
SUSTAINABLE MARKETING MIX AND SMES' SUSTAINABILITY: THE MEDIATING ROLE OF COMPETITIVE ADVANTAGE

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Abstract: SMEs' sustainability has become a strategic priority amid increasing business uncertainty. This study examines the effect of the Sustainable Marketing Mix, including Sustainable Product, Sustainable Price, Sustainable Place, Sustainable Promotion, and Sustainable People, on SMEs' Sustainability, with Competitive Advantages as a mediating variable. Focusing on building material retail businesses in Riau Province, Indonesia, data from 156 respondents, including customers and potential customers, were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that Sustainable People and Sustainable Place significantly influence both Competitive Advantages and SMEs' Sustainability, while Sustainable Product affects SMEs' Sustainability directly. Competitive Advantages significantly mediate the relationship between Sustainable People and SMEs' Sustainability. Theoretically, this study enriches RBV-based sustainability research by identifying Sustainable People as a unique internal resource that strengthens SMEs' sustainability both directly and through competitive advantages. Practically, SMEs are encouraged to enhance human resource capabilities and distribution efficiency, while policymakers and business associations should implement training, mentoring, and incentive programs to support sustainability-driven strategies. Future research may explore additional factors such as digital capabilities, dynamic capabilities, or entrepreneurial resilience, and adopt longitudinal or mixed-method approaches to capture evolving challenges in increasingly volatile and disruptive business environments.

Keywords: Sustainable Marketing Mix; SMEs' Sustainability; Competitive Advantages; PLS-SEM; Resource-Based View

Abstrak: Keberlanjutan usaha kecil dan menengah (UKM) telah menjadi prioritas strategis di tengah meningkatnya ketidakpastian bisnis. Penelitian ini meneliti pengaruh *Sustainable Marketing Mix* (*Sustainable Product, Sustainable Price, Sustainable Place, Sustainable Promotion, dan Sustainable People*), terhadap SMEs' *Sustainability* dengan *Competitive Advantage* sebagai variabel mediasi. Penelitian difokuskan pada bisnis ritel bahan bangunan di Provinsi Riau, Indonesia, dengan data dari 156 responden, termasuk pelanggan dan calon pelanggan, yang dianalisis menggunakan *Partial Least Squares Structural Equation Modeling* (PLS-SEM). Hasil penelitian menunjukkan bahwa *Sustainable People* dan *Sustainable Place* secara signifikan memengaruhi baik *Competitive Advantage* maupun SMEs' *Sustainability*, sementara *Sustainable Product* hanya memengaruhi SMEs' *Sustainability* secara langsung. *Competitive Advantage* terbukti memediasi hubungan antara *Sustainable People* dan SMEs' *Sustainability*. Secara teoritis, penelitian ini memperkaya penelitian keberlanjutan berbasis RBV dengan mengidentifikasi *Sustainable People* sebagai sumber internal yang unik yang memperkuat SMEs' *Sustainability* baik secara langsung maupun melalui *Competitive Advantage*. Secara praktis, UKM dianjurkan untuk meningkatkan kapabilitas sumber daya manusia dan efisiensi distribusi, sementara pembuat kebijakan dan asosiasi bisnis sebaiknya

melaksanakan program pelatihan, pendampingan, dan insentif untuk mendukung strategi berbasis keberlanjutan. Penelitian selanjutnya dapat mengeksplorasi faktor tambahan seperti *digital capabilities*, *dynamic capabilities*, atau *entrepreneurial resilience*, serta menggunakan desain longitudinal atau metode campuran untuk menangkap tantangan yang terus berkembang dalam lingkungan bisnis yang semakin tidak stabil dan rentan terhadap gangguan.

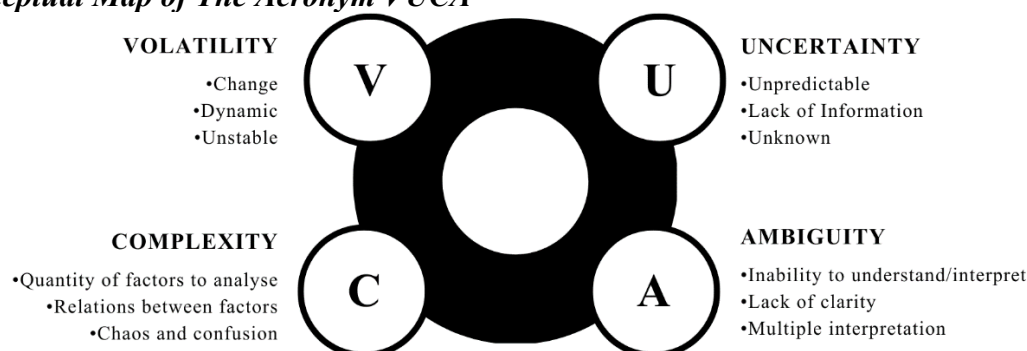
Kata Kunci: *Sustainable Marketing Mix*, *SMEs' Sustainability*, *Competitive Advantages*, *PLS-SEM*, *Resource-Based View*.

