



The Impact of Cross-Sector Collaboration on F&B Micro Business Revenue through Ecosystem Orchestration and Innovation

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ABSTRACT

This study seeks to examine the impact of cross-sector collaboration on the revenue of micro-food and beverage (F&B) enterprises, utilizing ecosystem orchestration and innovation skills as mediating variables. Micro-food and beverage (F&B) firms are important to the Indonesian economy, but they have a lot of competition, few resources, and limited access to markets. People think that working together across sectors is a good way to get support, networks, and new ideas. The research employed an explanatory design alongside a quantitative methodology. A purposive sample questionnaire survey was utilized to gather data from 300 proprietors of food and beverage microbusinesses in the Koja Subdistrict of North Jakarta. We used Structural Equation Modeling-Partial Least Squares (SEM-PLS) to look at the data more closely. Cross-sector collaboration has a big effect on microbusiness income, innovation capacity, and ecosystem orchestration, according to this study. Ecosystem orchestration has little effect on revenue, while innovation capability has no direct consequence. Ecosystem orchestration does not significantly mediate the impact of cross-sector collaboration on revenue, whereas innovation capabilities does. These results show how important it is for enterprises in different sectors to work together to help microbusinesses make more money by improving innovation and ecosystem coordination

INTRODUCTION

Micro, small, and medium-sized firms (MSMEs) are very important to Indonesia's economic growth because they make up over 60% of GDP and 97% of the workforce. This is especially true in the food and beverage (F&B) sector (Ministry of Cooperatives and SMEs, 2022). Many microenterprises expand slowly because they don't have enough money, technology, marketing, or efficiency (Tambunan, 2019).

Cross-sector collaboration, or CSC, is one significant way to get around these problems. The Resource-Based View (RBV) posits that collaboration facilitates access to external resources such as financing, technology, and training (Long et al., 2023). Nonetheless, empirical evidence addressing the influence of CSC on the financial performance of F&B MSMEs is contradictory; several research indicate good outcomes, whereas others reveal minimal or inconsistent benefits (Scuotto et al., 2023). This indicates the presence of a mediation mechanism that has not been adequately examined.

This work presents a fresh contribution by examining a sequential mediation model. Collaboration is deemed effective solely when underpinned by two essential abilities. Ecosystem orchestration is the ability to organize and coordinate networks of partners (Ansell et al., 2017). Second, the capacity to convert collaborative resources into novel goods, processes, or business models is referred to as innovation capability (Audretsch et al., 2023; Zastempowski, M.; Saunila, M.). 2020 (2022).

This study examines the influence of teamwork and elucidates how ecosystem coordination and innovative abilities convert teamwork into augmented revenue for food and beverage microbusinesses.

LITERATURE REVIEW

The study's findings indicate that cross-sector collaboration exerts a favorable and substantial influence on the revenue of micro-food and beverage enterprises. Working with governments, businesses, communities, and schools makes it easier to get to markets, technology, and capital. This makes enterprises more competitive and opens up new chances for long-term growth. This finding is consistent with the study by Gupta, S., Joshi, D., and Jagtap, S. (2025), which indicates that cross-sector collaboration facilitates access to finance, markets, and technology, hence enhancing competitiveness and fostering sustainable business growth. Additional investigation in alignment with Rahman, A., Syamsun, M., & Maulana, A. 2021. Cross-sector collaboration is a way to increase social innovation in rural microenterprises by using social capital, transformational leadership, and institutional alignment. (Kasumaningrum et al., 2024a). Cross-sector collaboration is when people from the public, nonprofit, and business sectors work together to come up with new ideas and solve difficult problems. (Mayr, 2022)

Cross-sector cooperation has become a useful strategic way to help microbusinesses in Indonesia (Kusumawardhani et al., 2015). Cross-sector collaboration has been very important for boosting the sales of small businesses in the food and drink industry. This is because of ecosystem orchestration and

innovative skills. Support from businesses, the government, communities, and schools all help competition and make sure that growth will last over time.

Also, ecosystem orchestration has been shown to be a key middleman. Strategically managed cooperation leads to successful coordination, role allocation, and resource integration, which in turn leads to a sustainable network. This is in line with the idea of ecosystem orchestration (Shen, L., Shi, Q., Parida, V., & Jovanovic, M. (2024)), which stresses the importance of motivating actors in fostering cooperation that leads to group innovation. Bernhard Lingens and Florian Huber (2021) say that ecosystem orchestration is the process of leveraging inter-organizational frameworks to get all the people in an ecosystem to collaborate toward a common value proposition. The three basic ways to get ecosystem partners to work together are to set up an organizational structure, make sure everyone has a job in the ecosystem, and regulate how information and knowledge flow. (Huber and Lingens, 2023.)

