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The Effect Of Attitude Towards Sustainable Business Models, Social Norms And Perceived Behavioral Control On Behavioral Intention To Adopt It With Open Innovation Ecosystem Partnership As An Intervening Variable (A Case Study On Cobek Batu Merapi Business)

Aldian Sidha Pamungkas [1], Al Hasin [2]

[1.2]Management Study Program, Faculty of Business and Economics, Islamic University of Indonesia, Yogyakarta

[1*]Corresponding Author: aldiansidha16@gmail.com

Abstract

This study aims to analyze the influence of attitudes towards sustainable business models, social norms, and perceived behavioral control on the behavioral intentions of MSMEs in adopting sustainable business models, with open innovation ecosystem partnerships as an intervening variable. The object of the study focused on the Karya Batu Indah MSME, namely Cobek Batu Merapi craftsmen who have the potential to develop their business through the application of sustainability principles. Respondents in this study numbered 110 people, with the following criteria: being an active business actor in the Karya Batu Indah MSME, having run the business for at least one year, having a role in business decision-making, and being willing and able to provide information needed in the study. Data collection was carried out using a five-point Likert scale questionnaire, then the data were analyzed using the Partial Least Squares (PLS)-based Structural Equation Modeling (SEM) method through SmartPLS 3.0 software. The results showed that social norms have a significant positive influence on open innovation ecosystem partnerships, as well as contributing to attitudes and perceived behavioral control. Furthermore, open innovation ecosystem partnerships and perceived behavioral control were shown to have a significant positive influence on the behavioral intentions of MSMEs in adopting sustainable business models. Attitudes toward sustainable business models also positively influence behavioral intentions. The conclusion of this study is that the adoption of sustainable business models in the Cobek Batu Merapi MSME industry is more determined by social support and the business owner's ability to manage sustainability

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practices than by individual attitudes alone. Therefore, building a partnership ecosystem that supports open innovation and strengthens social norms is key to increasing MSME commitment to sustainability.

Keywords: sustainable business models, social norms, perceived behavioral control, open innovation ecosystem partnerships, behavioral intentions, MSMEs.

INTRODUCTION

In an era of economic disruption and dynamic business environment change, open and sustainable business model innovation is increasingly recognized as a crucial strategy for companies and Micro, Small, and Medium Enterprises (MSMEs) to survive and thrive. This approach emphasizes cross-sector collaboration and the use of external resources to create shared value (Lüdeke-Freund, 2020). Furthermore, growing awareness of the importance of sustainability is encouraging businesses to adopt the triple bottom line principle, encompassing economic, social, and environmental aspects (Geissdoerfer et al., 2018). Thus, open and sustainable business model innovation not only creates long-term profits but also strengthens social and environmental resilience.

One MSME sector with high cultural value is the Cobek Batu Merapi and pestle craftsmanship industry in the Muntilan area of Magelang. This product is based on the traditional skills of the communities around Mount Merapi, known as a center for the production of high-quality traditional cooking utensils. Karya Batu Indah, as a community of Cobek Batu Merapi craftsmen, plays a vital role in preserving this cultural value through production practices that use selected natural stones and manual carving techniques passed down through generations (Andriani & Mu'is, 2017). However, this business faces modern challenges such as changing market demand, pressure from imported products, and limited access to technology and digital markets (Permata et al., 2023).

Adopting open and sustainable business model innovation is a strategic choice to increase business competitiveness and sustainability. However, the decision to adopt is influenced not only by external factors but also by psychological and social factors that shape behavioral intentions (Lüdeke-Freund, 2020). Based on the Theory of Planned Behavior (TPB), the intention to adopt a new business model is influenced by three main factors: attitudes toward sustainable business model innovation, social norms, and perceived control over behavior (Ajzen, 1991). These three factors play a crucial role in shaping individual and organizational readiness to make changes toward more adaptive and collaborative business models.

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A positive attitude toward sustainability can strengthen an individual's tendency to adopt sustainable innovation (Dangelico & Vocalelli, 2017). Conversely, a negative or neutral attitude toward change can be a major barrier to innovation adoption (Severo et al., 2021). In the context of Cobek Batu Merapi, attitudes toward sustainable innovation are crucial in driving changes in mindset and traditional business practices toward more modern systems (Jansson et al., 2017). Therefore, understanding business actors' attitudes is essential for designing effective strategies to strengthen their behavioral intentions to innovate (Bansal et al., 2021).