INTRODUCTION

Background

Rapid urbanization, which is projected to reach 68 percent of the global population by 2050 (United Nations, 2018), is increasing demand for housing and infrastructure, creating opportunities for the construction and building materials retail sectors, including SMEs. In Indonesia, SMEs contribute over 60% to GDP and employ 97% of the workforce (Kemenko Perekonomian RI, 2025). The construction sector continues to grow, particularly in Sumatra and Kalimantan, with Riau Province gaining prominence due to its strategic position on international trade routes (BPS, 2025a; Bakce et al., 2019). However, SMEs face challenges in a VUCA (Volatility, Uncertainty, Complexity, Ambiguity) environment, such as intense competition, technological shifts, and environmental pressures (Taskan et al., 2022; Rudawska, 2019). Their vulnerability in adapting to uncertainty (Troise et al., 2022) highlights the need for sustainable strategies to maintain competitiveness, making research on sustainability-based approaches in the building materials retail sector highly relevant.

Figure 1
Conceptual Map of The Acronym VUCA



Source: Taskan et al. (2022)

SMEs' sustainability is vital, as disruptions to their operations can affect the broader economy (Pu et al., 2021). To remain resilient in a VUCA environment, SMEs must be able to anticipate and respond effectively to external changes (Troise et al., 2022). A marketing mix that aligns with market needs and builds long-term customer relationships can strengthen competitiveness and customer loyalty (Mintz et al., 2021). Lim (2021) noted that the marketing mix integrates strategic and organizational processes to create value and reinforce competitive advantage. However, traditional marketing mix strategies have often overlooked sustainability, even though they contribute to sustainable economic growth and competitiveness (Syapsan, 2019). Martins et al. (2022) emphasized the importance of green management, environmental and socio-cultural values, and capability development in supporting SMEs' sustainability. In response, Kotler (2011) encouraged revising conventional marketing practices, and Kowalska (2020) proposed Sustainable Marketing Mix (5s) while considering social welfare and environmental constraints. This sustainable approach has been shown to enhance competitiveness and support SMEs' long-term sustainability.

Competitive advantages have also been identified as a mediating factor in SMEs' sustainability (Tolossa et al., 2024; Demessie & Shukla, 2024), although findings are inconsistent, as Zahara et al. (2024) reported no significant mediating effect in supply chain performance. Capability development remains central to improving competitiveness (Fabrizio et al., 2022) and supporting business sustainability (Najib et al., 2021). Martins et al. (2022) and Nogueira et al. (2023) emphasized the need for sustainability studies that balance economic, social, and environmental dimensions. Kowalska (2022) also noted that previous research was geographically and sectorally limited, reducing generalizability beyond the SME food and beverage sector in Sri Lanka and Poland.

Research Objective

Based on the explanation above, this study examines the Sustainable Marketing Mix and expands the empirical understanding of Competitive Advantages as a mediating variable in sustaining and improving SMEs' Sustainability in a VUCA environment. The study considers different geographical and sectoral contexts, focusing on building materials retail SMEs in Riau Province, Sumatra, Indonesia, which continue to contribute to the regional economy.

LITERATURE REVIEW

Resource-Based View (RBV)

The Resource-Based View (RBV) explains that firms achieve sustainable competitive advantage by leveraging valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). These resources include both tangible assets such as technology and distribution systems and intangible assets such as human capital, customer relationships, and organizational culture (McWilliams & Smart, 1995). For SMEs, RBV highlights the importance of maximizing limited but specialized resources including employee capabilities, knowledge, and customer-oriented practices to create long-term value (Lumpkin et al., 2011; Varadarajan, 2020). In sustainability contexts, RBV further argues that capabilities such as environmental responsibility, employee training, and ethical sourcing function as strategic, hard-to-imitate resources that enhance competitive advantage.

Sustainable Marketing Mix (5Ps)

The traditional 4Ps marketing mix introduced by McCarthy in 1960 has evolved as firms increasingly integrate sustainability into marketing strategy (Kotler, 2011; Kowalska, 2020). The Sustainable Marketing Mix broadens the scope of marketing decisions by incorporating economic, social, and environmental considerations into each marketing element (Lim, 2021). Kowalska (2020, 2022) advanced this approach by developing a five element framework consisting of Sustainable Product, Sustainable Price, Sustainable Place, Sustainable Promotion, and Sustainable People, which reflects the triple bottom line of profit, people, and planet. This 5P structure aligns with the context of SMEs because it retains the essential People dimension and adapts the traditional marketing mix to sustainability without generating conceptual overlap.

Sustainable Product emphasizes reduced environmental impact through eco friendly materials, responsible packaging, and longer product life cycles (Mahenc, 2008; Dotson, 2015), supported by eco labeling that enhances reputation and differentiation (Moon et al., 2017). Sustainable Price stresses fairness and transparency by accounting for broader social and environmental costs (Leonidou et al., 2013; Richardson et al., 2015) and reflects evidence that environmentally conscious consumers are willing to pay more for responsible offerings (Trujillo et al., 2014). Sustainable Place addresses responsible distribution through efficient logistics, local sourcing, and reduced waste across the supply chain (Rondinelli and Berry, 2000; Leonidou et al., 2013). Sustainable Promotion covers ethical and transparent communication that conveys a firm's sustainability initiatives and encourages stakeholder engagement (Hashem, 2012; Emrich, 2015), including digital communication and participation

in environmental programs (Gunther, 2006). Sustainable People involves employees who uphold sustainability values through competence, training, ethical behavior, and well being (Larashati et al., 2012; Certo and Certo, 2018). Collectively, these five elements extend the traditional marketing mix by balancing profitability with environmental and social responsibility, which is essential for the long term sustainability of SMEs.