The ability to come up with new ideas is another essential middleman. Companies who can use cooperation to come up with new products, new ways to advertise, or better ways to run their business usually generate more money. This finding aligns with Schumpeter's theory and the research (Zhang & Li, 2022) which underscores the significance of innovation for the sustainability of microbusinesses in the food and beverage sector.

Cross-sector collaboration has a direct and indirect effect on revenue growth through ecosystem orchestration and inventive capacities. These two mediators work together to make the mental framework better. Collaborative advantage (Dzhengiz, T., & Patala, S. 2025) shows how important organized teamwork is for the survival of microbusinesses.

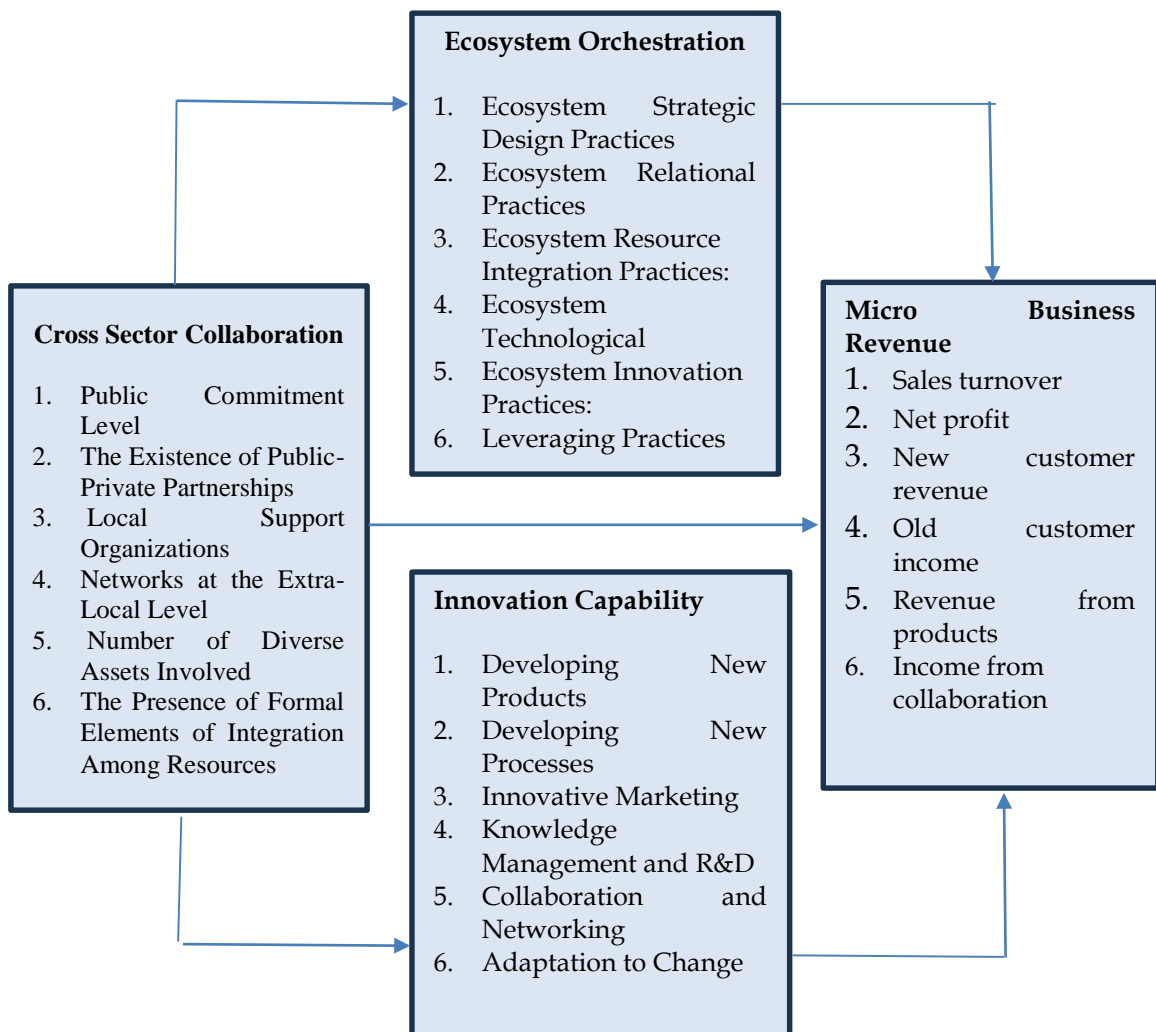


Figure 1. Conceptual Framework

METHODOLOGY

To elucidate the causal relationship among cross-sector collaboration, ecosystem orchestration, innovation capability, and revenue enhancement for food and beverage microbusinesses, this study employs a quantitative technique inside an explanatory framework. This methodology was selected to guarantee that the outcomes are factual, objective, quantifiable, and amenable to statistical analysis.