Furthermore, social norms play a crucial role in shaping business behavior, particularly in communities with strong cultural ties and collective values. When the social environment supports innovation and sustainability, businesses are more likely to follow these changes (White et al., 2009). This social support can strengthen collaboration among community members in developing more sustainable and inclusive business practices (Farrow et al., 2017). In the context of Karya Batu Indah, positive social norms can be a catalyst for collaborative innovation based on local values.

Meanwhile, perceived behavioral control reflects the extent to which entrepreneurs feel capable of adopting new business models with their existing resources. Entrepreneurs with sufficient resources, skills, and information will have greater confidence in innovating (Kautonen et al., 2015). Conversely, if perceived control is low, the intention to change will weaken even if attitudes and social norms are supportive (Yzer, 2012). In the context of MSMEs such as the Cobek Batu Merapi, this perception of control is strongly influenced by access to technology, training, and support from various stakeholders (Phuoc et al., 2020).

Furthermore, open innovation ecosystem partnerships act as intervening variables that bridge the relationship between attitudes, social norms, and behavioral control with behavioral intentions (Vanhaverbeke et al., 2018). Within this ecosystem, businesses can collaborate with other actors to build a conducive environment for innovation (Chesbrough et al., 2018). Collaboration with the government, tourism sector, and academia can strengthen product promotion, access to broader markets, and increase business capacity (Bogers et al., 2017). Thus, open innovation ecosystem partnerships are key to accelerating innovation adoption and building sustainable competitiveness.

Participation in an open innovation ecosystem also provides benefits in the form of information flow, technology transfer, and strengthening business networks (Spithoven et al., 2013). Cross-sector collaboration creates synergies that drive changes in business models to become more inclusive and future-oriented (Giudice et al., 2021). Furthermore, these partnerships can increase business actors' confidence in taking innovative risks and

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accelerate the transformation of traditional businesses into more adaptive ones (Pikkarainen et al., 2017).

In the context of Cobek Batu Merapi craftsmen, this approach has the potential to integrate local cultural values with modern, environmentally friendly innovations. While resistance and structural challenges remain, opportunities to improve production efficiency, product quality, and market reach are wide open if supported by effective partnerships and a collaborative approach.(Giudice et al., 2021)This also presents an opportunity for cultural MSMEs to reach international markets through narratives of sustainability and product uniqueness. This study aims to determine the impact of attitudes toward sustainable business models on behavioral intentions at Karya Batu Indah MSMEs.

This research is novel in integrating the Theory of Planned Behavior (TPB) with the concept of open innovation ecosystem partnerships as an intervening variable in the context of local culture-based MSMEs. Unlike previous research that generally focuses solely on internal or economic factors, this study emphasizes the role of cross-sector collaboration as a bridge between attitudes, social norms, and perceived control on entrepreneurs' behavioral intentions to adopt sustainable business models.

Empirically, this research contributes to the development of a more comprehensive conceptual model to explain the factors influencing the adoption of sustainable innovation in the traditional MSME sector. Practically, the results of this study are useful for Karya Batu Indah and similar MSMEs in designing partnership strategies, strengthening innovation capacity, and enhancing economic, social, and cultural sustainability amidst the pressures of changes in the modern business environment.

Objective

This article aims to

1. To determine attitudes towards sustainable business models towards behavioral intentions at Karya Batu Indah MSMEs.
2. To determine the influence of perceived behavioral control on behavioral intentions at Karya Batu Indah MSMEs.
3. To determine the influence of social norms on attitudes towards sustainable business models at Karya Batu Indah MSMEs.
4. To determine the influence of social norms on perceived behavioral control in the Karya Batu Indah MSME.
5. To determine the influence of social norms on the open innovation ecosystem partnership of Karya Batu Indah MSMEs.
6. To determine the influence of open innovation ecosystem partnerships on attitudes towards sustainable business models at Karya Batu Indah MSMEs.

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7. To determine the influence of open innovation ecosystem partnerships on perceived behavioral control in Karya Batu Indah MSMEs.
8. To determine the influence of open innovation ecosystem partnerships on behavioral intentions at Karya Batu Indah MSMEs.

LITERATURE ANALYSIS

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) explains that a person's intention to behave is influenced by three main factors: attitude, subjective norms, and perceived behavioral control (Ajzen, 1991). This theory helps explain how beliefs, social pressure, and perceived ability influence a person's decision to act. In the context of implementing a sustainable business model, TPB serves as a basis for understanding business actors' intentions to adopt environmentally friendly and socially oriented innovations. This model is relevant for identifying psychological factors that play a role in shaping the behavioral intentions of MSMEs such as Karya Batu Indah (Farell et al., 2023).