Although sustainability can be integrated into various marketing activities, applying the sustainability concept to all elements of the marketing mix requires theoretical justification. Prior research highlights that the Sustainable Marketing Mix is not merely an extension of the traditional 4Ps but a conceptual shift that embeds the triple bottom line, economic, social, and environmental responsibility into marketing decisions (Kowalska, 2020; 2022). This integration is particularly relevant for SMEs, whose resource limitations require them to prioritize internal capability development (Lim, 2021; Varadarajan, 2020).

While some critics argue that extending sustainability across all Ps risks conceptual broadness, recent studies show that each P captures a distinct sustainability-related organizational capability (Garg et al., 2024). Sustainable Product reflects environmental and functional responsibility; Sustainable Price captures fairness and cost transparency; Sustainable Place represents responsible distribution and supplier relationships; Sustainable Promotion reflects ethical communication and stakeholder engagement; and Sustainable People captures employee-centered practices that align with sustainability values. These elements have been empirically validated as distinct dimensions in multiple cross-country SME studies (Kowalska, 2020; 2022).

Moreover, refining the marketing mix into measurable sustainability variables does not simplify the concept but rather operationalizes it in a way that is suitable for empirical testing. This is consistent with the Resource-Based View, which emphasizes categorizing firm resources into discrete, assessable capabilities that may contribute to competitive advantage (Barney, 1991). Therefore, adopting the 5Ps framework in this study is conceptually justified because it provides a structured and theoretically grounded way to examine how sustainability-oriented resources influence competitive advantage and SMEs' sustainability.

Competitive Advantage

Competitive advantage refers to the firm's ability to deliver greater value than competitors through differentiation or cost efficiency (Porter, 1985). From the RBV perspective, competitive advantage arises when firms utilize internal resources that are difficult to replicate (Barney, 1991). In SMEs, competitive advantage may derive from innovation, market focus, cost control, or service quality (Tolossa et al., 2024). Studies have shown that competitive advantage can mediate the relationship between sustainability-oriented strategies and business performance (Correia et al., 2020; Demessie & Shukla, 2024). However, Zahara et al. (2024) found no significant mediating effect in supply chain performance, suggesting variation across sectors. Developing competitive advantage enables SMEs to adapt to dynamic environments while supporting sustainability goals (Olazo, 2023).

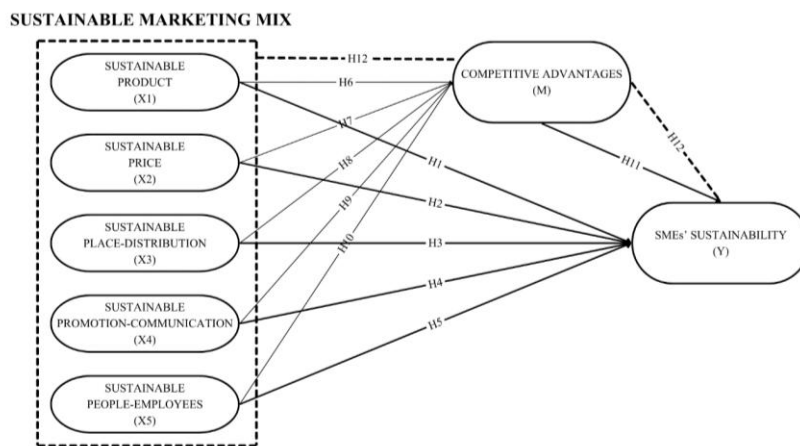
SMEs' Sustainability

SMEs make up over 90% of enterprises in developing countries and are essential to achieving the Sustainable Development Goals (World Bank, 2019; United Nations, 2024). Their sustainability requires financial continuity, environmental responsibility, and social contribution (Pu et al., 2021). Integrating sustainable practices, innovation, and digitalization enhances SMEs' efficiency and sustainability (Najib et al., 2021), while balancing economic, social, and environmental priorities is also necessary (Martins et al., 2022; Nogueira et al., 2023). In a volatile and uncertain business environment (Taskan et al., 2022), SMEs must adopt adaptive and sustainable strategies to maintain resilience (Troise et al., 2022). The Sustainable Marketing Mix guides sustainability-oriented marketing decisions, and competitive advantage

enables these efforts to translate into stronger performance and long-term survival (Tolossa et al., 2024).

