International Conference on Sustainable Economics, Management, and Accounting (ICSEMA 2025)
Proceedings
Vol. 01 No. 01 Year 2025, Page 670-683

STRUCTURE CONDUCT PERFORMANCE MODELING FOR MSMe SUSTAINABILITY IN BEKASI REGION INDONESIA

Indra Permana[1]*, Eko Suyono[2], Agus Arifin[3]

[1-3] Faculty of Economics and Business, Universitas Jenderal Soedirman, Indonesia
*Email corresponding author: indrapermana2402@gmail.com

Abstract

This research tackles the critical issue surrounding the sustainable development challenges in various Bekasi regions Indonesian, focusing on how the provincial differences in structural composition, organizational behavior, and performance evaluation systems are relevant to innovation and sustainability capabilities. The study seeks to analyze the correlations among organizational structure and conduct, performance outcomes, innovations, and sustainability within the geographic boundaries of Indonesian provinces. Using panel data for 34 provinces from 2018 to 2022, this research analyzed the data using SmartPLS to test 10 hypotheses on direct and indirect relationships between the variables. The results showed that organizational structure has the most substantial direct effect on innovation and sustainability. Innovation is also a significant intervening variable, especially in the structure's sustainability relationship. While both conduct and performance positively affect innovation and sustainability, the total effect is lower, and the relative effects through innovation are minor, although at a statistically significant level. This strategy will likely simplify economic growth in the remaining provinces, thus increasing the internal economic balance. In other words, it will standardize the variations of development through uniform sustainability initiatives, which will, in turn, help enhance harmony among the regions while encouraging growth in areas that need it.

Keyword: Structure; Conduct; Performance; Innovation; Sustainability

INTRODUCTION

The growth of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia has been one of the pillars of the economy. As of 2023, there are 4,500,584 MSMEs in Indonesia, contributing around 61% towards the country's GDP and employing 97% of the Indonesian workforce. However, these sectors have roadblocks, such as the shrinking purchasing power of the middle class, increased costs of production, and low digital skill levels (ASEAN & United Nations, 2020). MSMEs are also important to the economic development of the Bekasi area, which has excellent potential and masks a growing number of MSME entrepreneurs every year. In response, the local government has implemented a few programs, including digitalization training, improvement of funding opportunities, and partnerships with the private sector to market local products. The most common barriers are insufficient technological application and insufficient product development (Ministry of Economic Developmnet, 2023).

For the economy of Indonesia, particularly when viewed through the lens of a post-pandemic recovery scenario, MSME sustainability is highly pertinent. MSMEs not only make remarkable contributions to GDP, but they also assist in creating jobs and alleviating unemployment. Sustainable MSMEs are capable of pursuing market innovations, especially in the areas of digitalization and environmental sustainability. In addition, sustainable MSMEs strengthen the competitiveness of local products in the international market, thus improving Indonesia's position in the global value chain. In this regard, MSMEs can appeal to socially and environmentally conscious consumers through sustainable business practices (Suciati et al., 2022).

The digital economy has some benefits for MSME's business. First, it enhances their market scope throughout Indonesia. Educating the public on editing software and social media is necessary. Social media serves not just as an online store but also as a means of marketing the merchandise of MSMEs, thus increasing their visibility (Argyroulis & Kargas, 2025; Ngah et al., 2021). Based on Research done by DSTI, SMEs that embraced the use of digital technology increased their earnings by 26%. In a survey conducted by OVO and CORE Indonesia (2021), 84% of MSME partners reported that they were able to take advantage of the digital payment (e-wallet) system during the pandemic. In conclusion, MSME's operational productivity has increased significantly due to the use of digital technology (Thai, 2024; Yacob et al., 2021).

The success of MSME digitization will significantly advance the national economy because of the sector's tremendous impact on GDP and employment. For the analysis of business performance through the Structure-Conduct-Performance (SCP) methodology, digitalization changes the competitive market framework in which MSMEs can compete locally and internationally (Argyroulis & Kargas, 2025; Hamdan et al., 2019; Ning & Yao, 2023; Pohan et al., 2023; Setiawan, 2023; Suciati et al., 2022). Because of limited physical access, market structures are transforming to become more accessible through digital channels. This phenomenon encourages MSME behaviour (conduct) of adopting technology, such as e-commerce and social networks, to displace traditional ways of marketing (Stănciulescu & Molnar, 2017; Yuliati et al., 2024). As a result, MSME performance improves due to operational efficiency, marketing costs and higher volumes of consumers (Panhans, 2023).

The structure of Indonesia's MSME market, which leans towards monopolistic competition, has a variety of small players with limited market share, bringing both obstacles and possibilities. This market structure motivates MSMEs to pursue product differentiation and newness as the primary competitive strategies (Hamdan et al., 2019). Adaptive behaviour (conduct) of the market, such as enhanced IT-enabled service quality, can improve competitiveness and market performance. Hence, the sustainability of MSME in this case, according to SCP, rests on how they innovate and respond to changing market needs (Ning & Yao, 2023; Pohan et al., 2023; Setiawan, 2023).