Attitudes towards Sustainable Business Models

Attitudes toward sustainable business models reflect an individual's assessment of the extent to which the adoption of sustainable practices is perceived as beneficial or detrimental (Ajzen, 1991). A positive attitude reflects the belief that sustainability can provide economic, social, and environmental benefits to business actors (Minatogawa et al., 2022). Attitude indicators, according to Farell et al. (2023), include belief in the economic benefits of sustainable business models, concern for social and environmental impacts, and support for the implementation of sustainable innovation. The more positive an individual's attitude toward these practices, the more likely they are to demonstrate an intention to adopt them in their daily business activities.

Social Norms

Social norms are behavioral adaptations that help individuals and groups create and maintain a predictable environment (Cardinal & Cardinal, 2024). These norms are formed from a person's willingness to comply with the beliefs of important people around them, such as parents, friends, coworkers, or investors (Ajzen, 1991). Indicators of social norms, according to Farell et al. (2023), include support from the surrounding environment, customer satisfaction with sustainable business models, and support from colleagues in implementing sustainability principles. Strong social norms can strengthen business actors' confidence to align their business behavior with prevailing social expectations and values.

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Perceived Behavioral Control

Perceived behavioral control describes the extent to which an individual believes they have the ability, resources, and opportunity to perform an action (Kiriakidis, 2017). In the context of MSMEs, this perception encompasses the entrepreneur's belief in their ability to overcome obstacles in implementing a sustainable business model. Indicators of perceived behavioral control, according to Farell et al. (2023), include the ability to find sustainable suppliers, the ability to measure and monitor business changes, and the belief in achieving planned sustainability goals. The higher the perceived control, the greater the entrepreneur's tendency to demonstrate behavioral intentions consistent with sustainability goals.

Partnerships in the Open Innovation Ecosystem

Partnerships in an open innovation ecosystem are a form of collaboration between actors who share resources, ideas, and knowledge to create shared value (Duarte et al., 2021). This concept emphasizes that successful innovation stems not only from internal organizational efforts but also from interactions with external parties such as research institutions, governments, and local communities (Bereczki & Füller, 2024). Indicators of partnerships in an open innovation ecosystem, according to Farell et al. (2023), include collaboration among business community members, discussions within cultural associations to solve common challenges, and the collective implementation of sustainable practices. Through open partnerships, MSMEs like Karya Batu Indah can strengthen their innovation capacity and accelerate the adoption of sustainable business models.

Behavioral Intention

Behavioral intention describes a person's desire or commitment to perform a particular action (Ajzen, 1985). In the context of a sustainable business model, behavioral intention reflects the readiness of business actors to apply sustainability principles in their business activities. Indicators of behavioral intention, according to Farell et al. (2023), include the desire to implement a sustainable business model, the willingness to innovate in an environmentally friendly manner, and a commitment to maintaining economic, social, and environmental balance in business practices. Strong intentions will be the main driving force for MSMEs to consistently behave in accordance with sustainable business principles.

Hypothesis Formulation

The hypothesis in this study is formulated based on theories and previous research results that are relevant to the variables studied.

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Research by Farell et al. (2023) shows that managers' positive attitudes toward sustainability drive their intention to implement it. The belief that sustainable business models bring economic, social, and environmental benefits strengthens this intention (Nosratabadi et al., 2019; Abdelkafi & Täuscher, 2016).

H1. Managers' attitudes have a positive influence on the intention to implement a Sustainable Business Model.

According to Ajzen (1985, 1991), perceived behavioral control reflects a person's belief in their ability to act. Alexa et al. (2021) and Farell et al. (2023) demonstrated that high perceived control increases intentions to act, including implementing sustainable business practices.

H2. Perceived behavioral control has a positive effect on managers' intention to implement a Sustainable Business Model.

Ajzen (1985) explained that social norms influence individual attitudes and behavior. Junco et al. (2024) and Farell et al. (2023) found that social pressure and environmental support strengthen managers' positive attitudes toward sustainability implementation (Papagiannakis & Lioukas, 2012).

H3. Social norms have a positive influence on managers' attitudes in the Sustainable Business Model.

