The Role of Opportunity Recognition as a Learning Outcome in Mediating the Relationship between Entrepreneurial Orientation and MSME Performance

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Sections Info	ABSTRACT
	Objective: This study examines the effect of Entrepreneurial Orientation (EO) on the business performance of culinary Micro, Small, and Medium Enterprises (MSMEs) in West Java, with opportunity recognition positioned as a mediating variable and learning outcome. **Method**: Using a quantitative approach with an explanatory survey, the Ministry of Communication and Information collected data from 301 MSME owners or managers registered in the Digital Entrepreneurship Academy (DEA) program. EO was measured through five dimensions: innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy, while business performance was assessed through internal process perspectives. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). **Results**: The findings show that EO has a positive and significant direct effect on business performance and indirectly through opportunity recognition. Opportunity recognition partially mediates the relationship between EO and performance, highlighting its strategic role. **Novelty:** The novelty of this study lies in conceptualizing opportunity recognition not only as a cognitive ability but as a learning outcome of entrepreneurial behavior. This perspective emphasizes its developmental potential through entrepreneurship education and training, providing theoretical insight and practical implications for MSME resilience and growth strategies in emerging economies

INTRODUCTION

MSMEs (Micro, Small, and Medium Enterprises) significantly influence the expansion of Indonesia's national economy. They play a significant role in creating jobs and reducing poverty, accounting for over 60% of the GDP (Harisandi et al., 2025). The adaptability and strategic role of MSMEs in maintaining national economic stability are demonstrated by their ability to withstand a variety of crises, including the global financial crisis and the COVID-19 pandemic. West Java is one of the regions with the fastest-growing MSMEs at the provincial level, particularly in the culinary subsector. Using information from (BPS, 2024), West Java's creative industry is dominated by the culinary sector, highlighting its potential as a significant engine of the local economy (Harisandi, Muhammad Mardiputra, et al., 2024).

Nonetheless, operational and structural issues still affect the success of culinary MSMEs in West Java. According to a report published in 2023 by the Office of Cooperatives and Small Businesses, business players confront several challenges, including decreased turnover, trouble sustaining consistent product quality, inefficient production methods, and little use of digital technology. This condition was made worse by the COVID-19 outbreak, which resulted in a sharp drop in consumer spending power

and economic activity (Harisandi, Yahya, et al., 2024). This circumstance highlights the necessity of managerial change and more flexible, forward-thinking entrepreneurial skills.

Entrepreneurial orientation is one of the key factors that might lead to better company success (Henderson & Robertson, 2000) Entrepreneurial orientation is the strategic propensity of business players to engage in creative, proactive, and risk-taking behaviour. Several studies have highlighted the significance of entrepreneurial orientation as a determinant of MSMEs' success, particularly in a dynamic business environment (Harisandi et al., 2023; Hassan et al., 2022; Mei et al., 2020; Piperopoulos & Dimov, 2015; Rea, 2007). Entrepreneurial orientation also helps businesses stay competitive and sustainable by boosting product innovation and quick reaction to market shifts (Armstrong Soule & Reich, 2015).

However, a key element of the entrepreneurial process is opportunity recognition, or the capacity to identify business prospects. (Bae, Qiao, et al., 2023) Outlined how business players might identify and take advantage of unrealised market potential thanks to this skill. Another learning outcome of the entrepreneurial orientation influenced by the entrepreneurial process is opportunity recognition. (Lång et al., 2024) Highlighted that by fostering innovation in business models, these talents help to increase business success, while (Xanthopoulou & Sahinidis, 2025a) demonstrate how the relationship between EO and start-up success is mediated by opportunity recognition.

From a conceptual standpoint, SME performance is crucial for assessing corporate competitiveness and operational efficacy. Sales growth, market share expansion, and the effectiveness of creative tactics are all ways to gauge this Performance. According to (Harisandi, Nurhidayah, et al., 2024) Performance is a record of the outcomes of carrying out job duties over a specific period. In contrast (Bae, Qian, et al., 2023) highlight the volume and calibre of work output. Performance in a business setting reflects how well processes, outputs, and results are integrated to provide additional value (Fayolle & Gailly, 2015; Lång et al., 2024) The Balanced Scorecard methodology emerged (Xanthopoulou & Sahinidis, 2025b) It incorporates learning and development, internal procedures, customers, and financial elements. Innovation, manufacturing efficiency, and flexibility in responding to technology and market shifts all impact MSMEs' Performance (Zhang & Huang, 2023)

Some gaps in the literature need to be filled, even though the relationship between EO, opportunity recognition, and business performance has been extensively studied. First, most earlier research still views opportunity recognition as a personal cognitive trait rather than a learning objective that can be enhanced by education, training, and business experience. Second, there is a dearth of research examining opportunity recognition as a mediator in the context of MSMEs in the culinary sector, particularly in business-heavy regions like West Java. Third, the empirical technique has not extensively explored how cultivating an entrepreneurial mindset might systematically result in the capacity to identify business possibilities in a dynamic post-pandemic environment.

By using opportunity recognition as an entrepreneurial learning outcome that serves as a mediating variable, this study attempts to examine the impact of entrepreneurial orientation on business performance in the MSME sector in light of the background and research gap. This research will enhance scholarly investigations in entrepreneurship and offer valuable insights for formulating learning- and opportunity-based methods for fostering entrepreneurial capacities. The study's findings also offer pertinent policy

proposals to help policymakers, MSME actors, and educational institutions create a competitive and sustainable entrepreneurial ecosystem.

Based on the background and understanding of the research described, this study aims to answer the following questions: Does entrepreneurial orientation influence business performance in the culinary MSME sector in West Java, and does opportunity recognition mediate this relationship? Thus, the proposed research hypotheses are: (H1) Entrepreneurial orientation has a positive effect on the performance of culinary MSMEs in West Java; (H2) Entrepreneurial orientation has a positive effect on opportunity intelligence capabilities; and (H3) opportunity recognition capabilities mediate the influence of entrepreneurship on culinary MSME performance. The determination of these questions and hypotheses aims to provide a clear empirical framework in reflecting the role of entrepreneurial orientation and opportunity identification as determinants of MSME success in a dynamic post-pandemic environment.

RESEARCH METHOD

In line with the research conceptual framework, this study employs a quantitative methodology and an explanatory survey method to investigate the link between variables empirically. This method was selected because it can explain the causal relationship between company performance, entrepreneurial orientation, and opportunity recognition as a learning result in the MSME sector, particularly in the West Java Province's culinary subsector.