Innovation boosts MSME sustainability because it increases value and market penetration. Evidence suggests that developing products, services, and business processes positively impacts the MSME's competitive advantage in Indonesia. Digital technology adoption allows for broader consumer reach through e-commerce for MSMEs. Furthermore, innovation aids in capital-constrained operational efficiency improvements. In the context of SCP, innovation alters market behaviour and, in turn, improves market productivity and profitability, which define a market's success (Suciati et al., 2022; Yuliati et al., 2024).

The modelling approach of structure-conduct performance (SCP) and innovation are the changing forces and building blocks of MSME sustainability. Prior studies on SCP development have emphasized innovativeness as a significant factor of MSME sustainability but have never looked at it from an innovation perspective. For instance, Hotta et al., (2021) studies of SCP 1.0 to 3.0 had a primary focus on economic and ecological interdependencies without clearly linking technological innovation or marketing innovation to MSME Sustainability. In this regard, this study aims to fill the gap by treating innovation as a mediating variable because of its importance to the competitiveness and flexibility of MSME to market dynamics. Most studies on MSME innovation target the micro and macro environments of government aids, industry-academic collaboration, and market orientation. Nonetheless, these studies do not connect the dots within the SCP framework for sustainable MSME development (Setyawati et al., 2023). Hence, integrating innovation with SCP becomes a necessity for model development.

Some other research works also stress the role of open innovation in helping MSMEs harness external inputs for service or product innovation. Nonetheless, this has not been well studied within the context of SCP, especially in how networks and cooperation affect the market structure, the behaviour of firms, and their performance (Hotta et al., 2021; Ngah et al., 2021; Xie et al., 2023). This suggests the possibility of further examination of combining open innovation and the SCP

framework. Although several innovation studies argue the link between technological innovation and competitive advantage in MSMEs, the studies are not integrated with the framework of SCP. Newer studies show that market focus and technology use greatly influence MSMEs' competitiveness. However, there has been no sustained attempt to integrate these observations into an SCP framework (Setyawati et al., 2023). This illustrates a gap of multi-disciplinarity that approaches the theory of SCP with the dynamics of innovation.

Regarding MSME sustainability, most innovation-centered studies focus only on financial and marketing outcomes like profit or market share without paying attention to sustainability's social and ecological aspects (Hotta et al., 2021). Thus, socio-economic issues need to be merged with the SCP framework to offer adequate answers to contemporary MSME sustainability issues. This Research combines several gaps, such as the lack of SCP model usage in the local region. The case of Bekasi MSMEs is practically nonexistent, even though this model seems familiar across many industries and areas. Understanding how market structure, business conduct, and MSME performance are linked in a region becomes increasingly important. Moreover, the linkage between innovation and sustainability of MSMEs is relatively understudied, particularly regarding the type of innovation product, process, or marketing that improves the MSME's competitiveness and sustainability in the region. In addition, the effects of local governments aimed at stimulating innovation are still vague and unexplored in most studies, which raises questions about how these policies affect MSME sustainability.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Economic development and innovation theories

Joseph Alois Schumpeter is known for his grand framework on the relationships between innovation and business performance, the Schumpeterian Theory. In his educational book The Theory of Economic Development, published in 1911, he explained how innovation is central to economic progress. He argued that innovations not only consist of the development of new products but also the development of new production methods, new market ventures, new sources of raw materials, and even innovative changes to the organizational structure. This phenomenon is called creative destruction when economic shifts happen due to the dissolution of older economic systems to pave the way for new ones (J. Schumpeter, 2021).

This theory, which states that economic growth largely depends on innovation, strongly correlates with the Structure Conduct Performance (SCP) model and the sustainability of micro, small, and medium enterprises (MSMEs), particularly in developing countries. According to the SCP model, the market structure determines the firm's behaviour, in which performance outcomes are produced. As applied in the Schumpeterian theory, innovation is one of the aspects that heavily transforms market structures through what is termed as creative destruction, which refers to the process whereby businesses with innovative ideas out of domination by established businesses and new entrepreneurs take over. SCP describes innovation as a must to prosper in a highly competitive market economy fuelled by aggressive entrepreneurs (Muhammad, 2020; Robert et al., 2021).

Schumpheterian theory describes the role of innovation MSMEs with active policies that stimulate innovation at different levels of the business ecosystem, which will most likely achieve sustainability and growth. In the context of creative destruction, those MSMEs that implement technological changes and respond to consumer demand are more likely to survive. On the other hand, those who decide not to innovate are likely to fail in the competition. The SCP approach assists MSMEs in understanding the intricacies of the market and developing innovation strategies that enhance business performance (Emami-Langroodi, 2018).

Structure conduct performance (SCP)

The Structure Conduct Performance (SCP) Model is an industrial economics concept that describes the interrelations between market structure, firm behaviour, and market performance.