Previous studies support a link between the Sustainable Marketing Mix and SMEs' Sustainability, with Competitive Advantage acting as a mediator. The Resource-Based View (RBV) explains how internal resources, particularly human capital and marketing capabilities, contribute to sustained competitive advantage and organizational sustainability. However, research has largely focused on SMEs in manufacturing and food and beverage sectors in developed contexts (Kowalska, 2022), leaving limited evidence from emerging markets and sectors such as building materials retail. This study addresses this gap by examining these relationships among building material retailers in Riau Province, Indonesia, to understand how sustainability-oriented marketing strategies strengthen long-term competitiveness. Accordingly, a conceptual research model (Figure 2) is developed to illustrate how the Sustainable Marketing Mix influences SMEs' Sustainability both directly and indirectly through Competitive Advantage.

Figure 2
Research Model



Source: Processed Data (2025)

Drawing on the conceptual model, the study formulates the following hypotheses.

- H1: Sustainable Product positively influences SMEs' Sustainability.
- H2: Sustainable Price positively influences SMEs' Sustainability.
- H3: Sustainable Place positively influences SMEs' Sustainability.
- H4: Sustainable Promotion positively influences SMEs' Sustainability.
- H5: Sustainable People positively influences SMEs' Sustainability.
- H6: Sustainable Product positively influences Competitive Advantage.
- H7: Sustainable Price positively influences Competitive Advantage.
- H8: Sustainable Place positively influences Competitive Advantage.
- H9: Sustainable Promotion positively influences Competitive Advantage.
- H10: Sustainable People positively influences Competitive Advantage.
- H11: Competitive Advantage positively influences SMEs' Sustainability.
- H12: Competitive Advantage mediates the relationship between the Sustainable Marketing Mix and SMEs' Sustainability.

RESEARCH METHODS

This study employed a quantitative approach using Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the relationships among the Sustainable Marketing Mix, Competitive Advantage, and SMEs' Sustainability. PLS-SEM was selected for its ability to analyze complex models with relatively small samples. Data were collected through a five-

point Likert scale online questionnaire distributed via purposive sampling to 156 customers or potential customers of building material stores in Riau Province. The sample size was determined using the inverse square root method to ensure adequate statistical power at a 5 percent significance level. Respondents were required to reside in Riau and have experience or interest in purchasing building materials. Data collection occurred from September 2024 to May 2025. All variables were measured using multi-item scales to ensure validity and reliability. Prior to PLS-SEM analysis, descriptive statistics were conducted to assess central tendency, dispersion, and normality. The measurement model was evaluated using factor loadings above 0.70, Composite Reliability, Cronbach's Alpha, and convergent and discriminant validity. The structural model was assessed using 5,000 bootstrap subsamples to analyze the significance of path coefficients. All analyses were conducted using SmartPLS version 4.1.1.2. The measurement indicators used in this study are presented below.

Table 1
Measurement Items

VARIABLE	INDICATOR	MEASUREMENT
SMEs' Sustainability Kowalska (2022)	Sustainable Product (PRO)	PRO1 The Building Material Store provides high-quality products and services.
		PRO2 The Building Material Store provides environmentally friendly products and services.
		PRO3 The Building Material Store uses recyclable packaging.
		PRO4 The Building Material Store is known as a business focused on social and/or environmental well-being.
	Sustainable Price (PRI)	PRI1 The Building Material Store offers affordable prices.
		PRI2 The Building Material Store competes fairly in pricing.
		PRI3 The Building Material Store provides fair prices for its products and services.
	Sustainable Place-Distribution (PLA)	PLA1 The Building Material Store collaborates with suppliers ethically and fairly.
		PLA2 The Building Material Store has written cooperation agreements with business partners.
		PLA3 The Building Material Store prioritizes local products.
		PLA4 The Building Material Store ensures alignment of values when selecting suppliers or contractors.
		PLA5 The Building Material Store considers price agreements carefully when establishing cooperation with suppliers or contractors.
	Sustainable Promotion - Communication (COM)	COM1 The Building Material Store participates in charity and/or sponsorship activities.
		COM2 The Building Material Store promotes sustainable consumption when communicating with customers.
		COM3 The Building Material Store communicates with customers honestly and transparently.
		COM4 The Building Material Store regularly informs stakeholders about its socio-ecological commitments to build trust and credibility.
		COM5 The Building Material Store regularly trains employees on social and environmental issues so they can communicate sustainable product benefits to customers.
		COM6 The Building Material Store attempts to replace traditional communication methods (e.g., leaflets, brochures, and other printed materials) with email, telephone, and social media.
	Sustainable People - Employees	EMP1 The Building Material Store provides a healthy and safe work environment for employees.