A closed questionnaire was utilized to collect primary data directly from respondents for this investigation. Owners or managers of culinary MSMEs enrolled in Kominfo West Java Province's Digital Entrepreneurship Academy (DEA) program received the questionnaire online and offline. To guarantee equitable geographic representation, the study was carried out over three months, from March to May 2025, and covered several West Javan cities and regions.

Population and Sample

The study's population comprises 301 business units, or all culinary MSMEs in West Java Province currently enrolled in the DEA Kominfo program. Given the unique and small population, a purposive sampling strategy was employed with the following selection criteria: (1) MSME players still operating a business as of 2025 and (2) willing to complete the questionnaire. Three hundred one respondents were among the samples gathered and deemed suitable for statistical analysis using structural equation modeling (SEM-PLS).

Descriptive Statistics of Respondents

Business owners made up 72% of the 301 respondents in this study, with operational managers making up the remaining 28%. In terms of gender, 41% of respondents were women and 59% of respondents were men. The most excellent age group was between the ages of 31 and 40 (34%), followed by 21 and 30 (29%), 41 and 50 (21%), and the last age group beyond 50 (16%). Sixty-two percent of business owners have been in operation for over three years, which shows they have enough expertise running MSMEs. The Greater Bandung, Bogor-Depok, Cirebon, East Priangan, and Pantura regions of West Java are among the respondents' geographic distributions, offering a representative sample of the province's culinary MSME population. This study measures three primary variables:

- The five qualities of innovativeness, proactivity, risk-taking, competitive aggression, and autonomy are used to measure entrepreneurial orientation (EO), an independent variable. The tool references the (Habib et al., 2020; Kusa et al., 2024)
- The three aspects of competitive scanning, proactive search, and innovative solution creation are used to quantify Opportunity Recognition (OR) as a mediating variable and learning outcome, concerning the ideas of (Chabowski et al., 2011; Kaplan & Haenlein, 2010a)
- The dependent variable, business performance (BP), is determined by the internal business process perspective, which encompasses customer service quality, product creation, and operational efficiency. (Brik et al., 2011; Kaplan & Haenlein, 2010b; Khairurrahman et al., 2023) are cited theoretically.

The questionnaire instrument employed a 5-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5). To verify the validity and reliability of the items, a pilot test of the instrument was carried out on 30 respondents before the central survey's implementation.

Data Analysis Technique

SmartPLS version 4 software was used to analyze the data using a Structural Equation Modeling technique based on Partial Least Squares (SEM-PLS). In addition to its superiority in handling non-normal data and medium to large sample sizes, this technique was selected due to the research model's complicated structure with mediating variables (Hair et al., 2018). SEM-PLS is the ideal option for MSME-based research since it is adaptable to data distribution assumptions. The phases of analysis include:

- Assessment of the Measurement Model (Outer Model): to assess internal reliability (composite reliability and Cronbach's alpha) and construct validity (convergent and discriminant validity).
- Structural Model Evaluation (Inner Model): Path coefficient estimation, R^2 value, effect size (f^2), and predictive relevance (Q^2) are used to test the association between variables. Additionally, bootstrapping is used to test for significance.

Table 1. Meassurement Variable

Variabel	Dimension	Indicator	Size	Scale	No. Item
1	2	3	4	5	6
Business Performance	**Internal Business Process Perspective**	1. Efficiency in the company's operations.	Efficiency level in the company's operations	interval	1
Rangkuti (2011) business performance: the ability of an organization to achieve its strategic goals through effective and efficient	Internal business processes are a series of activities that exist in the organization to create the quality of products/services needed to meet customer expectations.	2. Changes in product development	Product development in business		2
		3. The level of the innovation process	Identify the characteristics of the market segment that you want to satisfy through products and services.		3
			Perform the product design process		4

Variabel	Dimension	Indicator	Size	Scale	No. Item
management of resources	(Fatima & Elbanna, 2023; Gupta, 2021; Herlinawati & Machmud, 2020; Kaplan & Norton, 2000)		according to the customer's wishes		
			Creating products and services that will meet customer needs		5
		4. After-sales service	Level of service to after sales customers		6
Entrepreneurial Orientation Entrepreneurial orientation is a process, practice, and decision-making activity that involves taking new input or making a change in an entrepreneur's business. (Miller, 2011)	**Innovativeness** The ability to create new products, services, or processes that add value (Bhatti et al., 2020; Erista et al., 2020) (Al-Momani et al., 2023) (Albhirat et al., 2023) (Asad et al., 2023) (Asemokha et al., 2019) (Bhatti et al., 2020) (Diabate et al., 2019) (Hruby, 2024)	1. Creation or introduction of new menus to attract customers	The number of new products that have been successfully marketed	interval	7
		2. Innovations in recipes, services, or presentations as per market trends	Many changes to the menu are based on market trends		8
		3. Application of new technology to support product development	The Many Applications of Culinary Technology		9
	Proactiveness Ability to act early in seizing opportunities before competitors (Erista dkk., 2020; Lee & Tsang, 2001) (Al-Momani et al., 2023) (Albhirat et al., 2023) (Asad et al., 2023) (Asemokha et al., 2019)) (Bhatti et al., 2020) (Diabate et al., 2019) (Hruby, 2024)	1. Launch of a new product or menu before competitors	The frequency of launching new products before competitors do so	interval	10
		2. Application of innovative techniques or services in culinary SMEs.	Frequency of implementation of new engineering innovations		11
		3. Monitoring of culinary trends to identify future customer needs.	Frequency of customer needs surveys or market trends		12
	Risk-Taking	1. The courage to allocate significant	The amount of funds allocated for the development of new	interval	13

