





“Determinants of sustainability performance in information technology companies: Cooperation through strategic alliances and business strategies”

AUTHORS	Ria Emilia Sari  Muhtosim Arief Mohammad Hamsal  Rano Kartono Rahim 
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Mohammad Hamsal, Rano Kartono
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Ria Emilia Sari, Ph.D. Candidate,
Department of Management, BINUS
Business School Doctor of Research
in Management, Bina Nusantara
University, Indonesia. (Corresponding
author)

Muhtosim Arief, Professor,
Department of Management, BINUS
Business School Doctor of Research
in Management, Bina Nusantara
University, Indonesia.

Mohammad Hamsal, Professor,
Department of Management, BINUS
Business School Doctor of Research
in Management, Bina Nusantara
University, Indonesia.

Rano Kartono Rahim, Dr., Department
of Management, BINUS Business
School Doctor of Research in
Management, Bina Nusantara
University, Indonesia.



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Ria Emilia Sari (Indonesia), Muhtosim Arief (Indonesia), Mohammad Hamsal (Indonesia),
Rano Kartono Rahim (Indonesia)

DETERMINANTS OF SUSTAINABILITY PERFORMANCE IN INFORMATION TECHNOLOGY COMPANIES: COOPERATION THROUGH STRATEGIC ALLIANCES AND BUSINESS STRATEGIES

Abstract

The rapid progress in information technology has presented both opportunities and challenges for companies, particularly within the IT industry in Indonesia. This study examines the impact of hybrid business strategies and corporate strategic alliances on the sustainability performance of IT companies. Adopting quantitative methods, data were collected from 389 management professionals in IT companies through a structured questionnaire. The analysis employed structural equation modeling (SEM) to assess the relationships between hybrid business strategies, strategic alliances, and sustainability performance. The results indicate that hybrid business strategies positively influence corporate strategic alliances (t -value = 2.243, p -value = 0.025) and positively influence corporate sustainability performance (t -value = 5.294, p -value = 0.000). Additionally, corporate strategic alliances significantly enhance sustainability performance (t -value = 5.603, p -value = 0.000), mediating the relationship between hybrid strategies and sustainability outcomes (t -value = 1.995, p -value = 0.047). The findings emphasize the critical role of strategic alliances in achieving long-term sustainability goals in the IT industry. The study concludes that integrating hybrid business strategies with effective strategic alliances is essential for IT companies to maintain competitiveness and achieve sustainable growth.

Keywords

information technology companies, digital transformation, sustainability, Indonesia, structural equation modeling

JEL Classification

L25, L24, O32, M15

INTRODUCTION

The continuous advancement of information technology presents both opportunities and challenges for society, making it an essential part of daily life with a rapidly growing demand for IT services to meet various needs. In Indonesia, the Central Statistics Agency has reported positive progress in this sector from 2015 to 2022. However, as a driving force of global innovation, the IT industry is increasingly scrutinized for its environmental and social impact. To sustain organizational performance, companies must transform by adopting technology that enhances business performance and creates opportunities for new business models, all while being prepared for potential disruptions from competitors who can adapt more quickly.

However, internal business strategies are critical; the study emphasizes the pivotal role of strategic alliances and hybrid business models in enhancing corporate sustainability performance for IT companies. Strategic alliances provide a platform for IT firms to pool resources,

share knowledge, and collaborate on innovative solutions to sustainability challenges. By partnering with organizations that possess complementary strengths, IT companies can accelerate the development of sustainable technologies and practices, mitigate risks, and achieve greater scale and impact.

Moreover, the adoption of hybrid business models, which combine elements of traditional and emerging business approaches, offers IT companies new avenues for sustainable growth. These models can enable companies to balance economic performance with environmental and social considerations, fostering a more resilient and purpose-driven organization. IT companies must adapt to competition by creating business models that meet consumer demands and collaborating to address changing environmental conditions. This approach not only supports performance, survival, and resilience but also reinforces long-term sustainability goals. By examining the intricate relationship between strategic alliances, hybrid business models, and corporate sustainability performance in the IT industry, this paper seeks to provide valuable insights for IT companies, policymakers, and stakeholders committed to building a sustainable digital future.

1. LITERATURE REVIEW AND HYPOTHESES

Information technology companies are business entities focused on developing, implementing, and providing information technology solutions. These companies can operate in various fields, including hardware, software, IT services, and technology infrastructure (Rehman et al., 2022; Anwar & Hasnu, 2017; Mantecon et al., 2016). As technology continues to advance, IT businesses must optimize the use of information technology to enhance their business performance and achieve an edge over competitors in the industry, leading to corporate sustainability performance (Shang et al., 2020; Wang & Teng, 2022). Business sustainability does not only involve standalone IT companies but also derives from a chain of cooperation among IT companies in the form of strategic alliances (Seo et al., 2020). Organizations with a network of inter-company cooperation in the form of corporate strategic alliances can foster corporate sustainability performance (Seo et al., 2020; Paracha et al., 2019; Koka & Prescott, 2008). Moreover, an organization must adopt a hybrid business strategy and collaborate with other organizations from an innovation perspective (Alnoor et al., 2022).