The TPB theory (Ajzen, 1991) states that social norms can increase a person's perception of control over their actions. Findings by Farell et al. (2023) and Cantele and Zardini (2020) indicate that social support strengthens an individual's self-confidence and ability to implement sustainable practices.

H4. Social norms have a positive effect on perceived behavioral control.

Social norms shape an organization's moral legitimacy to behave sustainably (Thomas & Lamm, 2012). Farell et al. (2023) and Purtik & Arenas (2019) found that strong social norms encourage collaboration and open innovation in business environments.

H5. Social norms have a positive influence on the open innovation ecosystem.

Open innovation ecosystems encourage collaboration and knowledge exchange, strengthening understanding and positive attitudes toward sustainable innovation (Farell & Miralles, 2022; Farell et al., 2023). This collaboration also fosters awareness of the economic and social benefits of shifting toward sustainability (Ayandibu & Ayandibu, 2024).

H6. Participation in the open innovation ecosystem has a positive effect on managers' attitudes towards Sustainable Business Models.

Participation in an open innovation ecosystem broadens access to resources, external support, and knowledge, which enhances managers' sense of control over innovation

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implementation (Farell & Miralles, 2022; Zhang & Wang, 2021). Farell et al. (2023) confirm this positive relationship in the context of sustainable business.

H7. Participation in an open innovation ecosystem has a positive effect on perceived behavioral control.

Collaboration within open innovation ecosystems enables companies to acquire external ideas, technologies, and best practices to strengthen sustainable innovation (Altaf & Khan, 2024). Farell & Miralles (2022) and Farell et al. (2023) demonstrated that such participation increases the intention to adopt sustainable business models.

H8. Participation in the open innovation ecosystem has a positive effect on the intention to implement a Sustainable Business Model.

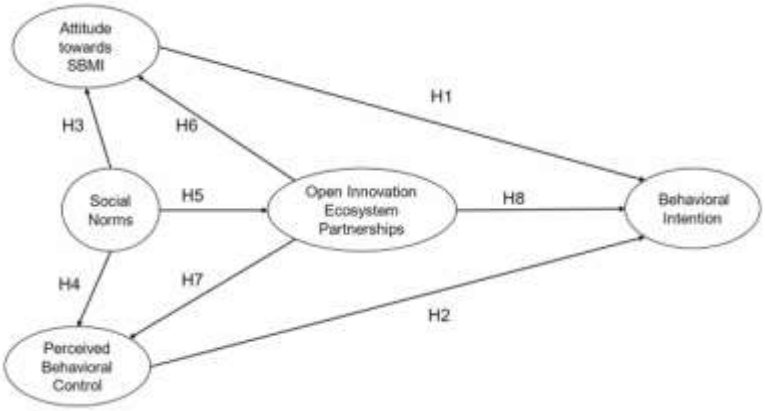


Figure 1. Research Framework
Source :Farell et al., (2023)

METHODOLOGY

This research was conducted at the Karya Batu Indah community in Sewan, Sedayu, Muntilan District, Magelang Regency, Central Java, which is a center for MSMEs producing Cobek Batu Merapi. This research used a quantitative approach, according to Hair et al. (2017), a quantitative approach is a research method that uses concrete data from a specific sample or population that can be measured statistically. The data collected are in the form of numbers processed using statistical tools to obtain objective conclusions. The population in this study was all Karya Batu Indah MSMEs who actively produce and sell Cobek Batu Merapi in Magelang Regency, Central Java.

This study used non-probability sampling with a purposive sampling technique, because not all members of the population have an equal chance of being selected as

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respondents. The sample criteria in this study were MSMEs who had been running their businesses for at least 1 year, played an active role in business decision-making, and were willing to complete the research questionnaire. The number of indicators in this study was 17 items, and the sample size calculation was based on the method of Hair et al. (2017), which is a minimum of 5 times the number of indicators and variables used. Thus, the minimum sample size was 110 respondents and the maximum was 220 respondents. This study involved 110 respondents who met these criteria.

The data used consisted of primary and secondary data. Primary data were obtained through an online questionnaire using Google Forms, which included respondent characteristics and research variable indicators. Secondary data were obtained from relevant literature, books, and previous journals. All indicators were measured using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Prior to use, the questionnaire was tested for validity and reliability to ensure that the research instrument produced accurate and consistent data.