	(EMP)	EMP2	The Building Material Store promotes transparency and openness through a code of ethics that respects employee values and norms.
		EMP3	The Building Material Store encourages employees to be responsible toward the environment.
		EMP4	The Building Material Store motivates employees to participate in company-developed volunteer programs.
		EMP5	The Building Material Store hires individuals from the local area when new employees are needed.
		EMP6	The Building Material Store consults and involves employees in strategic planning processes.
		EMP7	The Building Material Store provides work–life balance programs.
Competitive Advantages Tolossa et al. (2024)	Differentiation (DI)	DI1	The Building Material Store sells unique products in a distinctive way.
		DI2	The Building Material Store focuses on offering higher product quality.
	Focus Strategy (FS)	FS1	The Building Material Store targets specific market segments.
		FS2	The Building Material Store offers products tailored to meet the needs of specific client groups.
	Cost Leadership (CL)	CL1	The Building Material Store focuses on standardizing its products and services.
		CL2	The Building Material Store emphasizes efficiency in its products and services.
SMEs' Sustainability Najib et al. (2021)	Economy (EC)	EC1	I feel that this building material store is increasingly visited by customers.
		EC2	I feel satisfied shopping at this building material store.
		EC3	I feel that this building material store continues to expand its business.
	Social (SO)	SO1	I feel that this building material store supports the surrounding community.
		SO2	I feel that this building material store cares about social well-being.
	Ecology (ECO)	ECO1	I feel that this building material store protects the surrounding environment.

Note: The questionnaire was administered in Indonesian. Measurement items are presented here in English to ensure clarity for publication.

RESULTS AND DISCUSSION

Characteristics of Respondents

Table 2 presents the demographic profile of the 156 respondents. The sample shows a balanced distribution across gender, with a larger proportion of younger consumers. Respondents come from varied educational backgrounds, representing the diverse communities that frequently interact with building material stores.

Table 2
Characteristics of Research Subjects

Classification	Category	Frequency (n)	Percentage (%)
Gender	Men	70	57.70%
	Women	66	42.30%
Age	< 25 years old	49	31.40%
	26–30 years old	29	18.60%
	31–35 years old	23	14.70%
	36–40 years old	16	10.30%
	41–45 years old	19	12.20%
	> 45 years old	20	12.80%
Education Level	Primary School	2	1.30%

	Junior High School	5	3.20%
	Senior High School	56	35.90%
	Diploma (D1/D2/D3)	8	5.10%
	Undergraduate (S1)	77	49.40%
	Graduate (S2/S3)	8	5.10%
Have shopped at building stores	Yes	145	92.90%
	No	11	7.10%
Domiciled in Riau	Yes	156	100.00%
	No	0	0.00%

Source: Processed Data (2025)

Outer Model Result

After conducting an initial analysis of the PLS-SEM model consisting of 37 indicators, it was found that there were 8 indicators with outer loading values below the threshold of 0.70. Referring to Hair et al. (2022), indicators with values below 0.70 can be eliminated because they are considered not to represent the construct optimally. The following is a list of the eliminated indicators along with their outer loading values:

Table 3
Outer Loading Results of Eliminated Indicators

Indicators	Items	Outer Loading
PRO3	Building material stores use recycled packaging	0.63
PRI2	Building material stores compete on price	0.326
PLA3	Building material stores prioritize local products	0.647
COM1	Building material stores are involved in charitable activities and/or sponsorships	0.694
COM3	Building material stores communicate with customers honestly and transparently	0.681
COM6	Building material stores are trying to replace traditional forms of communication with email, telephone, and social media	0.621
DI2	Building material stores focus on higher product quality	0.681
FS1	Building material stores target specific market segments	0.585

Source: Processed Data (2025)

After removing eight indicators, the model was recalculated with 29 retained indicators, all showing outer loadings above 0.70. The highest loading indicators were ECO1 (0.902), PRI3 (0.898), and SO1 (0.889), indicating strong contributions to their respective constructs.

Table 4
Composite Reliability and Average Variance Extracted (AVE)

Scale	Composite reliability (rho _a)	Average variance extracted (AVE)
SUSTAINABLE PRODUCT	0.788	0.684
SUSTAINABLE PRICE	0.729	0.783
SUSTAINABLE PLACE	0.874	0.724
SUSTAINABLE PROMOTION	0.758	0.67
SUSTAINABLE PEOPLE	0.902	0.624
COMPETITIVE ADVANTAGES	0.846	0.673
SMES' SUSTAINABILITY	0.921	0.756

Source: Processed Data (2025)

Based on Table 4, all constructs demonstrated acceptable reliability and convergent validity. Composite reliability values ranged from 0.70 to below 0.95, indicating consistent measurement without redundancy. All AVE values exceeded 0.50, confirming that each construct explains more than half of the variance in its indicators. These results confirm that the measurement model is both reliable and valid for further analysis.

Table 5
Heterotrait-monotrait Ratio (HTMT) Results

	COMPETITIVE_ ADVANTAGES	SMES' SUSTAINABILITY	SUSTAINABLE_ PEOPLE	SUSTAINABLE_ PLACE	SUSTAINABLE_ PRICE	SUSTAINABLE_ PRODUCT	SUSTAINABLE_ PROMOTION
COMPETITIVE_ ADVANTAGES							
SMES' SUSTAINABILITY	0.74						
SUSTAINABLE_ PEOPLE	0.837	0.792					
SUSTAINABLE_ PLACE	0.712	0.754	0.761				
SUSTAINABLE_ PRICE	0.581	0.596	0.708	0.804			
SUSTAINABLE_ PRODUCT	0.596	0.754	0.766	0.782	0.884		
SUSTAINABLE_ PROMOTION	0.766	0.741	0.88	0.857	0.712	0.726	

Source: Processed Data (2025)

Discriminant validity was assessed using the HTMT ratio (Table 5). All HTMT values were below 0.90, with most falling under the more conservative 0.85 threshold. These results indicate that the constructs are empirically distinct. The following are the results of collinearity testing using the variance inflation factor (VIF).