Hybrid business strategy is a combination of various business strategies implemented together to achieve specific business goals. In a dynamic business world, companies need to be able to adapt and apply appropriate strategies to achieve optimal performance (Agyapong et al., 2016; Garg, 2016; Wang et al., 2021). Additionally, this strat-

egy aims to balance a focus on efficiency and cost with a focus on innovation and growth, enabling companies to meet the needs and challenges of an ever-changing business environment (Chang et al., 2019; Strobl et al., 2020). Furthermore, this strategy allows companies to compete effectively and achieve long-term competitive advantage (Yang et al., 2018; Khedmati et al., 2019; Alnoor et al., 2022).

Hybrid business strategy will influence the formation of strategic collaborations between companies. In this collaboration process, maintaining the partnership is crucial to sustain the relationship as it can affect the continuity or termination of cooperation between partners (Tang et al., 2022; Mantecon et al., 2016). Additionally, the impact of hybrid business strategy on the success of corporate strategic alliances is also influenced by intellectual capital and innovative performance (Rehman et al., 2022; Anwar & Hasnu, 2017; Garg, 2016). Subsequently, after the effective implementation of a hybrid business strategy, alliances will be able to create shared value by emphasizing a combination of differentiation and low cost, which can result in unique and efficient solutions, thus creating added value for the allied parties. Therefore, the relationship between hybrid business strategy and corporate strategic alliance will have a positive impact on collective performance outcomes (Tang et al., 2021; Mantecon et al., 2016; Rehman et al., 2022; Anwar & Hasnu, 2017).

In such situations, companies are required to adapt and implement appropriate strategies to achieve corporate sustainability performance (Nguyen et

al., 2022; Wang et al., 2020). Market conditions and resource availability can influence the adoption of a hybrid business strategy, which in turn affects overall corporate sustainability performance (Manning et al., 2017; Yasa et al., 2018). Hybrid business strategy has a positive influence on corporate sustainability performance mediated by corporate strategic alliance (Agyapong et al., 2016; Tang et al., 2022; Rehman et al., 2022; Garg, 2016). Corporate strategic alliances assist companies in strengthening dynamic capabilities and knowledge management, which reinforces the implementation of hybrid business strategies and ultimately enhances corporate sustainability performance (Anwar & Hasnu, 2017).

A corporate strategic alliance is a type of collaboration between two or more companies working together to achieve common goals (Paracha et al., 2019; Lee & Cavusgil, 2006). It can take the form of a joint venture, merger, or simply close cooperation between companies (Islam et al., 2018). Such strategic alliances typically aim to share resources and knowledge or gain access to new markets, technologies, or customer bases. These alliances enable companies to achieve their goals more efficiently and effectively than if they work alone. The rapidly evolving digital transformation has significantly altered business concepts nowadays (Jiang et al., 2021; He et al., 2020; Morakanyane et al., 2017).

Corporate strategic alliances, environmental changes, and implemented strategies play a crucial role in influencing corporate sustainability performance (Cacciolatti et al., 2020). Companies positioned centrally within alliance networks will have better access to resources and information compared to those not in central positions (Goerzen, 2007; Koka & Prescott, 2008; Jiang et al., 2022). Therefore, a company's position in alliances should be considered when forming strategic alliances (Kamasak et al., 2016; Ge et al., 2020; Aceves et al., 2018). Additionally, environmental changes and corporate strategies also affect a company's sustainability performance through strategic alliances. Companies must monitor environmental changes and ensure that implemented strategies remain relevant and able to meet evolving environmental demands (Koka & Prescott, 2008; Li & Liu, 2014).

Corporate sustainability performance relates to how a company conducts its operations considering the business's impact on the environment, economy, and society both presently and in the future (Wang et al., 2020). In this regard, companies strive to meet current needs without neglecting the needs of future generations while considering the continuously evolving dynamics in the environment, economy, and society (Xie & Zhu, 2020; Shang et al., 2020; Munir et al., 2019). To enhance corporate sustainability performance, companies must have a long-term commitment to ensuring that their businesses fulfill social and environmental responsibilities. The principle of sustainability should permeate all aspects of business with continuous monitoring and evaluation to ensure that the business remains responsibly and sustainably operational (Asha'ari & Daud, 2018; Tseng et al., 2018).