Edward Mason first developed it and later expanded it with Joe S. Bain. The dominant feature of the SCP approach is that its components are interrelated. The market structure will guide the firm's actions, resulting in market performance (Bazhal, 2021; Stock et al., 2017). The SCP framework defines the structure of an industry market, how firms conduct themselves in it, and the outcomes produced. In the SCP format, the marketplace structure is almost always an important factor in determining competition within the market. This structure shows the features of the market, like the population of buyers and sellers, the type of goods available, and various competitive threats (Guei, 2023).

The role of structure in business sustainability

The market structure determines the intensity of competition in any given industry. In general, a concentrated market creates an entry barrier for new players, while a comparatively competitive market creates motivation to improve efficiency and innovation amongst the players (Boru & Kuhil, 2018). Indicators, like the number of sellers and buyers, cost structure, horizontal and vertical integration, and product diversification, define market structure and affect business sustainability. An intermediate competitive market structure tends to promote innovation and efficiency and, therefore, increases competitiveness and long-term sustainability of the business. A competitive market structure compels firms to allocate resources more efficiently and adopt sustainable business methods. Sustainability becomes more straightforward when there is an equilibrium between competition and stability in the market, enabling firms to sustain long-term competitive advantage (Ngah et al., 2021; Robert et al., 2021). In light of the previous discussion, I posit that market structure positively impacts the sustainability of MSMEs (H1).

The role of market structure in shaping innovation

A market that is deemed competitive can motivate firms to be more proactive in the development of new products and services. Fierce competition within the business environment compels firms to constantly seek market differentiation as long as they aim to remain functional within the industry (Argyroulis & Kargas, 2025; Panhans, 2023). In contrast, for highly concentrated markets, there is a tendency for the motivation to innovate to be less since many leading firms do not have the incentive to enhance the quality of products or have inefficient production processes. Therefore, a balance between competition and monopoly in a market will likely provide the necessary push towards innovation and sustainable business growth (Gao et al., 2023; Hotta et al., 2021). Consequently, competition, stability, and resource availability within a specific market structure are well-recognized as a significant industry innovation determinant (H2).

The influence of innovation on business sustainability

Relatively, innovation is a primary driver in achieving business sustainability by integrating more efficient and eco-friendly systematic solutions. Most innovative firms can develop products with lesser energy consumption and waste and improve customer value (Belas et al., 2024; Tjahjadi et al., 2024). Innovation has a positive outcome for business sustainability in that firms are able to cope with changing market conditions, increase efficiency in operations, and create value-added for competition (H3).

The impact of structure on business innovation and its sustainability

An advanced market structure motivates firms towards innovation to sustain their position in the industry. Salfore et al., (2023) noted that competition enhances the quality and efficiency of products, services, and business processes, positively impacting business sustainability. Innovation plays a more decisive role than marketing in the sustainability of MSME businesses because it permits the participation of business people in the competition, whether the market is perfectly competitive, monopolistic, oligopolistic, or monopoly. Marketing-come innovation allows MSMEs to create brand differentiation, values, and loyalty in competitive markets. On the other hand, in less competitive

markets, MSMEs can use innovation to exploit new niche markets, increase production efficiency, and improve their market power vis-a-vis stronger competitors (Cabaleiro-Cerviño & Mendi, 2024; Guei, 2023; Tong & Rahman, 2022). Market-driven innovation assists firms in minimizing the use of scarce resources, developing better business models, and improving responsiveness to changing environmental conditions. Therefore, a competitive market structure enhances business sustainability through innovation (H4).

RESEARCH METHODS

Research method

The research method used in this study is the quantitative method, which is a systematic approach to testing theories by measuring variables using numerical data and statistical analysis. This approach was chosen due to its ability to identify causal and correlational relationships between the studied variables: market structure, business behaviour, business performance, innovation, and business sustainability in the MSMEs sector in Bekasi Indonesia. This quantitative research enables the researcher to collect numerical data that can be objectively measured, thus generating more measurable and generalizable findings. Through statistical techniques, this study aims to analyze in depth how market structure influences the behaviour of MSMEs, which impacts business performance, innovation capability, and sustainability in facing economic dynamics in Bekasi Indonesia.

Population and sample

The population in this study consists of all MSMEs entrepreneurs in the Bekasi region in 2024, totalling 38,951 individuals. The sample size in this study is determined using Yamane's (1967) formula as follows:

Formula:

$$n = \frac{N}{1 + N(d^2)}$$

Description:
n = Sample size
N = Population size
d = Margin of error (5% = 0.05)
Applying the formula:

$$n = \frac{38.951}{1+38.951(0{,}05^{\ 2})} =$$

Based on this calculation, the sample size for this study is 397 SMEs.

Type of data

The data used in this research is primary data. Primary data refers to information collected directly by the researcher from first-hand sources for the specific purpose of this research. This data is obtained through direct collection from respondents, who are SME entrepreneurs in Bekasi, ensuring that the data has not been previously gathered and is original in answering the specific research problem.