The research tool was a Likert-scale questionnaire with a range of 1 to 4 that asked people how they felt about important variables. The metrics encompassed revenue growth, product and marketing innovation capabilities, ecosystem coordination efficiency, and the degree of collaboration. After being checked by experts, the measure was tested for validity and reliability using Cronbach's Alpha and Confirmatory Factor Analysis (CFA).

The data was submitted by owners or managers of micro-food and beverage (F&B) firms who have a minimum of two years of experience and skill in cross-sector collaboration. Using a purposive sample technique, about 300

people were picked from the Koja District of North Jakarta. The survey has both online and offline questions to get more people to answer.

We utilized SEM-PLS to look at the data because it works with models that have mediating factors and data that isn't normally distributed. The analytical step includes testing hypotheses, evaluating structural models, and checking validity and dependability. beginning at the beginning. A link between variables is deemed significant at a 5% significance level if the t-statistic exceeds 1.96.

The analytical results are displayed in tables, graphs, and path diagrams to elucidate the relationships among variables. This graphic presentation underscores the role of ecosystem orchestration and innovation capacities as mediators, while affirming the validity, trustworthiness, and application of this research technique in both academic and practical contexts

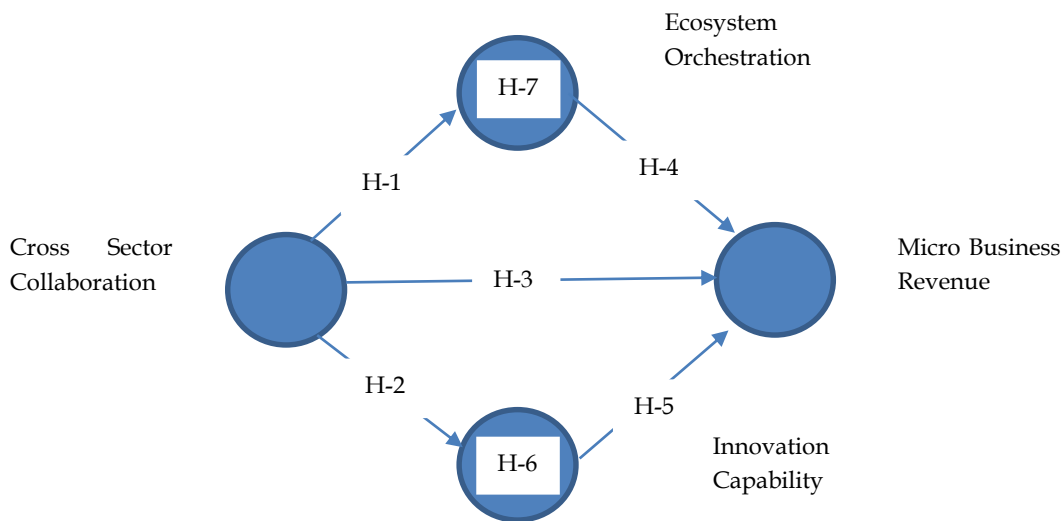


Figure 2. SEM-PLS Research Model Framework

RESULTS AND DISCUSSION

1. Evaluation of Measurement Model

This study used a reflective technique to assess the constructs of Cross-Sector Collaboration, Ecosystem Orchestration, Innovation Capability, and Micro-Business Income Growth. Hair et al. (2021) assert that to confirm distinctions across constructs, the assessment employed discriminant validity and convergent validity (factor loading ≥ 0.70 , composite reliability ≥ 0.70 , Cronbach's alpha > 0.70 , AVE ≥ 0.50). We employed the Heterotrait-Monotrait ratio (HTMT) and the Fornell-Larcker criterion to check for discriminant validity. The Fornell-Larcker criterion states that the Heterotrait-Monotrait ratio (HTMT) must be less than 0.90 (or less than 0.85 for severe criteria) and that the square root of the Average Variance Extracted (AVE) must be greater than the correlation across constructs. This makes sure that each build is correct, unique, and that the study results are trustworthy.