Variabel	Dimension	Indicator	Size	Scale	No. Item
	Courage to take calculated risks in the face of business uncertainty (Bhatti et al., 2020; Erista et al., 2020) (Al-Momani et al., 2023) (Albhirat et al., 2023) (Asad et al., 2023) (Asemokha et al., 2019)) (Bhatti et al., 2020) (Diabate et al., 2019) (Hruby, 2024)	resources to the development of innovation despite the risks	products that have not been proven to be accepted by the market		
		2. Willingness to take significant steps, such as market expansion, despite uncertainty	Number of business expansions		14
		3. Trying new ideas even if it is risky	Courage in trying new ideas, even though it is risky.		15
	Competitive Aggressiveness Aggressive attitude in competing, trying to dominate the market with a fast and bold strategy (Beltrame et al., 2023) Civelek, 2021; (Abu-Rumman et al., 2021) (Al-Hakimi & Borade, 2020) (Górska-Warsewicz, 2024)	1. An aggressive approach is often used in dealing with competition in the culinary business	The frequency of using aggressive strategies in overcoming culinary business competitors.	interval	16
		2. The ability to compete in the culinary business is high..	Degree of excellence in maintaining or improving competitive position in the culinary market		17
	Autonomy Freedom in decision-making without external interference (Beltrame et al., 2023); (Civelek, 2021); (Abu-Rumman et al., 2021); (Al-Hakimi & Borade, 2020) (Górska-Warsewicz, 2024)	1. Employees are trusted to be able to make the right decisions without direct supervision	Level of confidence in employees' ability to make operational decisions independently	interval	18
		2. Employees have the right and responsibility to act independently in the interests of the business	The level of autonomy that employees have in acting in accordance with the interests of the business without direct instruction		19

Variabel	Dimension	Indicator	Size	Scale	No. Item
Opportunity Recognition The ability to recognize these opportunities also includes the ability to generate new ideas that are viable, legal, and have significant value and profit potential. (Baron & Byrne, 2003)	**Competitive Scanning of Opportunities** This refers to active behavior in seeking information in a competitive environment to create a strategic advantage. It involves collecting and analyzing relevant information about the market, competitors, and customer needs that can support the identification of opportunities.(Ataei et al., 2024)	1. There are potential opportunities for entrepreneurship.	A large number of new opportunities have been identified	interval	20
		2. Availability of facilities and resources to identify and create entrepreneurial opportunities	Frequency of approval of entrepreneurial initiatives by managers		21
		3. Understanding how to create entrepreneurship	The number of supporting facilities and tools available		21
	Proactive Searching of Opportunities Focus on proactive behavior to understand future trends and visualize emerging values. This includes an abstract search of potential developments in the market and identification of opportunities that can be leveraged before competitors. (Ataei et al., 2024)	1. Adequate database to start a new business	A large number of relevant and accessible databases to start a new business	interval	23
		2. Group discussions to explore new ideas	Frequency of team meetings for discussion		24
		3. The use of information technology to look for opportunities	The number of devices or applications used to search for opportunities		25
	Innovative Solution Creation of Opportunities It deals with innovative behaviors that include introducing	1. Collaboration with experts to develop innovative solutions	The frequency of expert engagement to provide input on innovation, not just opportunity identification	interval	26
		2. Evaluation and development of	The number of evaluations and		27

Variabel	Dimension	Indicator	Size	Scale	No. Item
	new ideas and exploring new approaches to create innovative opportunity solutions. This includes gathering information about new demands, preferences, and technologies to generate business opportunities. (Ataei et al., 2024)	new ideas for solutions	implementations of ideas, not just the number of ideas identified		
		3. Utilization of information to generate innovation	The large amount of information that has been collected has been used to produce innovations.		28

RESULTS AND DISCUSSION

Results

Respondent Profile

This study involved 301 respondents who are culinary SMEs in West Java Province. Based on the demographic data collected, most respondents were women, as many as 166 people (55.26%), while men amounted to 135 people (44.74%). In terms of age, the largest age group was in the range of 34–38 years at 31.05%, followed by respondents aged ≥44 years (24.47%) and 29–33 years (21.32%). This age composition shows that most SMEs are at a productive age with relatively mature business experience.

In terms of education, the majority of respondents were high school graduates or equivalent (50%), followed by bachelor's graduates (33.95%, diplomas (8.68%), master's (3.16%), and the rest with junior high and elementary education. This composition shows that culinary SMEs in this region have a secondary to upper education background, which has the potential to affect managerial skills and adaptability to market changes.

The type of business run by the respondents was mainly a combination of food and beverage businesses (65.82%), while the rest ran food only (30.38%) or beverages only (3.80%). Based on the business operation length, most respondents have been running their business for 1-5 years (53.68%), while the other 35.26% have been operating for 6 to 10 years. This shows that most actors have enough experience managing their businesses.

Interestingly, some respondents have only started a business for less than a year, and many have been running their businesses for over a decade. These findings reflect the dynamics and diversity of business maturity levels in the culinary sector.

Regarding annual turnover, most respondents are in the small business category, ranging from IDR 167 million to IDR 1.25 billion. The highest turnover range was recorded between IDR 250 million and IDR 500 million (65.49%), while only a small number recorded more than IDR 1.25 billion. This shows that most culinary SMEs in West Java are in a potential growth phase but still face scaling challenges.

Descriptive Analysis

A descriptive analysis was conducted to see how culinary SMEs perceive the main variables in this study, namely entrepreneurial orientation (OK), opportunity recognition (OPR), and business performance (KB). A categorization approach of five scales was used to determine the respondents' perception categories: very low, low, medium, high, and very high. This categorization refers to the score interval of the percentage of quantitative data conversion results used in the processing of questionnaire data, where the score of <36% is categorized as very low; 36%–<52% as low; 52%–<68% as moderate; 68%–<84% as high; and ≥84% were categorized as very high. This approach refers to interpreting Likert scale data commonly used in quantitative analysis based on weighted score percentages (Feishal Azriel Arya Putra et al., 2025).

The analysis showed that entrepreneurial orientation obtained an average score of 81.60% or on the Likert scale equivalent to 3.96, and was included in the high category. This reflects that culinary business actors in West Java have a strong entrepreneurial spirit. The most prominent risk-taking dimension, or the courage to take risks, indicates that business actors are relatively ready to make strategic decisions even though they contain risks. Nonetheless, some dimensions, such as autonomy and competitive aggressiveness, still show slightly lower scores, which opens up opportunities for improvement through entrepreneurial training.

Opportunity recognition as a mediating variable also showed a high average score of 78.82% or 3.96 on the Likert scale. The highest score is found in competitive scanning of opportunities and proactive searching, indicating that business actors actively observe and look for market opportunities. However, achieving a slightly lower score in innovative solution creation indicates the need to strengthen the ability to create innovative solutions from the opportunities found.

Meanwhile, business performance measured from the perspective of internal business processes showed the highest average score among the three variables, 83.07% or 3.96. The highest indicator is timely customer service, showing that satisfaction and speed of service are top priorities for SMEs. The aspects of operational efficiency and product development also showed strong performance, while the dimension of process innovation, although still high, recorded the lowest value. This finding is a signal for business actors to focus more on increasing innovation in the production process in order to be able to compete in an increasingly dynamic market.