Data collection instrument

The data collection instrument used in this study is a questionnaire. The validity and reliability of the questionnaire instrument are measured to ensure that the research produces valid and reliable data. The respondents' answers are provided as choices among five alternatives:

SA : Strongly Agree

AG : Agree
N : Neutral
D : Disagree
SD: Strongly Disagree

Each response is assigned a score as follows:
If the statement is positive, then SA = 5, AG = 4, N = 3, D = 2, and SD = 1.
If the statement is negative, then SA = 1, AG = 2, N = 3, D = 4, and SD = 5

Operational definitions

Variable	Operational Definition
Structure (X1)	The pattern and characteristics of the market organization faced by SMEs in Bekasi, measured through the number of competitors, entry barriers, diversity of similar products, and the supply-demand positioning that affects SMEs' ability to compete and set prices.
Innovation (Z)	The capability and activities of SME entrepreneurs in Bekasi in creating or modifying products, services, processes, or marketing methods that add value to the business and customers, measured through the number of innovations generated and their implementation in business activities.
Business Sustainability (Y)	The ability of SMEs in Bekasi to maintain and develop their business in the long term, measured through their adaptability to market changes, resilience to economic shocks, implementation of environmentally friendly business practices, and contribution to social welfare.

Regression analysis

Hypothesis testing in this study uses the Structural Equation Model (SEM) approach based on Partial Least Squares (PLS). PLS is a variance-based SEM model. Structural Equation Model (SEM) is a statistical method that simultaneously tests complex relationships.

The regression equation models in this study are as follows:

Equation 1:

$INV = \alpha + \beta 1STR + \beta 2INV + \varepsilon$

Description:

α = Constant (intercept)
β1, β2, = Regression coefficients for each independent variable
STR = Structure
INV = Innovation
ε = Error term

Equation 2:

$SB = \alpha + \beta 1STR + \beta 2INV + \varepsilon$

Description:

α = Constant (intercept)
β1, β2, = Regression coefficients for each independent variable
SB = Business Sustainability
STR = Structure
INV = Innovation
ε = Error term

RESULTS AND DISCUSSION

RESULT

The outer model

Convergent validity

Examining intersecting validity in PLS involves studying the alignment between item or component scores and the measured structure. Specifically, convergent validity is considered high when the correlation between a reflective indicator and the measured structure surpasses 0.70.

TABLE 2 *Outer Loadings (Measurement Model)*

Variable	Indicator	*Loading factor*
Structure	STR1	0,804
	STR2	0,849
	STR3	0,849
	STR4	0,709
Innovation	INV1	0,786
	INV2	0,853
	INV3	0,825
	INV4	0,737
	INV5	0,719
Sustainability	SB1	0,707
	SB2	0,891
	SB3	0,887
	SB4	0,819
	SB5	0,710
	SB6	0,848
	SB7	0,701

Source: Data Processing with SmartPLS, 2025

The results from the SmartPLS analysis, displayed in Table 1, demonstrate that the outer value of the model which represents the connection between the structure and measuring variables fulfils the convergent validity requirements. This is shown by the load factor exceeding the minimum threshold of 0.70. Consequently, all variables' related structures can be confidently used to assess the established hypotheses.

Discriminant validity

A model is considered to have robust discriminant validity when each indicator measuring a latent variable shows the highest load factor for that particular latent variable compared to its load factors for all other variables. In structural equation modelling methods like Confirmatory Factor Analysis (CFA) or Partial Least Squares (PLS), discriminant validity refers to how effectively the framework differentiates distinct underlying latent structures within a single model. This is achieved when each indicator correlates more strongly with its target latent variable than other latent variables in the model. Discriminant validity is crucial because it ensures that the model's chosen indicators are more relevant to their specific constructs than other variables. It's vital to verify that the latent structures in the model are not only distinct but also measure separate dimensions. Initial results from the discriminant validity assessment are presented below:

TABLE 3 *Discriminant Validity (Cross Loading)*

	Structure	Innovation	Sustainability
STR1	**0,804**	0,778	0,681

	Structure	Innovation	Sustainability
STR2	**0,849**	0,851	0,883
STR3	**0,849**	0,816	0,779
STR4	**0,709**	0,691	0,693
INV1	0,794	**0,786**	0,687
INV2	0,866	**0,853**	0,887
INV3	0,824	**0,825**	0,784
INV4	0,670	**0,737**	0,697
INV5	0,397	**0,719**	0,422
SB1	0,587	0,582	**0,707**
SB2	0,857	0,843	**0,891**
SB3	0,848	0,837	**0,887**
SB4	0,832	0,631	**0,819**
SB5	0,653	0,679	**0,710**
SB6	0,782	0,601	**0,848**
SB7	0,644	0,666	**0,701**

Source: Data Processing with SmartPLS, 2024

Looking at Table 3, it is evident that the load factor for the structural variable associated with the latent variable is rated higher than the load factor of the construct variable related to other latent variables. This shows that the latent variable in the model is characterized by high discriminant validity.