Table 6
Collinearity statistics (VIF) – Outer model – List

VIF		VIF		VIF	
PRO1	1.956	COM2	1.349	DI1	1.52
PRO2	2.001	COM4	1.641	FS2	1.973
PRO4	1.297	COM5	1.758	CL1	2.292
PRI1	1.475	EMP1	2.029	CL2	1.85
PRI3	1.475	EMP2	2.798	EC2	2.486
PLA1	2.024	EMP3	2.828	EC3	2.712
PLA2	2.338	EMP4	2.139	SO1	3.341
PLA4	2.294	EMP5	2.693	SO2	3.522
PLA5	2.21	EMP6	1.942	ECO1	4.188
		EMP7	2.236		

Source: Processed Data (2025)

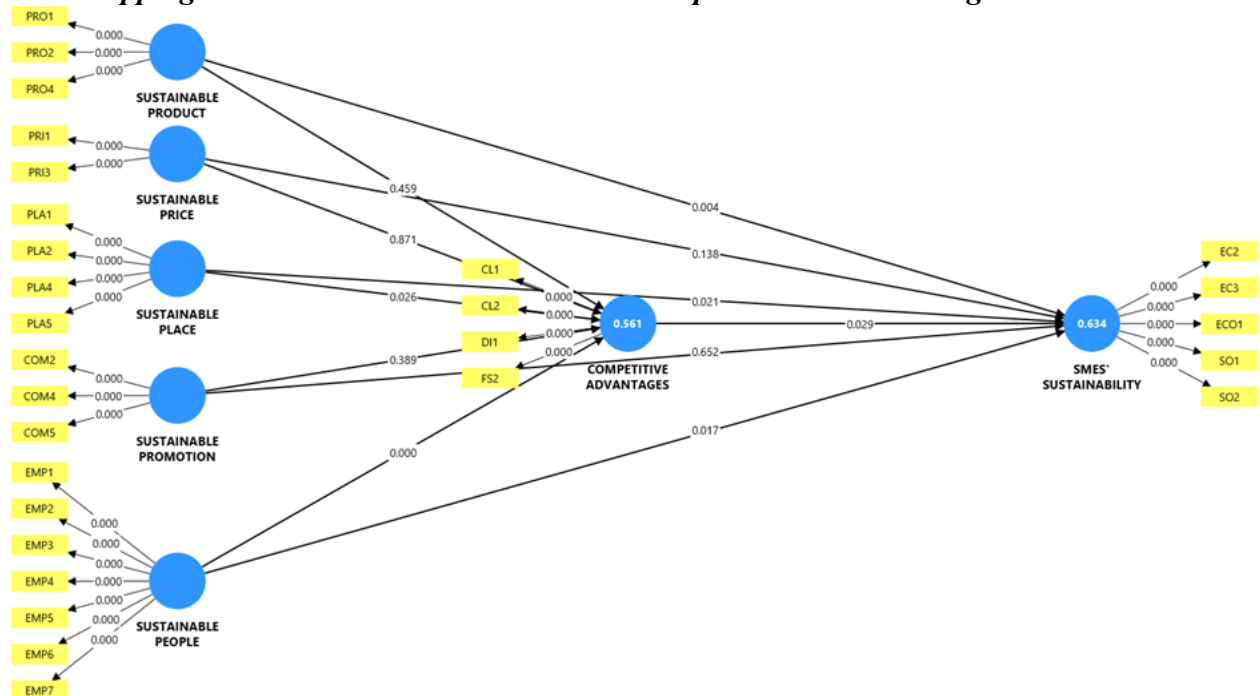
Table 6 shows that all VIF values are below 5, indicating no serious collinearity issues. Three indicators, SO1 with a value of 3.341, SO2 with a value of 3.522, and ECO1 with a value of 4.188, exceed the conservative threshold of 3, which suggests potential collinearity, but the values remain within acceptable limits.

Table 7**Collinearity statistics (VIF) – Inner model – Matrix**

	COMPETITIVE_ ADVANTAGES	SMES'_ SUSTAINABILITY	SUSTAINABLE_ PEOPLE	SUSTAINABLE_ PLACE	SUSTAINABLE_ PRICE	SUSTAINABLE_ PRODUCT	SUSTAINABLE_ PROMOTION
COMPETITIVE_ ADVANTAGES		2.275					
SMES'_SUSTAINABILITY							
SUSTAINABLE_ PEOPLE	2.698	3.394					
SUSTAINABLE_ PLACE	2.694	2.812					
SUSTAINABLE_ PRICE	2.081	2.081					
SUSTAINABLE_ PRODUCT	2.291	2.299					
SUSTAINABLE_ PROMOTION	2.519	2.536					

Source: Processed Data (2025)

Table 7 shows that all VIF values in the inner model are below 5, indicating no collinearity issues among the predictor constructs. Sustainable People has a VIF value of 3.394, which exceeds the conservative threshold of 3 and therefore requires attention, but it remains within acceptable limits and is still considered safe

Inner Model Result**Figure 3****Bootstrapping Structural Model produced using SmartPLS**

Source: Processed Data (2025)

Next, we examine the indirect or mediating effects in the relationships between two constructs in the following specific indirect effect table.