The results of descriptive data show that culinary SMEs in West Java have a high entrepreneurial orientation, a good ability to recognize opportunities, and relatively optimal business performance. Nevertheless, innovation and creativity in taking advantage of opportunities and business processes remain room for improvement that can be followed up through policy interventions, technical training, and strengthening the culinary business ecosystem.

Measurement Model
Validitas Konvergen (Loading Factor, AVE)

Convergent validity was tested using outer loading values and Average Variance Extracted (AVE). All indicators in the Entrepreneurship Orientation (OK), Opportunity Recognition (OPR), and Business Performance (KB) constructs have a loading factor value > 0.70, which indicates that the indicators have a significant contribution to the construct (Hair et al., 2014). The AVE value of each construct is also above 0.50, which

means that latent variables can explain most of the variance of the indicators. The full value of the loading factor indicator can be seen in Table 2. Loading Factor Indicator, while the AVE value is listed in Table 3. Construct Reliability Test Results.

Table 1. Outer Loading Valuesof research indocators

Indicator	Code	Loading Factor
SME Business Performance 1	KB.1	0.796
SME Business Performance 2	KB.2	0.776
SME Business Performance 3	KB.3	0.773
SME Business Performance 4	KB.4	0.792
Entrepreneurship Orientation 1	OK.1	0.794
Entrepreneurship Orientation 2	OK.2	0.829
Entrepreneurship Orientation 3	OK.3	0.817
Entrepreneurship Orientation 4	OK.4	0.760
Entrepreneurship Orientation 5	OK.5	0.710
Opportunity Recognition 1	OPR.1	0.874
Opportunity Recognition 2	OPR.2	0.874
Opportunity Recognition 3	OPR.3	0.858

The reliability of the constructs in this study was tested using three main measures, namely Cronbach's Alpha (CA), Composite Reliability (CR), and Dijkstra–Henseler's rho_A (ρ_A). These three indicators assess the internal consistency between indicators in a single construct. Cronbach's Alpha value indicates the item's consistency level in the construct. In this study, a value of $\alpha \geq 0.70$ is already considered adequate, while for exploratory studies, it can be tolerated at a value of ≥ 0.60 as suggested by (Sarstedt, 2019). Meanwhile, the Composite Reliability (CR) value, although similar to alpha, provides a more accurate estimate because it considers the weight of each indicator's contribution. A construct is reliable if the CR value reaches ≥ 0.70, per the minimum limit recommended by (J. F. Hair et al., 2018). On the other hand, rho_A is an alternative measure developed as a compromise between Cronbach's Alpha and CR. A good rho_A value is also above 0.70 and reflects an adequate level of internal consistency (Huit et al., 2018)

Based on the results of data processing through SmartPLS, all constructs in this study, namely Entrepreneurial Orientation (OK), Opportunity Recognition (OPR), and Business Performance (KB), have a reliability value above the minimum threshold. As presented in Table 3. The results of the Construct Reliability Test showed that Cronbach's Alpha value for KB was 0.791, for OK it was 0.842, and for OPR it was 0.838. The Composite Reliability (CR) values were 0.865 (KB), 0.888 (OK), and 0.902 (OPR), respectively. The rho_A value showed results of 0.792 for KB, 0.847 for OK, and 0.842 for OPR. These values are qualified and show that this research instrument is reliable and has high internal consistency.

Table 2 Cronbach's Alpha, CR dan AVE

Variable	Cronbach's Alpha	*Composite reliability* (rho_a)	CR	AVE
KB	0.791	0.792	0.865	0.615
OK	0.842	0.847	0.888	0.613
RED	0.838	0.842	0.902	0.755

Discriminant Validity (Fornell-Larcker and HTMT)

Discriminant validity is needed to ensure the research model constructs are empirically different. In this study, the validity of the discriminant was tested using two approaches, namely the Fornell-Larcker criteria and the HTMT (Heterotrait-Monotrait Ratio). According to (Fornell & Larcker, 1981), discriminant validity is achieved when the square root value of the AVE of a construct (shown diagonally in the matrix) is greater than the correlation between other constructs. Meanwhile, (Henseler et al., 2015) suggested that HTMT values below the 0.90 threshold indicate good discriminant validity.

The data processing results with SmartPLS show that the root value of AVE (Average Variance Extracted) of each construct displayed on the matrix diagonal is greater than the correlation between other constructs. This shows that each construct discriminates well against the other. These values can be seen in full in Table 4. Fornell-Larcker Criterion

Table 3. Fornell-Larcker Criterion

Variable	KB	OK	RED
KB	0.784		
OK	0.726	0.783	
RED	0.527	0.456	0.869

Furthermore, to strengthen the discriminatory validity test, HTMT analysis was carried out. The HTMT value of all construct pairs is below the 0.90 threshold. This supports the results of previous tests that show that the model's constructs have met the discriminant validity requirements. Details of HTMT values are shown in Table 5. HTMT Ratio.

Table 4. HTMT Ratio

Heterotrait-monotrait ratio (HTMT)	
OK <-> KB	0.882
OPR <-> KB	0.645
OPR <-> OK	0.545

Based on the results of the convergent validity test (with AVE > 0.50 and loading factor > 0.70), discriminant validity (via Fornell–Larcker and HTMT), and internal reliability (with Cronbach's Alpha, Composite Reliability, and rho_A values all ≥ 0.70), all constructs in this model can be declared valid and reliable. Therefore, as explained in the next section, the measurement model is declared to have met the requirements and is ready to proceed to the structural model analysis stage.

Structural Model Analysis

The structural model in this study was evaluated to determine the strength of the relationship between latent constructs, both directly and indirectly, and the extent to which exogenous constructs can explain endogenous variables in the model. The evaluation starts from testing the determination coefficient (R^2) value, which reflects the degree of variability of the endogenous construct that the exogenous construct can explain. Based on the results of the analysis with SmartPLS, the Opportunity Recognition (OPR) construct has an R^2 value of 0.208, while the Business Performance (KB) construct has an R^2 value of 0.576. The interpretation of this value refers to the classification criteria put forward by (J. Hair & Alamer, 2022), namely that the R^2 value of 0.75 is categorized

as substantial, 0.50 as moderate, and 0.25 as weak. Therefore, this model has moderate predictive power against family planning and weak predictive power against OPR. A summary of the R^2 value can be seen in Table 6.