Data analysis was performed using Structural Equation Modeling (SEM) based on SmartPLS 3.0. SEM was chosen because it can simultaneously test complex relationships between latent variables, both direct and indirect influences. The PLS model consists of two parts: an outer model and an inner model. The outer model was evaluated using convergent validity, discriminant validity, and composite reliability tests. The inner model was tested using the path coefficient, R-squared, effect size (f^2), and Goodness of Fit Index (NFI).
Hypothesis testing was carried out using the bootstrapping method to obtain the T-statistic and P-value, where the relationship was considered significant if $T > 1.96$ and $P < 0.05$ (Hair et al., 2017).

RESEARCH AND RESULTS

Respondent Characteristics

Based on the research results, the characteristics of the respondents are explained as follows:

Table 1. Respondent characteristics

Characteristics	Category	Percentage (%)
Gender	Man	78.2
	Woman	21.8
Age	18 – 21 Years	12.7

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Characteristics	Category	Percentage (%)
	22 – 25 Years	37.3
	26 – 30 Years	41.8
	> 30 Years	8.2
Last education	High School/ Vocational School/ Equivalent	52.7
	Diploma/Academy	26.4
	Bachelor degree	20.9
Monthly Income	2 – 3 Million	50.9
	4 – 5 Million	40.9
	> 5 Million	8.2
Length of Time Joining the Association	< 1 Year	2.7
	13 years old	34.5
	3 – 5 Years	46.4
	> 5 Years	16.4

Source: Processed primary data, 2025

Based on the research results, the characteristics of respondents indicate that the majority of Karya Batu Indah MSME business actors are men aged 26–30 years, have a high school/vocational high school education or equivalent, and an average income of 2–3 million rupiah per month. Most respondents have joined the Karya Batu Indah Association for 3–5 years. These findings indicate that Cobek Batu Merapi and pestle business actors are dominated by the productive age group with strong inherited skills, thus having great potential in maintaining business sustainability and adopting innovative open business models in the future.

Model Evaluation

The evaluation of the measurement model was tested with several indicators, including convergent validity, discriminant validity, and reliability. The measurement model was calculated using the PLS Algorithm. Based on the convergent validity test, it was found that the factor loading value of each indicator was more than 0.7 and the AVE value was

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more than 0.5, so the indicators used were declared valid to measure the latent variables. The results of the discriminant validity test showed that the cross-validity loading value for each item had a value > 0.70, and each item had the largest value when connected to its latent variable compared to when connected to other latent variables. This indicates that each variable in this study has explained its latent variable correctly and proves that the discriminant validity of all items is valid.

Reliability in PLS uses Cronbach's alpha and composite reliability values. The results of data analysis obtained composite reliability values for all research variables >0.7 and Cronbach's alpha >0.7. These results indicate that each variable has met composite reliability and Cronbach's alpha, thus it can be concluded that all variables have a high level of reliability. Therefore, further analysis can be conducted by examining the model's suitability by evaluating the internal model.

Internal model testing, or structural model testing, was conducted to examine the relationships between constructs, significance values, and R-squared of the research model. The structural model of this study is as follows (Figure 2):

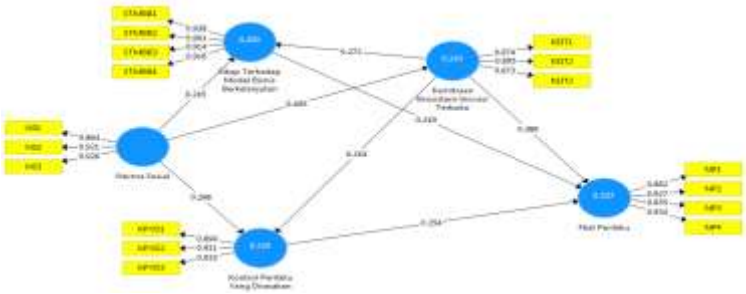


Figure 2. Structural Model

Source: SmartPLS Output Results (v.3.2.9)

Evaluation of the PLS structural model begins by examining the R-squared of each dependent latent variable. Table 2 shows the results of the R-squared estimation using PLS.