Corporate sustainability performance encompasses three main constructs, namely environmental sustainability performance, economic sustainability performance, and social sustainability performance. Environmental sustainability performance refers to the company's ability to address environmental issues and ensure that its operations do not harm the environment. Economic sustainability performance measures the company's ability to meet the economic needs of both the present and future generations. Lastly, social sustainability performance is the company's ability to meet social needs and maintain societal well-being (Shang et al., 2020; Asha'ari & Daud, 2018).

The framework of the hybrid business strategy, corporate strategic alliance, and corporate sustainability performance is represented visually in Figure 1. This model illustrates four hypotheses in-depth, depicting the correlations and influences between these variables. This study aims to examine the extent to which these factors influence each other and contribute to the success and sustainability of information technology companies in Indonesia. Based on the explanation above, the research hypotheses are as follows:

- H1: Hybrid business strategy influences corporate strategic alliance.*
- H2: Hybrid business strategy influences corporate sustainability performance.*

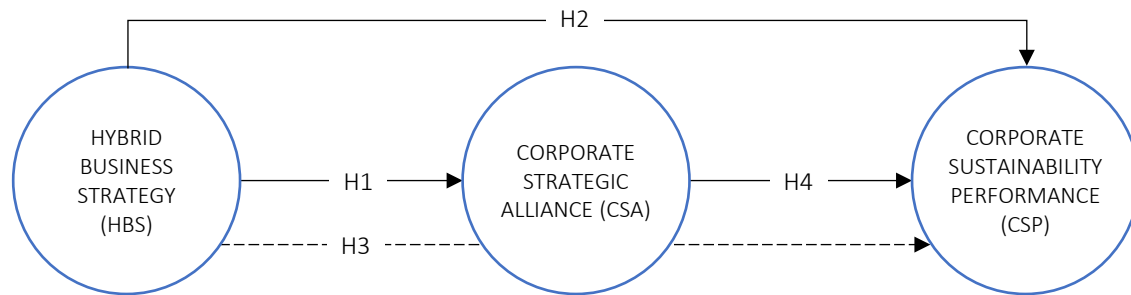


Figure 1. Research framework

H3: Hybrid business strategy influences corporate sustainability performance mediated by corporate strategic alliance.

H4: Corporate strategic alliance influences corporate sustainability performance.

2. METHODS

This paper used quantitative techniques, with data collected through the distribution of questionnaires to management figures of information technology companies in Indonesia. The survey method was utilized, where a sample was drawn from the population, and questionnaires were used as the primary data collection tool (Coughlan et al., 2009). Primary data were gathered directly from management and business unit managers of information technology companies, while secondary data were gathered from journal articles, company profiles, and relevant internal data, which served as supporting information. The questionnaire (Appendix A) utilized a Likert scale ranging from 1 to 6. Non-probability sampling was applied using a purposive sampling technique. Data analysis was conducted using the quantitative SEM method, facilitated by the SmartPLS 4.0 program.

Before proceeding with the analysis, all data were subjected to checks for validation, reliability, and completeness. Validity testing is essential to confirm that the questionnaire items accurately reflect the constructs being studied (Ghozali, 2014). Validity was assessed using the outer model measurement, focusing on convergent and discriminant validity. Items with loading factor values of ≥ 0.50 were deemed acceptable, while those below 0.50 were excluded

from the model. Reliability testing measures the consistency or stability of responses over time (Ghozali, 2014). The reliability of the research instrument was evaluated through the outer model measurement, specifically analyzing composite reliability and Cronbach's alpha. Constructs with Cronbach's alpha and composite reliability values of ≥ 0.70 were considered reliable.

The population consists of information technology companies in Indonesia, ranging from medium to enterprise scale, represented by a sample consisting of 389 respondents. A non-probability sampling method was selected, and purposive sampling was used to select the respondents. This study analyzes three variables, with a total of eight dimensions and 34 indicators representing the three research variables. A questionnaire consisting of 34 questions (Appendix A) was used to measure the indicators. The unit of analysis is IT companies operating for more than five years in Indonesia. The analysis was conducted within the timeframe of May to October 2023.

Table 1 shows the characteristics of respondents by the distribution of respondents' gender across the sample, the distribution of respondents' positions at various levels within the company, length of tenure in the company reflecting the level of experience, and the size of the company in terms of total number of employees. Thus, 239 respondents are male (61%), and 290 hold managerial positions in their companies (75%). A total of 163 respondents have a work tenure of 3-5 years (42%), and as many as 61 respondents have a work tenure of more than 15 years (16%). Furthermore, 161 respondents work in companies with fewer than 50 employees (41%).