Table 5. R-Square Value

Variable endogenous	R²	Category
Opportunity Recognition	0.206	Low
SME Business Performance	0.573	Medium–High

Furthermore, to determine the contribution of each exogenous construct to the endogenous construct, a measure effect value (F^2) was tested. Based on the analysis results, the effect of Entrepreneurial Orientation (OK) on Business Performance (KB) showed an F^2 value of 0.703, which was included in the large category. In contrast, the effect of OPR on KB of 0.263 was moderate, and the effect of OK on OPR of 0.114 was small. This classification refers to the criteria of (J. Hair & Alamer, 2022), which states that F^2 values of more than 0.02 are categorized as small, more than 0.15 as moderate, and more than 0.35 as a significant effect. Therefore, it can be concluded that the OK variable makes a decisive contribution to family planning, directly and through OPR mediation. A summary of the value of F^2 can be seen in Table 7:

Table 6. F-Square Value

Contribution between variables	F²	Category
OK → KB	0,703	big
OK → OPR	0,263	Keep
OPR → KB	0,114	Small

In addition, the results of the path coefficient test showed that the relationship between OK and family planning had a coefficient value of 0.614, with a t-statistic of 13.054 and a p-value of 0.000. Meanwhile, the relationship between OK and OPR has a coefficient of 0.456 with a t-value of 5.881, and the relationship between OPR and family planning has a coefficient of 0.247 with a t-value of 4.346. All relationships have a pvalue of less than 0.05, which means that all three relationships between constructs are statistically significant. These findings reinforce the conclusion that all hypotheses in the model are supported by empirical data, according to the criteria set out in the literature by (J. Hair & Alamer, 2022). The details of the path coefficient are also presented in full in Figure 1 and Table 4 below.
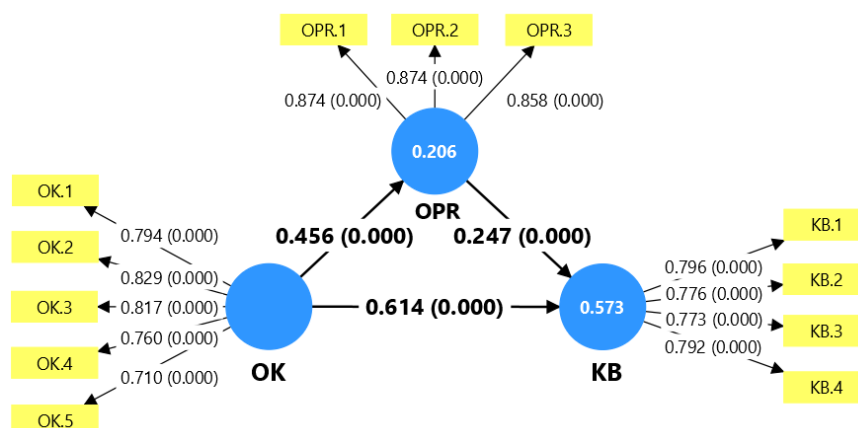
Figure 1. Bootstrapping results with t-statistics

Table 7. Path Coefficient Test Results

	Original sample (O)	Sample mean (M)	STDEV	T-statistics	P values
OK -> KB	0,614	0,612	0,047	13,054	0
OK -> OPR	0,456	0,456	0,078	5,881	0
OPR -> KB	0,247	0,246	0,057	4,346	0

Based on the results obtained, entrepreneurial orientation plays a vital role in influencing the business performance of SMEs, both directly and through their ability to recognize opportunities. The ability to recognize opportunities (opportunity recognition) is proven to mediate part of the influence of entrepreneurial orientation on improving business performance. Thus, this model is theoretically relevant and has practical implications for developing entrepreneurial capacity in the context of MSMEs in Indonesia, especially the culinary sector.

Goodness of Fit (GoF)
Goodness of Fit (GoF) is one of the indicators used to evaluate the suitability of the overall structural model in the PLS-SEM approach. Although the PLS-SEM approach does not have a global model fit measure like CB-SEM, several indicators, such as SRMR, d_ULS, and d_G, can be used as alternatives to assess the model's fit level (J. F. Hair et al., 2022). The results of the GoF test in this study are presented in Table 9:

Table 8. Goodness of Fit (GoF)

	Saturated model	Estimated model
SRMR	0,065	0,065
d_ULS	0,325	0,325
d_G	0,13	0,13

A Standardized Root Mean Square Residual (SRMR) value of 0.065 indicates that the model has a good level of fit because it is below the 0.08 threshold recommended by Henseler et al. (2016). In addition, the d_ULS and d_G values of 0.325 and 0.130 were within the acceptable range, indicating a match between the data and the proposed model. Thus, the structural model proposed in this study has an adequate fit and is feasible for further hypothesis testing.

Hypothesis Testing
Hypothesis testing was carried out to determine the direct and indirect influence of the variables of Entrepreneurial Orientation (OK), Opportunity Recognition (OPR), and Business Performance (KB) on culinary SMEs in West Java Province. The analysis used the estimated path coefficient and t-statistic value from bootstrapping with 5,000 samples to test the significance of the relationship between variables. The following is a summary of the hypothesis test results presented in Table 10:

Table 9. Model Structural

Hipotesis	Influence Path	Coephysin Path	t-Statistics	P-Value	Verdict
H1	OK → KB	0,614	13,054	0,000	Accepted (Significant)
H2	OK → OPR	0,456	5,881	0,000	Accepted (Significant)

Hipotesis	Influence Path	Coephysin Path	t-Statistics	P-Value	Verdict
H3	OPR → KB	0,247	4,346	0,000	Accepted (Significant)
H4	OK → OPR → KB (mediasi)	0,113	3,117	0,002	Accepted (Significant)

Based on Table 10, the results of the hypothesis test can be explained as follows:

- Hypothesis 1 (H1) states that Entrepreneurial Orientation positively and significantly affects Business Performance. With a path coefficient of 0.614 and a t-value far above 1.96 ($p < 0.01$), it can be concluded that the higher the entrepreneurial orientation of SMEs, the more their business performance tends to increase significantly.
- Hypothesis 2 (H2) shows that Entrepreneurial Orientation also positively and significantly affects Opportunity Recognition with a coefficient of 0.456. This indicates that SMEs with a high entrepreneurial orientation can better recognize business opportunities.
- Hypothesis 3 (H3) tested the influence of Opportunity Recognition on Business Performance and produced a significant path coefficient of 0.247. This strengthens the important role of opportunity recognition capabilities in improving the performance of SMEs.
- Hypothesis 4 (H4) testing the mediating effect of Opportunity Recognition between Entrepreneurial Orientation and Business Performance was also accepted. The indirect effect of 0.113 with a t value of 3.117 ($p < 0.01$) indicates that opportunity recognition is a connecting mechanism that strengthens the influence of entrepreneurial orientation on business performance.