Table 8**Specific indirect effects - Mean, STDEV, T values, p values**

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
SUSTAINABLE_PRODUCT → COMPETITIVE_ADVANTAGES → SMES' SUSTAINABILITY	-0.012	-0.01	0.019	0.67	0.503
SUSTAINABLE_PRICE → COMPETITIVE_ADVANTAGES → SMES' SUSTAINABILITY	-0.002	0	0.017	0.149	0.882
SUSTAINABLE_PLACE → COMPETITIVE_ADVANTAGES → SMES' SUSTAINABILITY	0.047	0.043	0.028	1.677	0.094
SUSTAINABLE_PROMOTION → COMPETITIVE_ADVANTAGES → SMES' SUSTAINABILITY	0.018	0.019	0.026	0.716	0.474
SUSTAINABLE_PEOPLE → COMPETITIVE_ADVANTAGES → SMES' SUSTAINABILITY	0.115	0.111	0.057	2.032	0.042

Source: Processed Data (2025)

Table 8 shows that Competitive Advantage significantly mediates the relationship between Sustainable People and SMEs' Sustainability, with a p value of 0.042 and a t value of 2.032. This indicates that Competitive Advantage acts as a meaningful intermediary for the Sustainable People dimension. No significant mediating effects were found for Sustainable Product, Sustainable Price, Sustainable Place, or Sustainable Promotion because their p values were above 0.05 and their t values were below 1.96. Overall, the mediating role of Competitive Advantage is supported only in the Sustainable People pathway. The following section presents the hypothesis testing results based on the path coefficients, t statistics, and p values generated through PLS-SEM bootstrapping.

Table 9**Hypothesis Results**

Hypothesis	Path of Influence	Path Coefficient	T-Statistic	P-Value	Description
H1	Sustainable Product → SMEs' Sustainability	0.257	2.917	0.004	Accepted
H2	Sustainable Price → SMEs' Sustainability	-0.106	1.484	0.138	Rejected
H3	Sustainable Place → SMEs' Sustainability	0.228	2.316	0.021	Accepted
H4	Sustainable Promotion → SMEs' Sustainability	0.041	0.451	0.652	Rejected
H5	Sustainable People → SMEs' Sustainability	0.285	2.378	0.017	Accepted
H6	Sustainable Product → Competitive Advantages	-0.06	0.74	0.459	Rejected
H7	Sustainable Price → Competitive Advantages	-0.012	0.163	0.871	Rejected
H8	Sustainable Place → Competitive Advantages	0.228	2.232	0.026	Accepted
H9	Sustainable Promotion → Competitive Advantages	0.088	0.862	0.389	Rejected
H10	Sustainable People → Competitive Advantages	0.553	4.952	0	Accepted
H11	Competitive Advantages → SMEs' Sustainability	0.208	2.181	0.029	Accepted

H12	Sustainable People → CA → SMEs' Sustainability	0.115	2.032	0.042	Accepted (Mediation)
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Source: Processed Data (2025)

The findings of this study provide important insights into how sustainability-oriented marketing capabilities shape SMEs' long-term viability within the VUCA environment of the building materials retail sector. Three dimensions of the Sustainable Marketing Mix, namely Sustainable People, Sustainable Place, and Sustainable Product, demonstrated significant positive effects on SMEs' sustainability, confirming that internally developed sustainability capabilities remain crucial for resilience. Among these dimensions, Sustainable People emerged as the strongest predictor, both directly and indirectly through Competitive Advantage. This reinforces the Resource-Based View, which argues that human capital and employee-centered capabilities represent valuable, rare, and inimitable resources that can drive sustained superior performance. Employees who embody ethical values, environmental responsibility, and community engagement strengthen SMEs' differentiation and operational reliability, explaining why Sustainable People is the only dimension that also exhibits a significant mediating effect through Competitive Advantage.

The significant effect of Sustainable Place on both sustainability and competitive advantage highlights the strategic value of responsible distribution, ethical supplier collaboration, and efficient logistics. These findings are consistent with the view that sustainable distribution practices enhance operational efficiency and stakeholder trust. In the context of building materials retail, where supply chain trust, reliability, and product availability are critical, Sustainable Place functions as a key organizational capability that improves market competitiveness. This aligns with the logic of the Resource-Based View, which states that operational systems and partner relationships can serve as strategic resources that competitors find difficult to replicate.

Sustainable Product also demonstrated a significant direct effect on SMEs' sustainability, indicating that high-quality and environmentally responsible offerings contribute to positive consumer perceptions and long-term firm viability. However, its nonsignificant effect on competitive advantage suggests that product-based sustainability practices alone may not currently differentiate SMEs in this sector. This finding aligns with the idea that eco-product initiatives are often underrecognized by customers when eco-labeling or sustainability communication is limited. Thus, while sustainable product practices enhance perceived sustainability, they may not yet translate into strong competitive differentiation in the building materials retail market.