Table 1. Characteristics of respondents

Characteristics	Classification	Total	Percentage
		Respondents	
Gender	Male	239	61%
	Female	150	39%
Position in the company	Manager	290	74%
	Senior Manager	42	11%
	Director	35	9%
	Company Owner	22	6%
Length of employment	3-5 years	163	42%
	> 5-10 years	122	31%
	> 10-15 years	43	11%
	> 15 years	61	16%
Total employees in the company	1-50 employees	161	41%
	51-100 employees	111	29%
	101-300 employees	59	15%
	> 300 employees	58	15%

3. RESULTS

The research model was evaluated using a construct validity test (Table 2), which aimed to determine the extent to which the questionnaire, as a measuring instrument, effectively captures the es-

sence of the model. Based on Hair et al. (2019), the convergent validity test specifies that each question indicator should have a loading factor value above 0.50 (> 0.50). In meeting this criterion, the questionnaire comprehensively captures the perception of all variables and enables accurate mea-

Table 2. Validity results

Variable	Indicator	AVE	Outer Loading	Result
Hybrid Business Strategy	HBS1	0.656	0.820	Valid
	HBS2		0.690	Valid
	HBS3		0.807	Valid
	HBS4		0.793	Valid
	HBS5		0.790	Valid
	HBS6		0.840	Valid
	HBS7		0.849	Valid
	HBS8		0.857	Valid
	HBS9		0.830	Valid
	HBS10		0.810	Valid
Corporate Strategic Alliance	CSA1	0.630	0.770	Valid
	CSA2		0.793	Valid
	CSA3		0.777	Valid
	CSA4		0.825	Valid
	CSA5		0.842	Valid
	CSA6		0.834	Valid
	CSA7		0.637	Valid
	CSA8		0.797	Valid
	CSA9		0.798	Valid
	CSA10		0.839	Valid
	CSA11		0.798	Valid
Corporate Sustainability Performance	CSP1	0.612	0.735	Valid
	CSP2		0.787	Valid
	CSP3		0.762	Valid
	CSP4		0.76	Valid
	CSP5		0.703	Valid
	CSP6		0.804	Valid
	CSP7		0.822	Valid
	CSP8		0.823	Valid
	CSP9		0.817	Valid
	CSP10		0.781	Valid
	CSP11		0.777	Valid
	CSP12		0.797	Valid
	CSP13		0.791	Valid

Table 3. Reliability results

Variable	Cronbach's Alpha	Composite Reliability (rho_a)	Composite reliability (rho_c)
Hybrid Business Strategy	0.942	0.950	0.950
Corporate Strategic Alliance	0.941	0.950	0.949
Corporate Sustainability Performance	0.947	0.951	0.953

Table 4. R-square results

Variable	R Squared	R Squared Adjusted
Corporate Strategic Alliance	0.625	0.622
Corporate Sustainability Performance	0.640	0.635

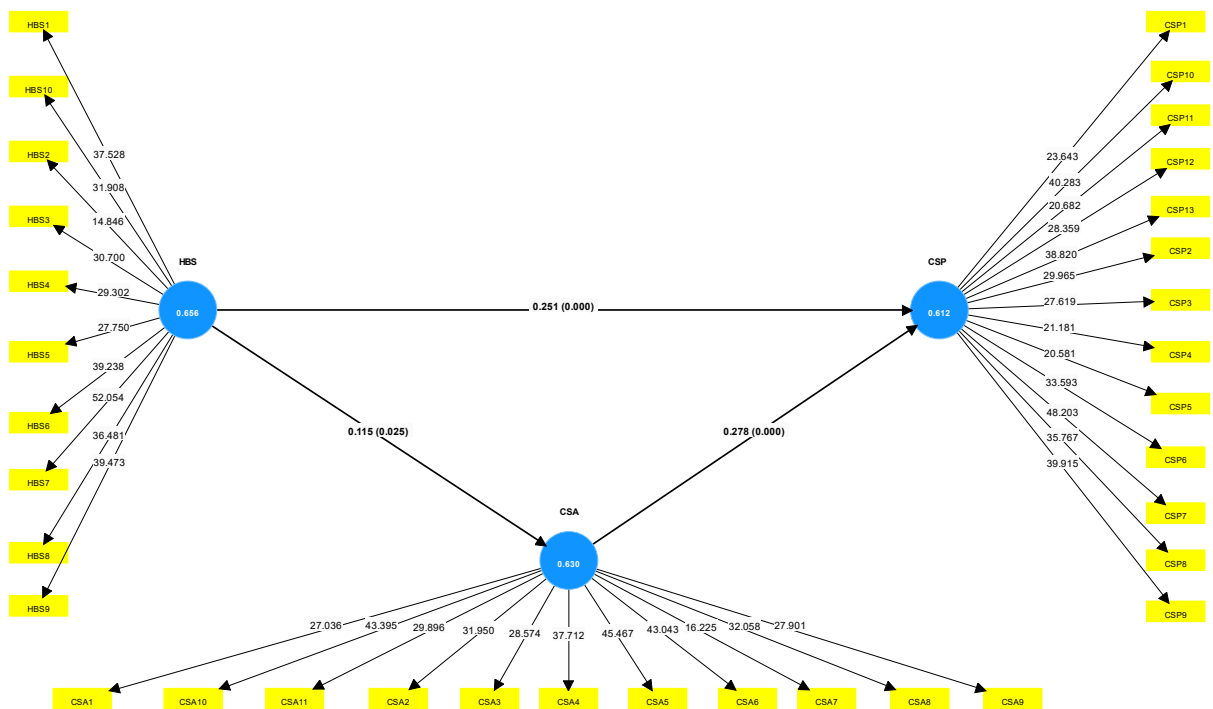
surement of the latent variables. Two reliability tests were conducted, namely a Cronbach's alpha test and the composite reliability test (Table 3). Hair et al. (2019) recommend that all constructs employed in the research model should have composite reliability and Cronbach's alpha values equal to or greater than 0.7 (≥ 0.7). In this respect, all variables utilized in this study demonstrated high reliability (Table 4).