Based on the results of the above hypothesis test, it can be concluded that all hypotheses in this study are statistically significant. This shows the positive relationship and mediation between the variables OK, OPR, and KB in the context of culinary SMEs in West Java Province.

Total Effect

Total effects describe the overall influence of independent variables on dependent variables, i.e., the sum of direct and indirect effects through mediated variables. In this study, the total effect of Entrepreneurial Orientation (OK) on Business Performance (KB) includes direct and indirect influences through Opportunity Recognition (OPR). The following table 12 presents the total effect value along with the bootstrapping value:

Table 11. Total Effect

Path	Original Sample	Sample Mean	STDEV	T-stat	p-value
OK → KB	0.726	0.725	0.042	17.272	0
OK → OPR	0.456	0.456	0.078	5.881	0
OPR → KB	0.247	0.246	0.057	4.346	0

From the table above, the total effect of OK on family planning of 0.726 indicates that entrepreneurial orientation strongly influences overall business performance, including the influence mediated by opportunity recognition. The relationship between

OK → OPR and OPR → KB also showed significant influence, strengthening the mediation mechanism in this model.

Discussion

The results of this study highlight the central role of entrepreneurial orientation (OK) in enhancing internal business-process performance (KB) among culinary SMEs, with opportunity recognition (OPR) serving only as a partial mediator. This finding challenges the dominant assumption in the entrepreneurial literature that opportunity recognition constitutes the primary conduit through which entrepreneurial orientation influences firm outcomes. While prior research (Venkatakrishnan et al., 2023), emphasizes that the ability to identify and exploit opportunities is a defining mechanism linking entrepreneurial behavior to performance, the present study demonstrates that entrepreneurial orientation can directly and strongly shape internal processes such as efficiency, timeliness, and service reliability, independent of explicit opportunity recognition. In this sense, the study not only corroborates earlier findings on the positive impact of entrepreneurial posture (Athia, 2018; Pratama et al., 2019) but also nuances them by showing that in process-driven, service-oriented sectors like culinary SMEs, proactive and risk-taking behaviors yield operational improvements even when the entrepreneurial actors may not explicitly articulate new opportunities.

Furthermore, the modest explanatory power of OPR (R^2 = 0.206) and its relatively small mediating effect suggest that previous models may overstate the centrality of market alertness in SMEs' performance trajectories. This invites a more critical reflection on contextual contingencies. Unlike technology-intensive or innovation-driven industries, where recognizing emerging opportunities is crucial for competitive advantage, the culinary sector often relies on routinized processes, customer loyalty, and incremental service innovation. Thus, entrepreneurial orientation in this context may function less as a mechanism of radical opportunity exploitation and more as a behavioral disposition that directly strengthens managerial discipline and operational efficiency. This extends the literature by positioning OPR not as a universal mediator but as a contingent one, whose relevance varies depending on sectoral characteristics, firm maturity, and the degree of process standardization.

Significantly, the descriptive insights that autonomy and process innovation scored relatively lower than proactiveness and risk-taking indicate a structural limitation in how entrepreneurial orientation is enacted within these SMEs. This pattern resonates with recent critiques (Rifqi Abdurahman et al., 2025) that entrepreneurial orientation research often assumes a uniform effect across dimensions. The evidence suggests asymmetry: behavioral components (proactiveness, risk-taking) appear more actionable for micro entrepreneurs than structural ones (autonomy, process innovation), given resource constraints and dependence on family-based management models. In this way, the study complicates the existing EO performance debate by revealing that not all dimensions of EO translate equally into outcomes, especially in under-capitalized and labor-intensive industries.

This research supports and problematizes extant literature by situating these findings within broader debates. It supports the general claim that EO enhances SME performance but problematizes the dominant mediational model privileging OPR, instead advocating for multi-pathway explanations that include latent capabilities such as absorptive capacity, social capital, and digital adoption. This opens a critical avenue

for future scholarship: to move beyond monolithic treatments of EO and instead adopt a configurational or contingency-based approach that accounts for industrial structure, institutional environment, and firm resources.

CONCLUSION

The findings of this study demonstrate that entrepreneurial orientation (EO) expressed through innovation, proactivity, and risk-taking plays a decisive role in enhancing the performance of culinary MSMEs in West Java. The evidence shows that EO is a behavioral posture and a strategic resource that directly strengthens operational efficiency, product development, and service quality.

Opportunity recognition (OR) emerges as a partial mediator in this relationship, underscoring its position as a vital learning outcome of entrepreneurial practice. Alternatively, develops through market interaction, reflective learning, and adaptive responses, making it an essential bridge between entrepreneurial behavior and competitive advantage. This highlights the dynamic nature of OR as more than a cognitive skill but a strategic competency that can be deliberately cultivated.

The study extends the literature by positioning OR as a contextual mechanism that links. EO is essential to sustainable performance in resource-constrained environments such as MSMEs. While earlier studies have emphasized EO's direct impact, this research provides a more nuanced view, showing that the interplay between EO and OR enables MSMEs to achieve resilience and adaptability in highly competitive and rapidly changing markets.

Nevertheless, the research also acknowledges important limitations. The cross-sectional design restricts causal inference, the geographic scope limits generalizability, and the reliance on self-reported data raises the potential for response bias. Moreover, variables such as digital competence, institutional support, and access to capital, increasingly critical in the digital era, were not incorporated. These limitations open pathways for future research that employs longitudinal, comparative, and multi-sectoral approaches to deepen the theoretical model and broaden its applicability.

From a practical and policy standpoint, this study calls for strengthening entrepreneurial mindsets and opportunity recognition skills through structured training, mentorship, and market intelligence systems. For MSMEs, this means embedding a culture of innovation, proactive behavior, and calculated risk-taking. Designing adaptive frameworks for policymakers and supporting institutions requires designing performance-based support systems and facilitative programs that empower MSMEs to thrive in the digital economy. Ultimately, the most significant contribution of this research lies in its integrative insight: EO and OR are not separate forces, but interdependent levers that build the foundation of MSME resilience, competitiveness, and long-term sustainability. In the broader context, these findings resonate with Indonesia's vision of inclusive economic growth, positioning MSMEs not merely as local enterprises but as dynamic agents of innovation and community empowerment in an increasingly interconnected world.