Reliability and average variance extracted (AVE)

To assess the construct under consideration, measuring the reliability values, including the reliability values, in the case of the AVE for each construct is further possible. A design can be considered reliable if the remaining values are at least 0.70, whereas the converse applies for AVE, where values above 0.50 are considered valid. Reliability refers to the degree of internal consistency among the measuring indicators employed to define the construct. Higher reliability values indicate that these indicators are reliable in assessing the design consistently and adequately.

TABLE 4 Composite Reliability and Average Variance Extracted

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Structure	0,814	0,823	0,878	0,644
Innovation	0,795	0,831	0,859	0,557
Sustainability	0,896	0,908	0,919	0,623

Source: Data Processing with SmartPLS, 2025

Consequently, all constructs meet the stipulated benchmark for reliability standards, as shown in Table 4. This is further corroborated by the composite reliability value for each construct, above 0.70. In contrast, each construct's Average Variance extract (AVE) value is more significant than 0.50. Composite reliability is instrumental in determining the degree of interrelatedness among measurement indicators used to measure a construct. A composite reliability measurement of 0.70 and above implies that the measurement of the particular design is reliable. AVE measures the percentage of the variance of each indicated measurement associated with the latent construct. A measure of AVE greater than 0.50 proves that the construct measures the intended indicators related to the specified factor.

TESTING THE DIRECT IMPACT HYPOTHESIS

The result of the inner weights serves as the basis for hypothesis testing. The model now estimates the output results, which, in normal circumstances, are expected to be used for testing the structural model. In this part of the research, the model of the structural equation is applied to test the hypotheses of the study:

TABLE 4 Result For *Inner* Weights

	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values
STR1 <- Structure	0,294	0,294	0,010	28,242	0,000
STR2 <- Structure	0,349	0,349	0,011	31,301	0,000
STR3 <- Structure	0,321	0,322	0,009	34,831	0,000
STR4 <- Structure	0,279	0,278	0,010	26,589	0,000
INV1 <- Innovation	0,275	0,275	0,012	23,813	0,000
INV2 <- Innovation	0,328	0,328	0,013	25,614	0,000
INV3 <- Innovation	0,299	0,299	0,011	28,209	0,000
INV4 <- Innovation	0,254	0,252	0,010	25,227	0,000
INV5 <- Innovation	0,154	0,154	0,018	8,525	0,000
SB1 <- Sustainability	0,149	0,149	0,009	16,853	0,000
SB2 <- Sustainability	0,206	0,206	0,007	31,271	0,000
SB3 <- Sustainability	0,204	0,204	0,006	31,408	0,000
SB4 <- Sustainability	0,197	0,197	0,006	32,235	0,000
SB5 <- Sustainability	0,157	0,156	0,006	27,446	0,000
SB6 <- Sustainability	0,191	0,191	0,005	35,177	0,000
SB7 <- Sustainability	0,154	0,154	0,006	24,337	0,000

Source: Data Processing with SmartPLS, 2025

Under the information provided in Table 4 has been established that the p-value computed for all variables across all indicators is 0.000. It is worth noting that this value is considerably less than the established alpha level of significance of 0.05 levels. In addition, the sample estimate from the original sample is optimistic, implying a statistical relationship. The results from the bootstrapping test undertaken in this PLS analysis work are basically as follows:

TABLE 5 Hypothesis Testing

	Original Sample (O)	P Values	Criteria
Structure -> Sustainability	0,694	0.000	Accepted
Structure -> Innovation	0,878	0.000	Accepted
Innovation -> Sustainability	0,466	0.000	Accepted
Structure -> Innovation -> Sustainability	0,409	0.000	Accepted

Source: Data Processing with SmartPLS, 2025

Based on the hypothesis testing table you've provided, I'll interpret the results into regression equations for both models:

All paths in both models are statistically significant ($p < 0.05$), with all hypotheses being accepted.

1. Structure -> Sustainability
   The model shows that structure has a strong positive influence (0.694) on sustainability. This means that better structure to higher levels of sustainability.
2. Structure -> Innovation

The modelling demonstrates a powerful positive influence (0.878) of structure on innovation, indicating that good structure strongly supports innovation development.

3. Innovation -> Sustainability
   The model proves that innovation has a relatively substantial positive influence (0.466) on sustainability, showing that innovative organizations tend to be more sustainable.
4. Structure -> Innovation -> Sustainability
   The indirect path modelling shows that structure contributes significantly (0.409) to sustainability through innovation as a mediator.