Table 2.R Square Test Results

Variables	R-Square	R-Square Adjusted
Open Innovation Ecosystem Partnership	0.245	0.238
Perceived Behavioral Control	0.220	0.205
Behavioral Intentions	0.537	0.524
Attitudes Towards Sustainable Business Models	0.200	0.185

Source: SmartPLS Output Results (v.3.2.9)

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Based on Table 2 above, the R-Square value of the Open Innovation Ecosystem Partnership variable is 0.245, which means that this variable can be explained by the independent variable by 24.5%, while the remaining 75.5% is explained by other variables outside this study. The R-Square value of the Perceived Behavioral Control variable is 0.220, which means that this variable can be explained by the independent variable by 22.0%, and the remaining 78.0% by other variables outside the study. Furthermore, the R-Square value of the Behavioral Intention variable is 0.537, meaning that this variable can be explained by the independent variable by 53.7%, while the remaining 46.3% is explained by other variables not studied. Finally, the R-Square value of the Attitude towards Business Model variable is 0.200, which means that this variable can be explained by the independent variable by 20.0%, and the remaining 80.0% is explained by other factors outside this research model. The results of the Q-square analysis are as follows:

Table 3.*Predictive Relevance*

Variables	Q^2 (=1-SSE/SSO)	Information
Open Innovation Ecosystem Partnership	0.185	Has predictive relevance value
Perceived Behavioral Control	0.175	Has predictive relevance value
Behavioral Intentions	0.424	Has predictive relevance value
Attitudes Towards Sustainable Business Models	0.159	Has predictive relevance value

Source: SmartPLS Output Results (v.3.2.9)

Based on the data presented in Table 3, it can be seen that the Q-square value for the dependent variable is > 0. By looking at this value, it can be concluded that this study has a good/very good observation value because the Q-square value is > 0 (zero). The results of the F-square analysis are as follows:

Table 4. F2 Value of Model

Variable	Open Innovation Ecosystem Partnership	Perceived Behavioral Control	Behavioral Intentions	Social Norms	Attitudes Towards Sustainable Business Models
Open Innovation Ecosystem Partnership		0.057	0.245		0.070

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Perceived Behavioral Control			0.226		
Social Norms	0.325	0.086			0.056
Attitudes Towards Sustainable Business Models			0.087		

Source: SmartPLS Output Results (v.3.2.9)

Based on Table 4, the Open Innovation Ecosystem Partnership variable has a moderate influence on Perceived Behavioral Control, a large influence on Behavioral Intention, and a small influence on Attitude Toward Sustainable Business Models. This indicates that ecosystem partnerships have a stronger influence on MSMEs' intention to conduct sustainable business compared to attitudes and behavioral control. Furthermore, Perceived Behavioral Control also has a large influence on Behavioral Intention, indicating that business actors' confidence in managing sustainable practices significantly determines their intention to implement them. In addition, Social Norms have a large influence on Open Innovation Ecosystem Partnerships, but only a small influence on Attitudes and Behavioral Control. Meanwhile, Attitudes toward Sustainable Business Models have a small influence on Behavioral Intention, which means that positive attitudes alone are not strong enough to drive behavioral intentions without the support of other factors. Overall, the largest influence in this model comes from Social Norms on Open Innovation Ecosystem Partnerships, as well as Open Innovation Ecosystem Partnerships and Perceived Behavioral Control on Behavioral Intention. Analysis ResultsModel Fit Test (NFI)are as follows:

Table 5. Model Fit Test Results

	Saturated Model	**Estimated Model**
SRMR	0.057	0.094
d_ULS	0.493	1,362
d_G	0.489	0.608
Chi-Square	312,289	349,203
NFI	0.816	0.794

Source: SmartPLS Output Results (v.3.2.9)

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Based on Table 5, the SRMR value for the Saturated Model is 0.057 and for the Estimated Model is 0.094, both below the threshold of 0.10, so the model is considered to have a good fit. The d_ULS and d_G values also show small differences between the empirical and theoretical models, indicating a fairly good model. In addition, the Chi-Square value for the Saturated Model (312.289) is lower than the Estimated Model (349.203), although in PLS-SEM this indicator is not the main focus. The NFI value of 0.816 for the Saturated Model and 0.794 for the Estimated Model are included in the acceptable fit category because they are close to 0.80. Overall, these results indicate that the research model has met the feasibility criteria and can be used for further hypothesis testing.