Structural modeling is an ideal data analytics method for examining complex relationships among multiple analytical variables. It is used to test the degree to which a hypothesized model accurately represents the interrelationships among its variables. The bootstrapping process, which in-

volves generating a large number of samples, was employed to check for errors and calculate the *P*-values to determine the significance of the measurement model at the 5% significance level. The bootstrapping process for the structural model is illustrated in Figure 2.

Table 5 summarizes the hypotheses analysis. This study used the bootstrapping procedure, as recommended by the literature.

Table 5 indicates that the hypothesis with the strongest and most significant relationship is hypothesis 4, which states that corporate strategic alliance positively influences corporate sustainability performance. From Table 5, hypothesis 4 has a



Note: HBS: Hybrid business strategy; CSA: Corporate strategic alliance; CSP: Corporate sustainability performance.

Figure 2. Research model

Table 5. Summary of hypothesis testing

No.	Original Sample (O)	Sample Mean (M)	STDEV	T Statistics (O/STDEV)	P-values	Conclusion	
H1:	HBS → CSA	0.115	0.121	0.051	2.243	0.025	Hypothesis 1 is accepted
H2:	HBS → CSP	0.251	0.250	0.047	5.294	0.000	Hypothesis 2 is accepted
H3:	HBS → CSA → CSP	0.032	0.035	0.016	1.995	0.047	Hypothesis 3 is accepted
H4:	CSA → CSP	0.278	0.285	0.050	5.603	0.000	Hypothesis 4 is accepted

Note: HBS: Hybrid business strategy; CSA: Corporate strategic alliance; CSP: Corporate sustainability performance.

Table 6. Model fit results

Measure	Saturated Model	Estimated Model
SRMR (Standardized Root Mean Square Residual)	0.048	0.048
d_ ULS (Unweighted Least Squares Discrepancy)	1.395	1.395
d_ G (Geodesic Discrepancy)	0.768	0.768
Chi-square	1602.05	1602.05
NFI (Normed Fit Index)	0.846	0.846

T-value of 5.603 and a *P*-value of 0.000. Therefore, based on these results, it can be stated that corporate strategic alliances are considered the strongest factor that can provide a positive contribution to corporate sustainability performance.

Table 6 states that the NFI value is 0.846, close to 1, and the SRMR value is $0.048 < 0.08$. It can be concluded that the model fits well.

4. DISCUSSION

Corporate sustainability performance in the IT industry has become an increasingly critical factor in today's global landscape. IT companies in Indonesia, as major players and contributors to environmental impact, have a significant role to play in driving sustainable practices. The evaluation results uncover the relationship, impacts, and deeper understanding of the concept of hybrid business strategy and corporate strategic alliance as powerful tools to enhance sustainability performance within the framework of IT companies in Indonesia.