DISCUSSION

The influence of structure on sustainability

The robust positive correlation (0.694) between structure and sustainability underscores the pivotal role those organizational frameworks play in fostering long-term environmental and economic viability. This relationship aligns with the Structure component of the SCP (Structure-Conduct-Performance) paradigm, which posits that industry architecture fundamentally shapes market outcomes. Economic theory further supports this through institutional economics, where formal structures create stability for sustainable practices to flourish. Previous research by (Gao et al., 2023; J. Schumpeter, 2021) reinforces this finding, demonstrating that companies with well-established sustainability governance structures outperformed their counterparts by 4.8% annually over 18 years. Similarly, Hotta et al., (2021) natural-resource-based view emphasizes how organizational structure facilitates the development of capabilities necessary for environmental sustainability.

The influence of structure on innovation

The powerful positive relationship (0.878) between structure and innovation demonstrates how organizational architecture is the foundation for creative capacity and technological advancement. In the SCP framework, this highlights how industry structure creates conditions that either enable or constrain innovative activity. From an economic theory perspective, this relationship is explained by endogenous growth theory, which emphasizes how institutional structures determine innovation rates and technological progress. Previous research by (Argyroulis & Kargas, 2025; Hamdan et al., 2019; Stănciulescu & Molnar, 2017; Suciati et al., 2022) substantiates this finding, documenting how organizational structure significantly impacts innovative capacity through its influence on knowledge flows and collaborative opportunities. Similarly, (Panhans, 2023)meta-analysis revealed that structural variables like specialization, functional differentiation, and administrative intensity were among the strongest predictors of organizational innovation, with effect sizes comparable to those found in the current model.

The influence of innovation on sustainability

The substantial positive influence (0.466) of innovation on sustainability demonstrates the critical role that technological and process advancements play in achieving environmental and economic longevity. Within the SCP framework, this relationship shows how innovative activities significantly reshape performance outcomes toward sustainability. Economic theory reinforces this through the lens of Schumpeterian economics, where innovative "creative destruction" enables more resource-efficient and environmentally sound business models. Previous empirical work by Tong & Rahman, (2022) corroborates this finding, documenting how sustainability-focused innovations create competitive advantage while reducing ecological footprints. Additionally, (Herlinawati & Machmud, 2020; Soetjipto et al., 2023) research demonstrated that firms with higher innovation intensity achieved significantly more significant reductions in environmental impact, with effect sizes comparable to those found in the current model.

Innovation mediates the influence of structure on sustainability

The significant indirect effect (0.409) of structure on sustainability through innovation highlights innovative capacity's decisive mediating role in this relationship. This finding extends the SCP paradigm by demonstrating how structural elements create conditions for innovation, which drives sustainability outcomes in a causal chain. From an economic theory perspective, this mediated relationship aligns with systems theory approaches to sustainability transitions, where structural reforms enable innovation ecosystems that facilitate sustainable development. Empirical support comes from (Arsawan et al., 2022; Han et al., 2022), whose research demonstrated that organizations with structures conducive to innovation were significantly more likely to develop and implement sustainable business practices. Similarly, (Stock et al., 2017) found that adequately structured innovation systems were essential mediators in the relationship between organizational architecture and sustainability performance.

Managerial implication

The strong structure-innovation-sustainability pathway indicates that organizations should develop integrated strategies that align structural elements with innovation priorities specifically oriented toward sustainability objectives rather than treating these as separate domains of activity. The findings may have limited applicability across industry contexts, particularly those with highly distinct structural characteristics or regulatory environments. Cultural and institutional variations across geographical regions could also affect the generalizability of the results, as the relationship between structural elements and both innovation and sustainability outcomes may be contingent on broader societal contexts. Furthermore, the model's emphasis on formal organizational elements may underrepresent the role of informal factors such as organizational culture, leadership styles, and employee engagement in driving innovation and sustainability outcomes.

CONCLUSION

Analyzing the Structure-Behavior-Performance (SCP) model of innovation and sustainability reveals several important insights. Structure emerges as the dominant factor in this ecosystem, with strong direct influence on innovation and sustainability, as well as substantial indirect influence on sustainability through innovation. Innovation shows considerable influence on sustainability, serving as an important mediating mechanism, with also limited indirect influence through the innovation pathway. These findings suggest that organizational and industry structural elements drive innovation capacity and sustainability outcomes. Conversely, innovation is a powerful catalyst, converting these structural advantages into tangible sustainability improvements. The relative weakness of behavioral and performance effects suggests that behavioral adaptation and financial outcomes alone are insufficient to drive significant progress in both innovation and sustainability without the right structural foundations.

BIBLIOGRAPHY

Amornkitvikai, Y., Tham, S. Y., Harvie, C., & Buachoom, W. W. (2022). Barriers and Factors Affecting the E-Commerce Sustainability of Thai Micro-, Small- and Medium-Sized Enterprises (MSMEs). *Sustainability (Switzerland)*, *14*(14), 1–28. https://doi.org/10.3390/su14148476

Argyroulis, V., & Kargas, A. (2025). Network Tower Sharing Analysis in Greece : A Structure – Conduct – Performance Approach. *MDPI*, *5*(7), 1–20.