Hypothesis Testing

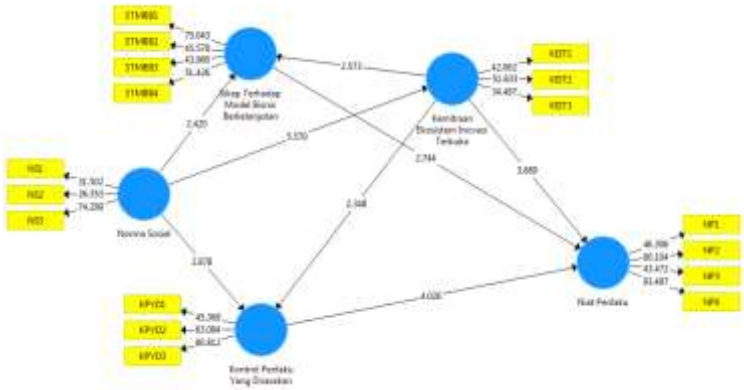


Figure 3.PenHypothesis test
Source: SmartPLS Output Results (v.3.2.9)

Table 6.PenHypothesis test

Variables	Original Sample (O)	T Statistics (| O/STDEV |)	P Values
Attitudes Towards Sustainable Business Models -> Behavioral Intentions	0.219	2,744	0.006
Perceived Behavioral Control -> Behavioral Intention	0.354	4,026	0,000
Social Norms -> Attitudes Towards Sustainable Business Models	0.245	2,420	0.016
Social Norms -> Perceived Behavioral Control	0.298	2,878	0.004

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Social Norms -> Open Innovation Ecosystem Partnership	0.495	5,570	0,000
Open Innovation Ecosystem Partnership -> Attitudes Towards Sustainable Business Models	0.272	2,573	0.010
Open Innovation Ecosystem Partnership -> Perceived Behavioral Control	0.244	2,348	0.019
Open Innovation Ecosystem Partnership -> Behavioral Intentions	0.388	3,689	0,000

Source: SmartPLS Output Results (v.3.2.9)

DISCUSSION

The Influence of Attitudes towards Sustainable Business Models on Behavioral Intentions

The test results show a coefficient value of 0.219, a p-value of 0.006 < 0.05, and a t-statistic of 2.744 > 1.960, indicating that Attitudes toward Sustainable Business Models have a positive and significant effect on Behavioral Intentions. This finding is supported by Farell et al. (2023) and Nosratabadi et al. (2019) who stated that managers with positive attitudes toward sustainability tend to believe that sustainable business models provide economic, social, and environmental benefits. This belief fosters the view that changes towards sustainability are important (Abdelkafi & Täuscher, 2016). Thus, the more positive the managers' attitudes, the higher their intention to implement sustainable business models.

The Influence of Perceived Behavioral Control on Behavioral Intentions

The coefficient value of 0.354, p-value 0.000 < 0.05, and t-statistic 4.026 > 1.960 indicate that Perceived Behavioral Control has a positive and significant effect on Behavioral Intention. This research aligns with Farell et al. (2023) and Alexa et al. (2021), which assert that an individual's belief in their abilities and resources can increase their intention to act. Rachman (2022) added that perceived self-control acts as an internal drive that makes managers more prepared to transform intentions into concrete actions in implementing a sustainable business model.

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The Influence of Social Norms on Attitudes Towards Sustainable Business Models

With a coefficient value of 0.245, a p-value of 0.016 < 0.05, and a t-statistic of 2.420 > 1.960, the results show that Social Norms have a positive and significant effect on Attitudes towards Sustainable Business Models. This finding is in line with Farell et al. (2023) and Papagiannakis & Lioukas (2012) who showed that social pressure and expectations of the business environment can influence managers' attitudes towards sustainability. Junco et al. (2024) also emphasized that social norms are a strong predictor in forming positive attitudes towards responsible business practices.

The Influence of Social Norms on Perceived Behavioral Control

The coefficient value of 0.298, p-value 0.004 < 0.05, and t-statistic 2.878 > 1.960 indicate that Social Norms have a positive and significant effect on Perceived Behavioral Control. These results support the theory of Ajzen (1991) and research by Farell et al. (2023) that social support can increase an individual's perceived ability to act. Cantele & Zardini (2020) added that when the social environment emphasizes the importance of sustainability, confidence to act also increases.

The Influence of Social Norms on Open Innovation Ecosystem Partnerships

The results show a coefficient value of 0.495, a p-value of 0.000 < 0.05, and a t-statistic of 5.570 > 1.960, indicating that social norms have a positive and significant effect on open innovation ecosystem partnerships. This finding aligns with Farell et al. (2023) and Purtik & Arenas (2019) who assert that social norms that support collaboration and innovation strengthen the creation of an open innovation ecosystem. Edward & Frinaldi (2024) added that social norms create a collaborative climate that encourages knowledge sharing and innovation adoption in the community.