Hypothesis 1 elucidates the relationship between hybrid business strategy and corporate strategic alliance. The statistical analysis results show that this relationship has a *T*-value of 2.243 and a *P*-value of 0.025, indicating that hybrid business strategy has a positive and significant influence on corporate strategic alliance. This finding aligns with previous research stating that hybrid business strategy helps build corporate strategic alliances. Additionally, the

relationship maintenance stage is crucial as it can affect the continuity of strategic alliances between companies (Tang et al., 2022). Moreover, an effective hybrid business strategy can form alliances by creating shared value such as knowledge sharing, resource sharing, and strategic synergy among alliance partners (Mantecon et al., 2016; Anwar & Hasnu, 2017; Garg, 2016; Tang et al., 2021; Rehman et al., 2022). Hypothesis 1 highlights the importance of shared expertise and resources in a hybrid business strategy. It can lead to combining the strengths of different companies' strategies to accelerate the development of sustainable technologies and practices by opening up new insights for further reflection on the interactions between these two variables in the rapidly evolving IT industry environment in Indonesia. Concentrating on a business concept that combines more than one business strategy to demonstrate competitiveness and emphasize efficiency and differentiation in the IT industry will result in positive outcomes for collaboration among partners in the system integrator industry (Wang et al., 2020). Additionally, the complex market environment and unique business dynamics have great potential to influence the formation of strategic alliances. Key factors such as possessing high-quality human resources, being able to adapt to the latest technology, and being flexible in facing changes will play a role in shaping effective and sustainable strategic alliances.

Reviewing the respondent demographics, most respondents hold bachelor's degrees (78%), master's degrees (12%), and doctoral degrees (1%). The education level of the respondents correlates with the qual-

ity of human resources in system integrator companies, which will determine each company's ability to contribute and adapt to technological developments, as well as innovate, ultimately determining the success of the implemented corporate strategic alliance.

The results found that the hybrid business strategy used by IT companies in Indonesia can influence how these companies form strategic partnerships with business partners. By combining elements from various business strategies, companies can create added value in their partnerships and help mitigate risks associated with new sustainability initiatives. Thus, leveraging hybrid business strategies in the strategic alliance of IT companies in Indonesia can be the key to synergizing better sustainability performance and creating added value through effective strategic partnerships (Tang et al., 2022; Mantecon et al., 2016).

The statistical data analysis in Table 5 also shows that the relationship between hybrid business strategy and corporate sustainability performance has a *T*-value of 5.294 and a *P*-value of 0.000, indicating that hybrid business strategy has a positive and significant influence on corporate sustainability performance, thus accepting Hypothesis 2. This finding aligns with several previous studies on this relationship. Companies must implement appropriate strategies to achieve corporate sustainability performance in a constantly changing business environment. Additionally, market conditions and resource availability can influence the adoption of hybrid business strategies, which subsequently impact sustainability performance (Agyapong et al., 2016; Nguyen et al., 2022; Manning et al., 2017; Yasa et al., 2019). In the context of IT companies in Indonesia, these findings have significant implications that strategic alliances can provide access to new markets and customer segments, expanding the reach of sustainable products and services. Focusing on hybrid business strategies provides valuable opportunities for these companies to integrate sustainability principles into their core operations. By adopting hybrid business strategies, these companies can harness the innovative potential of technology to design solutions that yield economic profits and sustainable social and environmental benefits. The integration of profit-oriented business components with sustainability values enables companies to optimize their resources and capabilities more effectively. The approach above not

only provides short-term benefits but also helps build the company's reputation as a socially and environmentally responsible player in the evolving IT industry. Additionally, by adopting a hybrid business strategy and integrating it with company collaboration, a strong synergy can be created to support the sustainability performance of IT companies in Indonesia. By leveraging the strengths of both, IT companies, which are at the forefront of digital transformation, can achieve sustainability goals more effectively, optimally, and with a positive impact (Morakanyane et al., 2017; He et al., 2020; Wang et al., 2022).

Table 5 also examines the influence of hybrid business strategy on corporate sustainability performance mediated by corporate strategic alliance, yielding a *T*-value of 1.995 and a *P*-value of 0.047. These values indicate that Hypothesis 3 is accepted. This is consistent with previous research involving these three variables. Corporate strategic alliance helps companies enhance dynamic capabilities and knowledge management, which in turn strengthens the implementation of hybrid business strategy and subsequently improves corporate sustainability performance. The implementation of a hybrid strategy will influence the characteristics of strategic alliances, which in turn will affect the corporate sustainability performance. The mediated effect will be stronger if the strategic alliances formed within the context of a hybrid business strategy are of high quality and support sustainability goals. A company's managerial ability to manage business strategy and alliances can affect the extent to which hybrid business strategy influences corporate sustainability performance (Agyapong et al., 2016; Tang et al., 2022; Rehman et al., 2022; Anwar & Hasnu, 2017; Garg, 2016).