Table 1. Loading Factor

Item	Outer loadings	Description
csc1 <- CSC	0.844	Valid
csc2 <- CSC	0.83	Valid
csc3 <- CSC	0.887	Valid
csc4 <- CSC	0.803	Valid
csc5 <- CSC	0.82	Valid
csc6 <- CSC	0.845	Valid
eo1 <- EO	0.772	Valid
eo2 <- EO	0.793	Valid
eo3 <- EO	0.831	Valid
eo4 <- EO	0.848	Valid
eo5 <- EO	0.836	Valid
eo6 <- EO	0.831	Valid
ic1 <- GCS	0.82	Valid
ic2 <- GCS	0.853	Valid
ic3 <- GCS	0.86	Valid
ic4 <- GCS	0.869	Valid
ic5 <- GCS	0.831	Valid
ic6 <- GCS	0.802	Valid
mb1 <- MB	0.819	Valid
mb2 <- MB	0.831	Valid
mb3 <- MB	0.899	Valid
mb4 <- MB	0.88	Valid
mb5 <- MB	0.877	Valid
mb6 <- MB	0.846	Valid

The measurement model's estimation results show that there are six valid items for cross-sector collaboration, six valid things for ecosystem orchestration, six valid items for innovation capability, and six valid items for microbusiness revenue.

Tabel 2. Outer Loading, Composite Reliability dan Average Varian Extracted (AVE)

Variable	Measurement	Indicator	Outer loadings	Crobachs Alpha	Composite Reliability	AVE
Cross Sector Collaboration	CSC1	Level of Public Commitment	0.844	0.915	0.934	0.703
	CSC2	Existence of Partnership	0.830			
	CSC3	Local Support Organizations	0.887			
	CSC4	Networking at the Extra-Local Level	0.803			
	CSC5	Number of Diverse Assets Involved	0.820			
	CSC6	The Presence of Formal Elements of Integration Among Resources	0.845			
Ecosystem Orchestration	EO1	Ecosystem Strategic Design Practices	0.820	0.902	0.924	0.671
	EO2	Ecosystem Relational Practices	0.853			
	EO3	Ecosystem Resource Integration Practices	0.860			
	EO4	Ecosystem Technological	0.869			
	EO5	Ecosystem Innovation Practices	0.831			

	EO6	Leveraging Practices	0.802			
Innovation Capability	IC1	Developing New Products	0.820	0.916	0.935	0.705
	IC2	Developing New Processes	0.853			
	IC3	Innovative Marketing	0.860			
	IC4	Knowledge Management and R&D	0.869			
	IC5	Collaboration and Networking	0.831			
	IC6	Adaptation to Change	0.802			
<i>Micro-Business Revenue</i>	MB1	Sales turnover	0.819	0.929	0.944	0.738
	MB2	Net profit	0.831			
	MB3	New customer revenue	0.899			
	MB4	Old customer income	0.880			
	MB5	Revenue from products	0.877			
	MB6	Income from collaboration	0.846			

To measure variable cross-sector collaboration, six trustworthy indicators were utilized (outer loading 0.803–0.887; CR 0.934; α 0.915; AVE 0.703). CSC3 and CSC6 were the most reliable signs. MoUs and digital platforms help MSMEs work together better, get more done, and stay in business longer. Cooperatives and MSME associations connect businesses with the government and big companies, giving them money, training, and access to markets (Klein & Spychalska-Wojtkiewicz, 2020).

EO4 and EO3 were the strongest of the six valid indicators of Ecosystem Orchestration (outer loading 0.802–0.869; CR 0.924; α 0.902; AVE 0.671). Cloud computing and AI-driven PRM enhance data flow, coordination, and market access for MSMEs, while collaboration across business, academia, and government for market adaption showcases innovation (Robbiano, 2022).

We employed six valid indicators (outer loading 0.802–0.869; CR 0.935; α 0.916; AVE 0.705) to measure innovative capability. GCS3 and GCS4 were the strongest ones. When numerous stakeholders are involved, ESG is clear, and resources are used well through IoT, AI, and renewable energy, MSMEs are more responsible, competitive, and long-lasting (Khan et al., 2024; Li et al., 2022). The six reliable measures of Micro Business Revenue (outer loading 0.831–0.899; CR

0.944; α 0.929; AVE 0.738) showed that MB3 and MB4 were the most closely related. Kuan and West (2023) assert that enhancing operational efficiency via IoT, AI, and ERP, alongside product innovation, research collaboration, and R&D investment, elevates competitiveness and fosters sustainable microbusiness growth.