REFERENCES

Abu-Rumman, A., Al Shraah, A., Al-Madi, F., & Alfalah, T. (2021). Entrepreneurial networks, entrepreneurial orientation, and performance of small and medium enterprises: are dynamic capabilities the missing link? *Journal of Innovation and Entrepreneurship*, *10*(1). https://doi.org/10.1186/s13731-021-00170-8

Albhirat, M. M., Zulkiffli, S. N. 'Atikah, Salleh, H. S., & Zaki, N. A. M. (2023). A Study on Strategic Entrepreneurship Orientations: Indicators, Differential Pathways, and Multiple Business Sustainability Outcomes. *International Journal of Sustainable Development and Planning*, *18*(5), 1625 – 1637–1625 – 1637. https://doi.org/10.18280/ijsdp.180534

Al-Hakimi, M. A., & Borade, D. B. (2020). The impact of entrepreneurial orientation on the supply chain resilience. *Cogent Business and Management*, *7*(1). https://doi.org/10.1080/23311975.2020.1847990

Al-Momani, L., Haddad, S., Sharabati, A.-A. A., & Hashesh, M. A. (2023). The moderation role of entrepreneurial orientation on the influence of innovation on pharmaceutical SMEs' performance. *Journal of Open Innovation: Technology, Market, and Complexity*, *9*(2), 100074. https://doi.org/10.1016/j.joitmc.2023.100074

Armstrong Soule, C. A., & Reich, B. J. (2015). Less is more: is a green demarketing strategy sustainable? *Journal of Marketing Management*, *31*(13–14), 1403–1427. https://doi.org/10.1080/0267257X.2015.1059874

Asad, M., Majali, T., Aledeinat, M., Abdelkarim Almajali, D., & Akhorshaideh, A. H. O. (2023). Green entrepreneurial orientation for enhancing SMEs financial and environmental performance: Synergetic moderation of green technology dynamism and knowledge transfer and integration. *Cogent Business and Management*, *10*(3). https://doi.org/10.1080/23311975.2023.2278842

Asemokha, A., Musona, J., Torkkeli, L., & Saarenketo, S. (2019). Business model innovation and entrepreneurial orientation relationships in SMEs: Implications for international performance. *Journal of International Entrepreneurship*, *17*(3), 425 – 453–425 – 453. https://doi.org/10.1007/s10843-019-00254-3

Athia, I. (2018). The Role of Internal and External Factors in Moderating the Influence of Customer Fo-cus Strategies to Increase Cooperative Competitiveness (Study on Cooperatives in Batu City). *Journal of Management Science (JIMMU), 3*, 86. https://doi.org/10.33474/manajemen.v3i2.1575

Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2023). The relationship between entrepreneurship education and entrepreneurial intentions: A meta-analytic review. *Entrepreneurship Theory and Practice*.

Bae, T. J., Qiao, L., Miao, C., & Fiet, J. O. (2023). The Impact of Entrepreneurship Education on Entrepreneurial Intentions of College Students. *Academy of Management Learning & Education*, *22*(4), 425–444.

Beltrame, F., Grassetti, L., Bertinetti, G. S., & Sclip, A. (2023). Relationship lending, access to credit and entrepreneurial orientation as cornerstones of venture financing. *Journal of Small Business and Enterprise Development*, *30*(1), 4 – 29–4 – 29. https://doi.org/10.1108/JSBED-07-2021-0281

Bhatti, A., Rehman, S. U., & Rumman, J. B. A. (2020). Organizational capabilities mediates between organizational culture, entrepreneurial orientation, and organizational performance of smes in pakistan. *Entrepreneurial Business and Economics Review*, *8*(4), 85 – 103–185 – 103. https://doi.org/10.15678/EBER.2020.080405

BPS. (2024). *Badan Pusat Statistik Indonesia* (Vol. 52). Badan Pusat Statistik.

Brik, A. Ben, Rettab, B., & Mellahi, K. (2011). Market Orientation, Corporate Social Responsibility, and Business Performance. *Journal of Business Ethics*, *99*(3), 307–324. https://doi.org/10.1007/s10551-010-0658-z

Chabowski, Mena, & Gonzalez-Padron. (2011). The structure of sustainability research in marketing, 1958–2008: A basis for future research opportunities. *Journal of the Academy of Marketing Science*, *39*(1), 55–70.

Civelek, M. (2021). The Mediating Role of SMEs' Performance in the Relationship between Entrepreneurial Orientation and Access to Finance. *BAR - Brazilian Administration Review*, *18*(4). https://doi.org/10.1590/1807-7692BAR2021210045

Diabate, A., Sibiri, H., Wang, L., & Yu, L. (2019). Assessing SMEs' sustainable growth through entrepreneurs' ability and entrepreneurial orientation: An insight into SMEs in Côte d'Ivoire. *Sustainability (Switzerland)*, *11*(24). https://doi.org/10.3390/su11247149

Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, *53*(1), 75–93.

Feishal Azriel Arya Putra, Bibit Waluyo, Risqi Faturohman, Wahyu Dwi Purwoprasetyo, & Ito Setiawan. (2025). Analisis Usability Testing Menggunakan Metode System Usability Scale terhadap Kepuasan Pengguna Website Kemahasiswaan Universitas Amikom Purwokerto. *Uranus : Jurnal Ilmiah Teknik Elektro, Sains Dan Informatika*, *3*(1), 121–130. https://doi.org/10.61132/uranus.v3i1.673

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, *18*(1).

Górska-Warsewicz, H. (2024). Relationship between entrepreneurial orientation, innovative co-branding partnership, and business performance. *Journal of Entrepreneurship, Management and Innovation*, *20*(2), 139 – 159–139 – 159. https://doi.org/10.7341/20242027

Habib, M. A., Bao, Y., & Ilmudeen, A. (2020). The impact of green entrepreneurial orientation, market orientation and green supply chain management practices on sustainable firm performance. *Cogent Business and Management*, *7*(1). https://doi.org/10.1080/23311975.2020.1743616

Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, *1*(3). https://doi.org/10.1016/j.rmal.2022.100027

Hair, J. F., Black, W. C., Babin, J. B., & Anderson, R. E. (2018). *Multivariate Data Analysis* (8th Edition 7th ed).

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3rd ed.). SAGE Publications, Inc.