The Influence of Open Innovation Ecosystem Partnerships on Attitudes Towards Sustainable Business Models

With a coefficient value of 0.272, a p-value of 0.010 < 0.05, and a t-statistic of 2.573 > 1.960, the results indicate that Open Innovation Ecosystem Partnerships have a positive and significant effect on Attitudes Toward Sustainable Business Models. According to Farell & Miralles (2022), partnerships in open innovation enable companies to share knowledge and experiences. This collaboration helps managers understand the benefits and risks of business model changes, resulting in more positive attitudes toward sustainability (Ayandibu & Ayandibu, 2024).

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The Influence of Open Innovation Ecosystem Partnerships on Perceived Behavioral Control

The coefficient value of 0.244, p-value 0.019 < 0.05, and t-statistic 2.348 > 1.960 indicate that Open Innovation Ecosystem Partnerships have a positive and significant effect on Perceived Behavioral Control. This is supported by Farell et al. (2023) who stated that innovative partnerships provide access to collaborative resources and networks, thereby increasing individual confidence in controlling actions. This collaboration reduces barriers to innovation and strengthens the perceived ability to implement change (Zhang & Wang, 2021; Udiyasa & Madubun, 2023).

The Influence of Open Innovation Ecosystem Partnerships on Behavioral Intentions

The test results show a coefficient value of 0.388, a p-value of 0.000 < 0.05, and a t-statistic of 3.689 > 1.960, indicating that Open Innovation Ecosystem Partnerships have a positive and significant effect on Behavioral Intention. This finding aligns with Farell et al. (2023) that cross-organizational collaboration increases managers' intention to implement sustainable business models. Through partnerships, companies can access new ideas and technologies and strengthen innovative competencies (Altaf & Khan, 2024; Farell & Miralles, 2022). This collaboration not only accelerates innovation but also increases motivation to implement sustainable business practices.

CONCLUSION AND RECOMMENDATIONS

Attitudes toward sustainable business models have a positive and significant influence on the behavioral intentions of Karya Batu Indah MSMEs. This indicates that the more positive business owners' views of the benefits of sustainability, the greater their intention to adopt it in their business practices. Perceived behavioral control also has a positive and significant influence on behavioral intentions, meaning the greater the confidence and ability of business owners to implement sustainable practices, the stronger their desire to implement them.

Social norms have been shown to have a positive and significant influence on attitudes toward sustainable business models, perceived behavioral control, and open innovation ecosystem partnerships. This means that social support from the surrounding environment, such as the community, fellow artisans, and community leaders, can shape positive perceptions and increase business actors' confidence in implementing sustainable strategies. Furthermore, open innovation ecosystem partnerships have a positive and significant influence on attitudes, behavioral control, and behavioral intentions. This suggests that the stronger the collaboration between MSMEs and external parties such as research

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institutions, the government, and business partners, the higher their commitment to implementing sustainable business models.

Overall, the results of this study confirm that attitudes, social norms, perceived behavioral control, and open innovation ecosystem partnerships are important factors shaping behavioral intentions in implementing a sustainable business model at the Karya Batu Indah MSME. These findings demonstrate the importance of synergy between internal factors (attitudes and behavioral control) and external factors (social norms and partnerships) in encouraging the adoption of sustainable practices in the MSME sector.

Based on the research results, several recommendations can be implemented by MSMEs and related parties. First, businesses need to strengthen awareness of the importance of sustainability through training, workshops, and outreach on environmentally friendly practices to foster a consistent positive attitude. Second, to increase perceived behavioral control, technical and managerial assistance is needed to help businesses effectively manage sustainable business activities. Third, social norms can be strengthened by establishing a collective culture that supports sustainability, for example by rewarding businesses that successfully implement environmentally friendly principles.

Fourth, open innovation ecosystem partnerships must continue to be developed by expanding collaborative networks, including with educational institutions, local governments, and other industrial sectors, to enhance innovation and sustainable competitiveness. Fifth, future researchers are advised to expand the sample to include MSMEs in other sectors and regions to allow for broader generalization of the results. Furthermore, future research could add new variables such as government support, digital technology, or market orientation to enrich the research model.

Finally, further research could employ a mixed-methods approach, combining quantitative and qualitative data, or be conducted longitudinally to monitor changes in MSMEs' attitudes and behaviors toward sustainable practices over the long term. Thus, future research findings could provide a more in-depth, dynamic, and contextualized picture of the implementation of sustainable business models among MSMEs in Indonesia.

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