Tabel 3. Table Fornell dan Lacker

	CSC	EO	IC	MB
Cross Sector Collaboration	0.838			
Ecosystem Orchestration	0.653	0.819		
Innovation Capability	0.543	0.727	0.84	
Micro Business Revenue	0.913	0.662	0.554	0.859

We utilized the Fornell-Larcker criterion to check for discriminant validity, which means that each variable is different in theory and practice. This criterion states that the correlation of a variable with other variables must be less than the square root of its Average Variance Extracted (AVE). The data shows that Cross Sector Collaboration has an AVE root of 0.838. This is greater than its correlation with Capability Innovation (0.543) and Ecosystem Orchestration (0.653), but lower than its correlation with Micro Business Revenue (0.913). The four variables – Cross Sector Collaboration, Ecosystem Orchestration, Capability Innovation, and Micro Business – demonstrated adequate discriminant validity.

2. Evaluation of Structural Model (Inner Model) in SEM-PLS Analysis

The structural model evaluation seeks to legally and reliably examine hypotheses concerning the impact of research variables through three primary processes. The test is the first step. The Inner Variance Inflation Factor (VIF) is a way to find multicollinearity. A value of less than 5 means that there are no major multicollinearity issues, while a value of more than 5 means that there is a strong correlation between predictors that could make it hard to estimate coefficients (Hair et al., 2021).

The second stage is to assess the significance of the hypothesis using t-statistics and p-values from bootstrapping 5,000 subsamples. A t-value exceeding 1.96 or a p-value below 0.05 signifies a substantial effect, corroborated by a 95% confidence interval that excludes zero. The third step is effect size analysis, which uses f^2 for the direct effect and V for the mediation effect. For f^2 , the range is 0.02–0.35 (small–large), and for V , the range is 0.02–0.175. The results of this evaluation help figure out how important each variable is in deciding which interventions to prioritize (Hair et al., 2021; Lachowicz et al., 2018).

Table 4. Inner VIF

	Cross Sector Collaboration	Ecosystem Orchestration	Innovation Capability	Micro Business Revenue
Cross Sector Collaboration		1.000	1.000	1.773
Ecosystem Orchestration				2.655
Innovation Capability				2.162
Micro Business Revenue				

Before testing the hypothesis, inner VIF was used to check for multicollinearity across variables. The estimation results reveal a VIF value below 5, which means there is little multicollinearity. This criterion guarantees that PLS-SEM parameter estimations are unbiased and robust, facilitating highly dependable hypothesis testing

After analyzing the data, the path coefficients and significance (p-value) between variables are checked to see if the hypotheses are true. The results illustrate the significance of cross-sector collaboration and the direct or indirect impacts of ecosystem orchestration, innovation capability, and micro business revenue. When the p-value is less than 0.05, the null hypothesis is not true. These results not only help policymakers and business stakeholders build cooperative and integrated sustainability plans, but they also help us understand how sectors may work together better in theory.

Direct effect

H-1: Cross-sector collaboration affects ecosystem orchestration.

H-2: Cross-sector collaboration affects innovation capability.

H-3: Cross-sector collaboration affects micro business revenue.

H-4: Ecosystem orchestration affects micro business revenue.