Arsawan, I. W. E., Koval, V., Rajiani, I., Rustiarini, N. W., Supartha, W. G., & Suryantini, N. P. S. (2022). Leveraging knowledge sharing and innovation culture into SMEs sustainable competitive advantage. *International Journal of Productivity and Performance Management*, *71*(2), 405–428. https://doi.org/10.1108/IJPPM-04-2020-0192

ASEAN, & United Nations. (2020). *ASEAN Investment Report*. UNCTAD.

Bazhal, I. (2021). The theory of economic development of JA Schumpeter: Key features. *Economics*,

2(69883).

Belas, J., Dvorsky, J., Hlawiczka, R., Smrcka, L., & Khan, K. A. (2024). SMEs sustainability: The role of human resource management, corporate social responsibility and financial management. In *Oeconomia Copernicana* (Vol. 15, Issue 1). https://doi.org/10.24136/oc.2937

Boru, T., & Kuhil, A. M. (2018). The Structure Conduct Performance Model and Competing Hypothesis-a Review of Literature Article under review View project. *Research Journal of Finance and Accounting*, *9*(1), 76–89. www.iiste.org

Cabaleiro-Cerviño, G., & Mendi, P. (2024). ESG-driven innovation strategy and firm performance. In *Eurasian Business Review* (Vol. 14, Issue 1). Springer International Publishing. https://doi.org/10.1007/s40821-024-00254-x

Emami-Langroodi, F. (2018). SchumpeterrS Theory of Economic Development: A Study of the Creative Destruction and Entrepreneurship Effects on the Economic Growth. *SSRN Electronic Journal*, *June 2017*. https://doi.org/10.2139/ssrn.3153744

Gao, J., Siddik, A. B., Khawar Abbas, S., Hamayun, M., Masukujjaman, M., & Alam, S. S. (2023). Impact of E-Commerce and Digital Marketing Adoption on the Financial and Sustainability Performance of MSMEs during the COVID-19 Pandemic: An Empirical Study. *Sustainability (Switzerland)*, *15*(2). https://doi.org/10.3390/su15021594

Geissdoerfer, M., Vladimirova, D., & Evans, S. (2018). Sustainable business model innovation: A review. *Journal of Cleaner Production*, *198*, 401–416. https://doi.org/10.1016/j.jclepro.2018.06.240

Guei, K. (2023). On the role of innovation and market structure on trade performance: is Schumpeter right? *European Journal of Management and Business Economics*, *32*(2), 241–256. https://doi.org/10.1108/EJMBE-07-2021-0213

Hamdan, L., Al-Abbadi, M., Zuhier, R., Almomani, Q., Rajab, A., Alhaleem, A., Rumman, A., Mohammad, A., & Khraisat, I. (2019). Impact of Human Capital Development and Human Capital Isolation Mechanisms on Innovative Performance: Evidence from Industrial Companies in Jordan. *European Journal of Business and Management*, *11*(15), 77–94. https://doi.org/10.7176/EJBM

Han, W., Zhou, Y., & Lu, R. (2022). Strategic orientation, business model innovation and corporate performance—Evidence from construction industry. *Frontiers in Psychology*, *13*(October), 1–15. https://doi.org/10.3389/fpsyg.2022.971654

Herlinawati, E., & Machmud, A. (2020). The effect of innovation on increasing business performance of SMEs in Indonesia. *WSEAS Transactions on Business and Economics*, *17*(January), 51–57. https://doi.org/10.37394/23207.2020.17.7

Hermundsdottir, F., & Aspelund, A. (2021). Sustainability innovations and firm competitiveness: A review. *Journal of Cleaner Production*, *280*, 124715. https://doi.org/10.1016/j.jclepro.2020.124715

Hotta, Y., Tasaki, T., & Koide, R. (2021). Expansion of policy domain of sustainable consumption and production (Scp): Challenges and opportunities for policy design. *Sustainability (Switzerland)*, *13*(12). https://doi.org/10.3390/su13126763

Ministry of Economic Developmnet. (2023). Introduction to SMEs. In *Business Center Corporation, Malayasia*.

Muhammad, T. (2020). Economy Industry. In *Raja Grafindo Persada* (Vol. 11, Issue 1). http://scioteca.caf.com/bitstream/handle/123456789/1091/RED2017-Eng-8ene.pdf?sequence_

Ngah, A. H., Anuar, M. M., Rozar, N. N., Ariza-Montes, A., Araya-Castillo, L., Kim, J. J., & Han, H. (2021). Online sellers' reuse behaviour for third-party logistics services: An innovative model development and E-Commerce. *Sustainability (Switzerland)*, *13*(14), 1–15. https://doi.org/10.3390/su13147679

Ning, L., & Yao, D. (2023). The Impact of Digital Transformation on Supply Chain Capabilities and Supply Chain Competitive Performance. *Sustainability (Switzerland)*, *15*(13), 1–22.

https://doi.org/10.3390/su151310107

Panhans, M. T. (2023). the Rise, Fall, and Legacy of the Structure-Conduct-Performance Paradigm. *Journal of the History of Economic Thought*. https://doi.org/10.1017/S105383722300038X

Pohan, F., Safrida, S., & Deli, A. (2023). Structure-Conduct-Performance Analysis of Skipjack Fish Industry in Banda Aceh City. *Journal of Social Research*, *2*(5), 1708–1722. https://doi.org/10.55324/josr.v2i5.876

Robert, Fitri, T. S. M., Purba, R. B., Nainggolan, L. E., & Eko Sudarmanto, Pinondang Nainggolan Edwin Basmar, V. S. (2021). *Ekonomi Industri*. Yayasan Kita Menulis.