This analysis depicts that the relationship between hybrid business strategy, corporate strategic alliance, and corporate sustainability performance within the IT industry environment is highly complex. Unique factors in this industry, including the rapid pace of technological change and constantly shifting market dynamics, will influence the interaction between strategic alliances and hybrid business strategies, which then impact the sustainability performance of companies. Therefore, this analysis is very helpful for system integrator companies in understanding the interaction of these three variables. In this situation, companies need to adopt hybrid strategies to achieve sustainability performance amidst the constantly

changing dynamics in a rapidly evolving industry. Additionally, internal resources and managerial capabilities in creating strategies significantly affect the success of strategic alliances between partners, ultimately influencing IT companies' sustainability.

IT companies in Indonesia play a critical role in addressing the challenges and opportunities brought by rapid technological and business changes. The results show a *T*-value of 5.603 and a *P*-value of 0.000, indicating that Hypothesis 4 is accepted, meaning corporate strategic alliances have a positive and significant influence on corporate sustainability performance. This acceptance aligns with previous research, which states that corporate strategic alliances play an important role in influencing corporate sustainability performance. Consequently, organizational culture is expected to align with the strategic alliances implemented by the company. Additionally, companies positioned centrally in the alliance structure have better access to resources and information compared to those not centrally positioned (Paracha et al., 2019; Koka & Prescott, 2008; Li & Liu, 2014). As technology continues to evolve rapidly and competition intensifies, IT companies in Indonesia find themselves strategically positioned to implement innovative solutions that support growth and sustainable performance. By providing integrated technology solutions, IT companies help integrate complex systems and support their customers' business operations. Therefore, these findings are highly relevant in helping companies and partners meet competitive demands and achieve digital transformation (Teng et al., 2022; Wang et al., 2022).

Strategic alliances with business partners, technology providers, and other stakeholders have become increasingly important. System integrator companies in Indonesia need to collaborate to create a sustainable and positively impactful business ecosystem. This collaboration enables

the exchange of knowledge, resources, and best practices, which can help companies achieve better sustainability performance. The results of this analysis offer invaluable guidance for IT companies in Indonesia. They can focus more on developing and utilizing corporate strategic alliances to enhance corporate sustainability performance. By collaborating with the right partners, system integrator companies can implement more responsible and sustainable business practices, positively impacting society, the environment, and sustainable business growth. This is a crucial step in supporting the development of a sustainable IT industry in Indonesia.

This study found that IT companies in Indonesia can enhance access to resources, knowledge, and innovation with effective strategic alliances, which will support sustainable corporate practices. The combination of corporate strategic alliances with business strategy can provide significant benefits in improving corporate sustainability performance. Incorporating sustainability into the core business strategy ensures that it is a top priority for the company, and developing long-term sustainability goals and plans can guide decision-making and resource allocation. Furthermore, engaging with stakeholders, including customers, employees, investors, and communities, can help build trust and support for sustainability initiatives. Thus, integrating strategic alliances with corporate strategy can create advantageous synergies in achieving corporate sustainability performance. Aligning goals and objectives within the strategic alliances, sharing resources to reduce cost, and increasing efficiency by collaborating in research and development on technology and innovation create a synergistic approach that can enhance IT companies in the Indonesian market to achieve company advantage, leading to sustainable performance (Wang et al., 2020).

CONCLUSION

This study aims to demonstrate that a hybrid business strategy will improve corporate sustainability performance by combining the strength and different business model to fostering the innovation. Moreover, corporate strategic alliance will also enhance the corporate sustainability performance by leveraging the resources, expertise, and market access of business partners. Furthermore, the interaction between corporate strategic alliance and corporate sustainability performance can be an effective tool for IT companies in Indonesia to improve their sustainability performance.

This study offers novels that provide valuable insights into the relationship between hybrid business strategy and corporate strategic alliance to create a synergistic effect that leads to greater benefits for corporate sustainability, especially for IT companies in Indonesia. Based on the findings, further research could focus on the impact of hybrid business strategy and corporate strategic alliance on specific dimensions of corporate sustainability, such as environmental performance, social responsibility, and governance. On the other hand, exploring and pursuing how institutional factors such as regulatory framework, cultural norms, and market condition have a moderating effect on those variables could provide a deeper understanding of the factors that drive corporate sustainability performance in IT companies and inform the development of effective strategies for promoting sustainable business practices.

AUTHOR CONTRIBUTIONS

Conceptualization: Ria Emilia Sari, Muhtosim Arief, Mohammad Hamsal, Rano Kartono Rahim.

Data curation: Ria Emilia Sari, Muhtosim Arief, Mohammad Hamsal, Rano Kartono Rahim.

Formal analysis: Ria Emilia Sari, Muhtosim Arief, Mohammad Hamsal, Rano Kartono Rahim.