H-5: Innovation capability affects micro business revenue

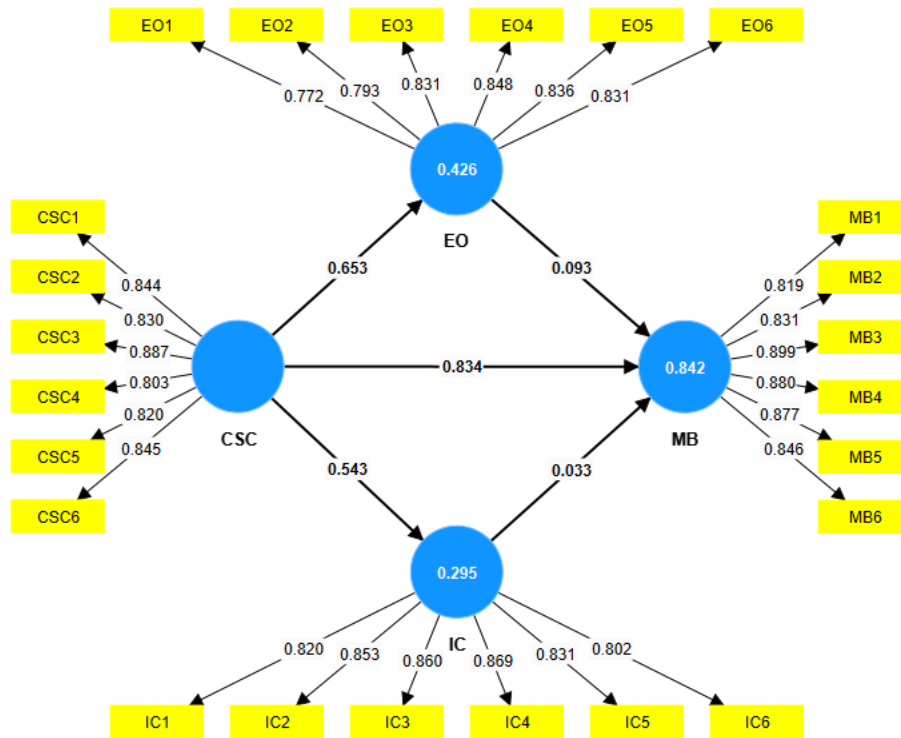


Figure 3. Direct Hypothesis Testing

Indirect Effect

H-6: Innovation capability significantly mediates the effect of cross-sector collaboration on micro business revenue.

H-7: Ecosystem orchestration significantly mediates the effect of cross-sector collaboration on micro business revenue

Table 5. Direct Hypothesis Testing

Hypothesis	Path Coefficient	P-Value	95% Confidence Interval of Path Coefficient		F-Square
			Lower Bound	Upper Bound	
H-1: Cross sector collaboration-ecosystem orchestration	0.653	0,000	0.579	0.725	0,742
H-2: Cross sector collaboration-Innovation Capability	0.543	0,000	0.421	0.653	0,419
H-3: Cross sector collaboration-micro business Revenue	0.834	0,000	0.778	0.89	2,479

H-4. Ecosystem Orchestration-Micro Business Revenue	0.093	0,029	0.004	0.172	0,021
H-5. Innovation Capability-Micro Business Revenue	0.033	0,297	-0.023	0.104	0,003

The validation of Hypothesis 1 (H-1) demonstrated that ecosystem orchestration is highly influenced by cross-sector collaboration, evidenced by a path coefficient of 0.653 and a p-value of 0.000 (<0.05). With an effect size of $F^2=0.742$ and a 95% confidence interval between 0.579 and 0.725, every time cross-sector collaboration is better, ecosystem orchestration gets stronger. This cooperation helps MSMEs by giving them access to training, money, digital platforms, and incentives that are good for the environment. The cooperation of the public, private, and non-governmental sectors in data, policy, and marketing creates a strong ecosystem that helps MSMEs grow in a way that is both competitive and sustainable (Muhammad Nabil Alfarobi & Arif Hartono, 2022).

Hypothesis 2 (H2) was proven to have a significant impact on Innovation Capability through cross-sector collaboration, with a path coefficient of 0.543 and a p-value of 0.000 (<0.05). With an effect size of $F^2=0.419$ and a 95% confidence interval of 0.421–0.653, every step forward in cross-sector collaboration makes green projects stronger. This alliance promotes green supply chain partnerships, eco-business education, sustainable finance, and research into new technologies. The Green KUR and the Unilever-IPB cooperation are two examples of how digital platforms and government support can make the business ecosystem more sustainable (Semanjski & Gautama, 2019).

Hypothesis 3 (H3) was confirmed with a path coefficient of 0.834 and a p-value of 0.000 (<0.05), suggesting that working together across sectors has a big effect on microbusiness revenue. Every time cross-sector collaboration gets better, microbusiness revenue goes up. The impact size is $F^2=2.479$ and the 95% confidence interval is between 0.778 and 0.890. Merín-Rodrigáñez et al. (2025) say that this partnership is based on a synergistic link between the public and commercial sectors, schools, communities, and the media to make it easier for people to get capital, training, rules, markets, and business networks. This will help small firms come up with new ideas, work more efficiently, and stay in business for a long time.

Hypothesis 4 (H4) was confirmed with a path coefficient of 0.093 and a p-value of 0.029 (>0.05). This means that Ecosystem Orchestration has a big effect on the revenue of microbusinesses. The effect size $F^2=0.021$ and the 95% CI of 0.004–0.172 indicate a minor impact. To enhance capital accessibility, operational efficiency, and the competitiveness of sustainable microbusinesses, ecosystem orchestration initiatives—encompassing shared value strategies, cross-sector collaboration, resource integration, and the implementation of digital technology and collaborative innovation—are essential (Lu et al., 2025; Addo, 2022).