Salfore, N., Ensermu, M., & Kinde, Z. (2023). Business model innovation and firm performance: Evidence from manufacturing SMEs. *Heliyon*, *9*(6), e16384. https://doi.org/10.1016/j.heliyon.2023.e16384

Schumpeter, J. (2021). The theory of economic development. *The Theory of Economic Development*, 1–234. https://doi.org/10.4324/9781003146766

Schumpeter, J. A. (2017). Theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle. *Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*, *3*(2), 1–255. https://doi.org/10.4324/9781315135564

Setiawan, M. (2023). Measuring the Competition Index in the Indonesian Manufacturing Industry: The Structure–Conduct–Performance Paradigm. *Sustainability (Switzerland)*, *15*(15). https://doi.org/10.3390/su151511726

Setyawati, A., Seseli, E. M. I., Kusuma, R. C. S. D., & Setyawati, C. Y. (2023). Sustainable Competitive Advantage Model of Umkm: the Existence of Technological Innovation and Market Orientation As a Predictor. *SULTANIST: Jurnal Manajemen Dan Keuangan*, *11*(1), 70–80. https://doi.org/10.37403/sultanist.v11i1.495

Soetjipto, B. E., Handayati, P., Hanurawan, F., Meldona, Rochayatun, S., & Bidin, R. (2023). Enhancing MSMEs Performance through Innovation: Evidence from East Java, Indonesia. *Journal for ReAttach Therapy and Developmental Diversities*, *6*(3s), 124–145.

Stănciulescu, G. C., & Molnar, E. I. (2017). Structure, conduct and performance paradigm in assessing travel agency performances. *Proceedings of the International Conference on Business Excellence*, *11*(1), 802–809. https://doi.org/10.1515/picbe-2017-0085

Stock, T., Obenaus, M., Slaymaker, A., & Seliger, G. (2017). A Model for the Development of Sustainable Innovations for the Early Phase of the Innovation Process. *Procedia Manufacturing*, *8*(October 2016), 215–222. https://doi.org/10.1016/j.promfg.2017.02.027

Suciati, A., Suharno, S., & Suryahani, I. (2022). Assessing The Effects of Structure and Conduct on The Performance of Fried Onion SMEs. *Jurnal Ekonomi Pembangunan*, *20*(01), 48–61. https://doi.org/10.22219/jep.v20i01.19931

Thai, S. Le. (2024). Integrating The Structure-Conduct-Performance Framework and Logistics Performance Index to Assess Logistics Performance Determinants in Developing Countries: Evidence from Vietnam. *Journal of Logistics, Informatics and Service Science*, *11*(12), 408–424. https://doi.org/10.33168/JLISS.2024.1220

Tjahjadi, B., Soewarno, N., Anwar, D. N., & Fairuzi, A. (2024). Effect of Human Capital and Information Capital Readiness on Business Sustainability: Do Market Orientation and Business Performance Matter? *SAGE Open*, *14*(1), 1–16. https://doi.org/10.1177/21582440231221320

Tong, T., & Rahman, A. A. (2022). Effect of Innovation Orientation of High-Tech SMEs "Small and Mid-Sized Enterprises in China" on Innovation Performance. *Sustainability (Switzerland)*, *14*(14), 1–17. https://doi.org/10.3390/su14148469

Xie, H., Chang, S., Wang, Y., & Afzal, A. (2023). The impact of e-commerce on environmental sustainability targets in selected European countries. *Economic Research-Ekonomska Istrazivanja* , *36*(1), 230–242. https://doi.org/10.1080/1331677X.2022.2117718

Yacob, S., Sulistiyo, U., Erida, E., & Siregar, A. P. (2021). The importance of E-commerce adoption and entrepreneurship orientation for sustainable micro, small, and medium enterprises in

Indonesia. *Development Studies Research*, *8*(1), 244–252. https://doi.org/10.1080/21665095.2021.1976657

Yuliati, L., Adenan, M., Prianto, F. W., Wibisono, S., & Komariyah, S. (2024). The Structure-Conduct-Performance Paradigm in the Indonesian Manufacturing Industry. *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi Dan Pembangunan*, *25*(1), 69–83. https://doi.org/10.23917/jep.v25i1.20483