In contrast, Sustainable Price and Sustainable Promotion did not significantly affect SMEs' sustainability or competitive advantage. These findings may reflect strong price sensitivity among consumers in the building materials sector, where competitive pricing is expected but not necessarily perceived as part of a sustainability strategy. This is consistent with evidence that consumers in emerging markets often prioritize affordability over environmental attributes. Similarly, Sustainable Promotion may have limited influence due to relatively low customer awareness of sustainability messaging in traditional retail contexts and the limited intensity of sustainability-oriented promotional activities among local SMEs. These results support the argument that sustainability communication is effective only when consistently delivered and supported by strong internal capabilities.

The significant positive effect of competitive advantage on SMEs' sustainability confirms prior findings that internal strengths such as differentiation, cost efficiency, and market focus enable SMEs to better adapt to uncertainty and maintain long-term performance. Importantly, this study finds that competitive advantage mediates only the relationship between Sustainable People and SMEs' sustainability. This indicates that sustainability-oriented human capital is not only a direct driver of resilience but also a strategic resource that enhances competitiveness, which in turn strengthens sustainability outcomes. These results deepen the empirical

understanding of the Resource-Based View by demonstrating that not all sustainability practices contribute equally to valuable, rare, inimitable, and non-substitutable advantages. Instead, human-centered capabilities remain the most strategic and transformative resources for SMEs.

Overall, these findings contribute to the literature by showing that sustainability in SMEs is primarily driven by internal capability-based resources rather than external marketing activities. In resource-constrained environments such as the building materials retail sector in Riau Province, the adoption of sustainable people practices and responsible distribution systems provides the strongest pathway to competitive and sustainable performance. This study therefore offers empirical evidence supporting the argument that organizational sustainability depends on cultivating internal strengths that are difficult for competitors to imitate, rather than relying solely on external-facing marketing tactics.

Conclusions

This study examined the influence of the Sustainable Marketing Mix on SMEs' sustainability, with competitive advantage as a mediating variable, in the building materials retail sector in Riau Province. The results of the PLS-SEM analysis demonstrate that Sustainable People, Sustainable Place, and Sustainable Product significantly enhance SMEs' sustainability, while Sustainable People and Sustainable Place also strengthen competitive advantage. Competitive advantage further contributes to sustainability and mediates the effect of Sustainable People on sustainability, highlighting the strategic importance of human-centered capabilities. In contrast, Sustainable Price and Sustainable Promotion do not exhibit significant effects, reflecting the price-sensitive nature of the local market and the limited application of sustainability-oriented promotional practices among SMEs.

Overall, the findings show that SMEs' sustainability is predominantly shaped by internally developed resources, particularly human capital, responsible distribution systems, and sustainability-oriented product practices. These results reinforce the Resource-Based View, which states that valuable, rare, inimitable, and non-substitutable resources, especially sustainability-oriented human capital, enable firms to build competitive advantage and long-term resilience. In a VUCA environment, SMEs in the building materials retail sector must therefore prioritize strengthening their internal capabilities rather than relying solely on external marketing activities.

This study contributes to the theoretical development of sustainable marketing by demonstrating that the Sustainable Marketing Mix does not operate uniformly. Its effectiveness depends on the strategic value of each resource. Practically, the results offer guidance for SMEs seeking to enhance long-term viability through investments in human resources, ethical supplier relationships, and sustainable product development. These insights broaden the understanding of sustainability-based strategies in emerging markets and support future research exploring capability-driven approaches to SME competitiveness.

Recommendations

Future research is encouraged to incorporate additional variables that may further explain SMEs' sustainability, including digital servitization, dynamic capabilities, knowledge transfer, digital capability, and entrepreneurial resilience. The use of a longitudinal research design would enable scholars to observe changes in the business environment more accurately, particularly as SMEs increasingly operate in conditions characterized by volatility, uncertainty, disruption, vulnerability, and ambiguity. Expanding the study to different sectors or geographic regions is also recommended to improve the generalizability and external validity of the findings.

From a practical perspective, training and mentoring programs are essential to support SMEs in understanding and implementing sustainability-oriented marketing strategies, especially those related to sustainable people, sustainable place, sustainable product, and

competitive advantage. Local governments can contribute by developing supportive policies or providing incentives to SMEs that commit to sustainability-based and competitive business practices. These initiatives are particularly relevant as public awareness of environmental and sustainability issues continues to grow.

The findings also highlight the importance of capacity-building initiatives aimed at strengthening internal capabilities that promote sustainability and competitive advantage. Government agencies, business associations, and educational institutions should collaborate to design programs that help SMEs adopt sustainability-driven marketing practices and enhance their strategic positioning in the market.

Future studies may also consider applying multi-group analysis to examine potential differences across categories such as firm age, operational scale, or geographic location. The use of mixed-method approaches, including qualitative interviews or case studies, would provide deeper contextual insights into how SMEs integrate sustainability within their strategic and operational processes.

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