Harisandi, P., Hurriyati, R., Gaffar, V., Adi Wibowo, L., Yanti, P., & Yusriani, S. (2025). Personal Branding of Lecturers and Word of Mouth: Effective Education Strategy in Increasing the Attractiveness of Entrepreneurship Study Program and Reputation of Pelita Bangsa University. *IJORER : International Journal of Recent Educational Research IJORER*, *6*(3). https://doi.org/10.46245/ijorer.v6i3.813

Harisandi, P., Muhammad Mardiputra, I., Zakiyatul Hidayah, Z., & Jordan Alvaro Ramba, S. (2024). Creation of Micro Market Structure in MSMEs in Review of Social Entrepreneurship Involvement, Government Policy and Empowerment. *Jurnal Ilmiah Manajemen*, *12*(1), 231–246. https://doi.org/10.56457/jimk.v12i1.534s

Harisandi, P., Nurhidayah, R., Yusriani, S., Yuningsih, N., Tikaromah, O., & Sarjaya, S. (2024). Transforming Student into Entrepreneurs: The Role of Entrepreneurship Education and E-Commerce. *Finansha: Journal of Sharia Financial Management*, *5*(2). https://doi.org/10.15575/fjsfm.v5i2.40685

Harisandi, P., Rabiatul Hariroh, F. M., & Zed, E. Z. (2023). Media Sosial, Pendidikan Kewirausahaan Berdampak terhadap Minat Berusaha Dimensi oleh Inovasi Mahasiswa di Cikarang. *Jurnal Pendidikan Dan Kewirausahaan*, *11*(3), 784–802. https://doi.org/10.47668/pkwu.v11i3.852

Harisandi, P., Yahya, A., & Istiqomah, A. (2024). Building Independence through an Entrepreneur Education, Marketing Channel Strategy and E-Commerce Mediated by Student's Entrepreneur Motivation in Increasing MSMEs in Bekasi District. *MUKADIMAH: Jurnal Pendidikan, Sejarah, Dan Ilmu-Ilmu Sosial*, *8*(2), 330–337. https://doi.org/10.30743/mkd.v8i2.9310

Hassan, H. M. K., Igel, B., & Shamsuddoha, M. (2022). Entrepreneurship Education and Social Entrepreneurial Intentions: The Mediating Effects of Entrepreneurial Social Network. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.860273

Henderson, R., & Robertson, M. (2000). Who wants to be an entrepreneur? Young adult attitudes to entrepreneurship as a career. *Career Development International*, *5*(6), 279–287.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hruby, V. (2024). Exploring AI Adoption Dynamics and Entrepreneurial Orientation in Czech Chemical SMEs: A Pilot Study Perspective. *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration*, *32*(1). https://doi.org/10.46585/sp32011718

Huit, G. T. M., Hair, J. F., Proksch, D., Sarstedt, M., Pinkwart, A., & Ringle, C. M. (2018). Addressing endogeneity in international marketing applications of partial least squares structural equation modeling. *Journal of International Marketing*, *26*(3), 1–21. https://doi.org/10.1509/jim.17.0151

Kaplan, A. M., & Haenlein, M. (2010a). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, *53*(1), 59–68. https://doi.org/https://doi.org/10.1016/j.bushor.2009.09.003

Kaplan, A. M., & Haenlein, M. (2010b). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, *53*(1), 59–68.

Khairurrahman, A. L., Badriah, L. S., Sambodo, H., Rahajuni, D., Kadarwati, N., Pudjianto, H., Setiarso, O., Supriadi, D., & Priyono, R. (2023). Informative Industrial Analytic for Effective Retail Business Performance: A Case of Emerging Economy. *WSEAS TRANSACTIONS ON SYSTEMS*, *22*, 170–179. https://doi.org/10.37394/23202.2023.22.16

Kusa, R., Suder, M., & Duda, J. (2024). Role of entrepreneurial orientation, information management, and knowledge management in improving firm performance.

International Journal of Information Management, *78*. https://doi.org/10.1016/j.ijinfomgt.2024.102802

Lång, S., Ivanova-Gongne, M., Lagerström, J., & Brännback, M. (2024). Refugee entrepreneurship: A systematic literature review and future research agenda. *European Management Journal*. https://doi.org/10.1016/j.emj.2024.03.012

Mei, H., Lee, C. H., & Xiang, Y. (2020). Entrepreneurship education and students' entrepreneurial intention in higher education. *Education Sciences*, *10*(9), 1–18. https://doi.org/10.3390/educsci10090257

Piperopoulos, P., & Dimov, D. (2015). Burst bubbles or build steam? Entrepreneurship education, entrepreneurial self-efficacy, and entrepreneurial intentions. *Journal of Small Business Management*, *53*(4), 970–895.

Pratama, M. A., Siregar, R. P. S., & Sihombing, S. O. (2019). The Effect of Consumer-Based Brand Equity and Satisfaction on Loyalty: An Empirical Study. *Jurnal Economia*, *15*(2), 275–291. https://doi.org/10.21831/economia.v15i2.27314

Rea, D. (2007). *Entrepreneurship: From Opportunity to Action*. Palgrave Macmillan.

Rifqi Abdurahman, F., Hendrayati, H., Mulyadi, H., Harisandi, P., & Yusriani, S. (2025). Entrepreneurship Management Education as a Catalyst for Student Interest in Developing Social Entrepreneurship at Pelita Bangsa University. *IJORER : International Journal of Recent Educational Research IJORER*, *6*(4), 1192–1205. https://doi.org/10.46245/ijorer.v6i4.876

Sarstedt, M. (2019). *Revisiting Hair Et al.'s Multivariate Data Analysis: 40 Years Later* (TheGreat Facilitator). Springer, Cham. https://doi.org/https://doi.org/10.1007/978-3-030-06031-2_15

Venkatakrishnan, J., Alagiriswamy, R., & Parayitam, S. (2023). Web design and trust as moderators in the relationship between e-service quality, customer satisfaction and customer loyalty. *TQM Journal*. https://doi.org/10.1108/TQM-10-2022-0298

Xanthopoulou, P., & Sahinidis, A. (2025a). Exploring the Impact of Entrepreneurship Education on Social Entrepreneurial Intentions: A Diary Study of Tourism Students. *Administrative Sciences*, *15*(3). https://doi.org/10.3390/admsci15030111

Xanthopoulou, P., & Sahinidis, A. (2025b). Exploring the Impact of Entrepreneurship Education on Social Entrepreneurial Intentions: A Diary Study of Tourism Students. *Administrative Sciences*, *15*(3). https://doi.org/10.3390/admsci15030111

Zhang, X., & Huang, Y. (2023). The impact of e-commerce on entrepreneurial intentions in digital natives. *Journal of Business Research*, *113*(124), 161.

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