanwhile, investors should critically assess companies' governance structures, focusing on the professional backgrounds and competencies of board members. By doing so, they can better predict a company's ability to navigate complex challenges and seize opportunities, ultimately contributing to its long-term sustainability and financial health. This approach promotes a more holistic evaluation of corporate governance, leading to more informed investment decisions and improved corporate accountability and performance.

Limitations and Suggestions

Next, this study has several limitations that need to be considered. First, the data on companies with complete information about the board of commissioners' profile by the required independent variables is still limited. As a result, the sample used is inadequate, with only 100 companies from five ASEAN countries. Second, this study uses a significance level of 10% ($\alpha = 0.10$), implying a high risk of error that may make the research findings less convincing than a stricter significance level. Furthermore, the SEM-PLS analysis results by country show inconsistencies with the aggregate SEM-PLS analysis results across the 5 ASEAN countries. This indicates that the aggregate study results across the 5 ASEAN countries are not strong or reliable enough to state outcomes. Fourth, the research only uses the variable of product responsibility performance as an indicator of corporate social responsibility practices in the Upper Echelons Theory. Other relevant variables are not used, so the study only partially represents this theory. Additionally, the lack of previous literature directly examining the influence of diversity and board characteristics on product responsibility performance leads to a limited understanding of the relationship between these variables.

Therefore, future research is suggested to expand the sample for more accurate representation and to make comparisons with other economic regions, such as the European Union. Future research may also reduce the error risk by using lower significance levels, such as 5% ($\alpha = 0.05$) or 1% ($\alpha = 0.01$), and is expected to conduct more in-depth and specific analysis in each ASEAN country by considering contextual and structural factors in each country. Additionally, consider adding other variables that reflect strategic choices in the Upper Echelons Theory, such as diversification, acquisition, capital intensity, equipment newness, integration, leverage, complexity, and response time. Future researchers are also expected to confirm the findings of this study and enrich the discussion further regarding product responsibility to fill the existing knowledge gap.

This study offers valuable empirical insights into how board characteristics interplay with product responsibility performance and company growth within the ASEAN-5 nations, comprising Indonesia, Malaysia, the Philippines, Singapore, and Thailand. One of the intriguing findings is that while gender diversity on boards is often championed as beneficial, it unexpectedly impacts product responsibility negatively. Conversely, the expertise of board members is identified as pivotal in advancing product responsibility, highlighting the vital role that knowledgeable governance plays in fostering ethical business practices. Additionally, the study finds a direct and significant link between robust product responsibility and enhanced company growth, emphasizing that prioritizing ethical considerations in corporate strategy can drive organizational success. The authors suggest that future research could delve into how factors like industry type or varying regulatory environments across ASEAN countries might influence these dynamics, offering a pathway to fine-tune our understanding of these relationships.

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