Investigation: Ria Emilia Sari, Muhtosim Arief, Mohammad Hamsal, Rano Kartono Rahim.

Methodology: Ria Emilia Sari, Muhtosim Arief, Mohammad Hamsal, Rano Kartono Rahim.

Project administration: Ria Emilia Sari.

Resources: Ria Emilia Sari, Rano Kartono Rahim.

Software: Ria Emilia Sari, Rano Kartono Rahim.

Supervision: Ria Emilia Sari, Muhtosim Arief, Mohammad Hamsal, Rano Kartono Rahim.

Validation: Ria Emilia Sari, Muhtosim Arief, Mohammad Hamsal, Rano Kartono Rahim.

Visualization: Ria Emilia Sari, Rano Kartono Rahim.

Writing – original draft: Ria Emilia Sari.

Writing – review & editing: Ria Emilia Sari, Rano Kartono Rahim.

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APPENDIX A

Table A1. Questionnaire: Personal data

Characteristics	Classification
Gender	Male
	Female
Position in the company	Manager
	Senior Manager
	Director
	Company Owner
Length of employment	3-5 years
	> 5-10 years
	> 10-15 years
	> 15 years
Total employees in the company	1-50 employees
	51-100 employees
	101-300 employees
	> 300 employees

Table A2. Questionnaire: Assessing hybrid business strategy, corporate strategic alliance, and corporate sustainability performance

No.	Code	Questions	SD	D	MD	MA	A	SA
Hybrid Business Strategy: Marketing Capabilities, Innovative Capabilities								
1	HBS1	My company is capable of developing products/services that meet the specific needs of customers.						
2	HBS2	My company uses personal selling (face-to-face meetings between sellers and potential buyers) to inform and provide understanding about a product/service.						
3	HBS3	My company provides products/services that meet customer needs.						
4	HBS4	My company closely monitors changes in market prices for ICT products/services.						
5	HBS5	My company offers good after-sales service to customers.						
6	HBS6	My company is able to develop functional products/services in line with the business strategy.						
7	HBS7	My company has the capacity to produce new products/services that align with the business strategy.						
8	HBS8	My company can adapt products/services to meet customer needs.						
9	HBS9	My company prioritizes innovation when creating products/services that align with the business strategy.						
10	HBS10	My company is capable of providing products/services that match customer purchasing behavior.						
Corporate Strategic Alliance: Knowledge Integration, Bonding, Alliance Performance								
1	CSA1	The knowledge possessed by parties across organizations has been fully transferred to each other.						
2	CSA2	Parties across organizations are interdependent in integrating knowledge.						
3	CSA3	Parties across organizations continuously support the shared use of knowledge.						
4	CSA4	The knowledge provided by parties across organizations has been effectively used to build new knowledge.						
5	CSA5	My company has close partnership relations with parties across organizations.						
6	CSA6	My company has very good social relations with parties across organizations.						
7	CSA7	My company would lose a good business partner if this cooperation ended.						
8	CSA8	My company has achieved the main objectives in this partnership.						
9	CSA9	My company's competitiveness has increased significantly with this partnership.						
10	CSA10	My company has successfully enhanced critical skills or capabilities from this partnership.						
11	CSA11	My company is satisfied with this partnership.						

Table A2 (cont.). Questionnaire: Assessing hybrid business strategy, corporate strategic alliance, and corporate sustainability performance

No.	Code	Questions	SD	D	MD	MA	A	SA
Corporate Sustainability Performance: Environmental Sustainability Performance, Economic Sustainability Performance, Social Sustainability Performance								
1	CSP1	My company reuses products that are still usable for internal purposes.						
2	CSP2	My company performs operational efficiency within the office environment.						
3	CSP3	There is an increase in the reuse of products that are still usable for internal purposes.						
4	CSP4	The company operates strategically and efficiently.						
5	CSP5	My company reduces operational costs to improve the company's financial performance.						
6	CSP6	The company follows government regulations to survive in the market.						
7	CSP7	My company always tries new technologies to increase the company's profits.						
8	CSP8	My company always creates new innovations in business to increase the company's profits.						
9	CSP9	My company considers the interests of stakeholders when making investments.						
10	CSP10	My company prioritizes improving employee health and safety facilities.						
11	CSP11	My company maintains relationships and harmony with stakeholders.						
12	CSP12	Top management always encourages company managers to innovate to increase the company's profits.						
13	CSP13	My company always conducts employee training to develop human resources in the company to stay competitive.						

Note: SD = Strongly Disagree = 1; D = Disagree = 2; MD = Moderately Disagree = 3; MA = Moderately Agree = 4; A = Agree = 5; SA = Strongly agree = 6.