Hypothesis 5 (H5) was rejected since the path coefficient was 0.033 and the p-value was 0.297 (>0.05). This means that Innovation Capability does not have a noticeable effect on microbusiness revenue. The effect size of $F^2=0.003$ and

the 95% confidence interval of -0.023 to 0.104 show that the effect is quite small. But to get MSMEs to use sustainable practices and make the most of their market opportunities, they need Innovation Capability through training, access to financing, product innovation, sustainable supply chains, digital marketing, and certification incentives (Sipos & Ionescu, 2024; Liu, 2025).

Table 6. Mediation Effect Hypothesis Testing

Hypothesis	Path Coefficient	P-Value	95% Confidence Interval of Path Coefficient		Upsilon V
			Lower Bound	Upper Bound	
H-6: Cross Sector Collaboration-Innovation Capability -Micro Business Revenue	0,061	0,030	0.003	0,113	0,0003
H-7: Cross Sector Collaboration-Ecosystem Orchestration-Micro Business Revenue	0,018	0,328	(-0,013)	0,062	0,037

Hypothesis 6 (H-6) is accepted since the path coefficient is 0.061 and the p-value is 0.030 (>0.05). This means that Innovation Capability has a big effect on how Cross Sector Collaboration affects micro firm sales. The direct effect of cross-sector collaboration is insignificant, as indicated by the 95% confidence interval of 0.003–0.113 (Upsilon V=0.0003). By involving the government, private sector, academia, and communities in regulation, technology, education, and public awareness, efforts to improve innovation capability through cross-sector collaboration promote operational efficiency, make it easier for microbusinesses to access green markets, and increase their competitiveness and sustainability (Kasumaningrum et al., 2024a; Singh et al., 2024).

Hypothesis 7 (H7) is rejected since the path coefficient is 0.018 and the p-value is 0.328 (greater than 0.05). This means that Ecosystem Orchestration does not significantly mediate the effect of Cross Sector Collaboration on micro company income. The direct effect is small (Upsilon V = 0.037), and the 95% CI is between -0.013 and 0.062. By coordinating stakeholder goals and resources, ecosystem orchestration makes collaboration more efficient and MSME performance better. It also creates a platform for technology exchange, market access, knowledge sharing, standardizing sustainable practices, and improving data flow and incentives (Khan et al., 2024; Wang et al., 2024).

3. Evaluation of the FIT Model (Goodness of FIT)

PLS-SEM employs various comprehensive evaluation measures to ascertain the empirical validity of the provided model. R2 uses criteria of 0.25 (weak), 0.50 (moderate), and 0.75 (strong) to show how much of the variance in the endogenous construct is explained by exogenous constructs (Hair et al., 2019). Q2 uses blindfolding to measure predictive relevance; values above 0 represent predictive strength (Sarstedt et al., 2019). An SRMR < 0.08 shows that the model is good enough (Henseler et al., 2015).

The R Square statistical metric tells us how much of an endogenous variable is explained by other endogenous or exogenous variables in the model. It has qualitative interpretations of 0.19 (low), 0.33 (moderate), and 0.66 (high) (Chin, 1998). Q Square checks how well the model predicts by giving it scores of 0 (low), 0.25 (moderate), and 0.50 (high). A score above 0 means that the model is significant for prediction (Hair et al., 2019). The study found that cross-sector collaboration makes up 42.1% of Ecosystem Orchestration (moderate), innovative capability makes up 28.3% (moderate), and microbusiness revenue makes up 83.2% (high).

Tabel 7. R Square

	R Square	Q Square
Ecosystem Orchestration	0.426	0.421
Innovation Capability	0.295	0.283
Micro Business Revenue	0.842	0.832

The R Square statistical measure describes how much an endogenous variable can be explained by other exogenous or endogenous variables in the model, with qualitative interpretations of 0.19 (low), 0.33 (moderate), and 0.66 (high) (Chin, 1998). Q Square assesses the predictive accuracy of the model; a value >0 indicates predictive relevance, with interpretations of 0 (low), 0.25 (moderate), and 0.50 (high) (Hair et al., 2019). Based on the data, the influence **Ecosystem Orchestration** explained 42.1% by cross sector collaboration (moderate), **Innovation Capability** 28.3% (moderate), and **Micro Business Revenue** 83.2% (high)

Tabel 8. Standarized Root Mean Square Residu (SRMR)

	Estimated Model
SRMR	0,107

The Standardized Root Mean Square Residual (SRMR) checks how well the model fits the data by looking at the correlation matrix between the data and the model predictions (Yamin, 2022). Hair et al. (2021) assert that a model fit is deemed satisfactory if the SRMR value is below 0.08, and acceptable if it ranges from 0.08 to 0.10 (Karin Schemelleh et al., 2003). The empirical data sufficiently elucidates the interrelationships among the variables inside the model; nonetheless, the model estimation result of 0.088 signifies that the model does not appropriately fit the data.

Tabel 9. GoF Index

Average Commuality	Average R Square	GoF Index
0.626	0,521	0.571

The Goodness of Fit (GoF) Index is the geometric mean of the square root of communality plus the average R2. It looks at the whole model, including the measurement and structural parts. Wetzels et al. (2009) in Yamin (2022) say that the GoF interpretation is as follows: 0.1 (low), 0.25 (mid), and 0.36 (high).

The Goodness of Fit (GoF) Index is the square root of the geometric product of the average communality and the average R2. It looks at the whole model, including the measurement and structural parts. Wetzels et al. (2009) in Yamin (2022) say that GoF values are 0.1 (low), 0.25 (mid), and 0.36 (high). The computation yields a GoF of 0.571, categorized as high, signifying that the empirical data demonstrates a substantial degree of alignment with the measurement and structural models.

CONCLUSION AND RECOMMENDATION

This study finds that cross-sector collaboration is essential for enhancing revenue in microfood and beverage enterprises, especially when bolstered by innovation and ecosystem orchestration competencies. The research findings lead to the following conclusions:

1. A path coefficient of 0.653 and a p-value of 0.000 (<0.05) show that working together across sectors has a big effect on ecosystem orchestration. With an effect value of $F^2=0.742$ and a 95% confidence interval between 0.579 and 0.725, each improvement in cross-sector cooperation enhances ecosystem orchestration, showing a significant influence.
2. The p-value of 0.000 (<0.05) and the path coefficient of 0.543 show that cross-sector collaboration has a big effect on Innovation Capability. With an effect value of $F^2=0.419$ and a 95% confidence interval between 0.421 and 0.653, every time cross-sector collaboration gets better, so does green strategy. This shows that it has a big effect.
3. The p-value of 0.000 (<0.05) and the path coefficient of 0.834 show that cross-sector collaboration has a big effect on microbusiness revenue. With an effect size of $F^2=2.479$ and a 95% confidence interval between 0.778 and 0.890, every improvement in cross-sector collaboration increases microbusiness revenue, suggesting a considerable influence.
4. Ecosystem orchestration has a big effect on microbusiness revenue, with a p-value of 0.029 (greater than 0.05) and a path coefficient of 0.093. This shows a small effect because the effect size is $F^2=0.021$ and the 95% confidence interval is between 0.004 to 0.172.
5. A path coefficient of 0.033 and a p-value of 0.297 (>0.05) indicate that innovation skill does not significantly affect microbusiness revenue. The effect is small, with an effect size of $F^2=0.003$ with a 95% confidence interval between -0.023 and 0.104.

6. Innovation capability strongly mediates the association between cross-sector collaboration and microbusiness income, with a path coefficient of 0.061 and a p-value of 0.030 (higher than 0.05). The direct effect of cross-sector collaboration is minimal, as indicated by the 95% confidence interval of 0.003–0.113 (Upsilon V=0.0003).
7. A path coefficient of 0.018 and a p-value of 0.328 (more than 0.05) indicate that Ecosystem Orchestration does not significantly mediate the impact of Cross Sector Collaboration on micro company income. The direct effect has a little effect (Upsilon V = 0.037), and the 95% CI is between -0.013 and 0.062.

Based on these results, a number of recommendations are offered. The government can make policies that encourage cross-sector collaboration better by making a single platform for food and beverage micro, small, and medium-sized businesses, the private sector, communities, and academia to share resources and information. Second, micro-enterprises should learn how to orchestrate ecosystems by making networks of strategic partnerships and using industrial clusters or business incubators. Third, it is important to focus on building innovation skills, whether that means learning about new company models, using digital technology, or going to entrepreneurship classes. Finally, researchers need to do additional study using qualitative or longitudinal methods to look at the factors that connect innovation, coordination, and collaboration in different MSME settings.

FUTHER STUDY

Every study has its limits, and this one is no different. The findings are not applicable to other industries or areas due to the emphasis on food and beverage microbusinesses in a particular urban area. The data used is also cross-sectional. It doesn't take into account the long-term effects of innovation and teamwork. Consequently, a more heterogeneous MSME sector in various geographic contexts or the application of a longitudinal technique to investigate temporal changes could expand the parameters of future research.

Qualitative methods like case studies and in-depth interviews can help us learn more about how ecosystems work together and how they might come up with new ideas. Also, including other aspects like how customers respond, how businesses are shifting to digital, or how the government is acting could help us understand how working together across sectors influences corporate performance in a changing world.

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