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The Mediating Role of Ambidextrous Learning Between Entrepreneurial Orientation and Business Performance on Women Entrepreneurs

Denta Felli Ananda[1*] and Ilone Shantia Gultom[1]
[1*]Sekolah Tinggi Ilmu Ekonomi Trisakti, Indonesia

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ABSTRACT

Objective: *The study explores the impact of innovativeness, proactiveness, and risk taking on the business performance of women entrepreneurs within the Jabodetabek region through ambidextrous learning.* ***Method:*** *A quantitative approach with Structural Equation Model (SEM-PLS) data from 110 women entrepreneurs in Jabodetabek which used a purposive sampling technique indicates that innovativeness not only increase ambidextrous learning, it also directly increases business performance. Proactiveness both directly enhances ambidextrous learning and business performance. Risk taking also proven increasing on both ambidextrous learning and business performance.* ***Results:*** *Research findings also highlight the role of ambidextrous learning as a mediating role. It effectively mediates the impact of innovativeness, proactiveness, and risk taking on business outcomes.* ***Novelty:*** *The outcome of this research offers valuable contribution to practical insight of ambidextrous capabilities to optimize entrepreneurial orientation dimensions, enabling women entrepreneurs to enhance adaptability, drive growth, and achieve sustained business success in dynamic market environments.*

INTRODUCTION

Over the past years, Indonesia's economic development has demonstrated a strong dependence on the rapid expansion of micro, small, and medium enterprises (MSMEs), which contribute 60.51% of the nation's economic growth (Aprilia *et al*., 2025). This sector is known to comprise 68.7% or a total of 183.36 million people of the entire population. Based on gender categories, the number of entrepreneurs is divided into approximately 64.5% women and the remainder are men. The MSME sector also absorbed up to 97% of the workforce in 2022 (Badan Pusat Statistik, 2023). From geographic perspective, West Java which includes the Jabodetabek region, contributes approximately around 20% of Indonesia's national GDP, making it the largest economic contributor. The region being characterized with financial service around DKI Jakarta, industrial corridors in Bekasi–Karawang–Tangerang, and the strong role of urban MSMEs, trade, and household consumption in sustaining regional economic growth. Here we can conclude that MSME in Indonesia place an important role for nationwide economic growth (Badan Pusat Statistik, 2025).

Although it shows some growth, MSMEs potential growth is yet optimal, especially for female entrepreneurs (Jha & Alam, 2022). Their success is influenced by a number of elements which differ from male entrepreneur, such as their capacity for innovation, proactive market responses, measured risk taking capability, and strategic balance between the efficient use of current resources and the pursuit of new opportunities (Andarsari & Ningtyas, 2019). The main reasons female entrepreneurs in MSMEs are still uncommon or have not reached their full potential, according to (Indriastuti & Ikmal, 2022) are the patriarchal cultural influence that limits their role as entrepreneurs, lack of

access to capital, training, development, mentorship and the social role conflict in balancing domestic family needs and personal growth.

Some studies have been conducted continuously to overcome issue of women entrepreneur performance, but few have tested the mechanism of both internal and external drivers such as the Hierarchy of Needs Theory point of view, especially in the higher needs level such as esteem and self actualization needs. According to perspectives, namely opportunity and necessity. Whilst opportunity-motivated entrepreneurs are pulled into entrepreneurship by its attractiveness, necessity- entrepreneurship occurs when individuals are forced by inevitability such as the needs to fulfill daily needs like food and clothing. Moreover, several recent studies on women entrepreneurs' performance also still indicate overly broad range of result. According to (Priya, 2025), women entrepreneur performance emphasize internal behavioral perspectives such as decision making ability. While according to (Skeja *et al.,* 2026), women entrepreneur business performance highlight external and contextual factors such as institutional support that has greater effect on performance. These differences in perspectives indicates that there is still a gap in providing more comprehensive discussion in determining women entrepreneurs' business performance.

This study exclusively examines Indonesian female entrepreneurs so it can empirically demonstrate that ambidextrous learning as pivotal mechanism through which innovativeness, proactiveness, and risk-taking are transformed into sustainable business performance under gender-specific constraints. Thus, this study objectives is to analyze the influence of entrepreneurial orientation through innovation, proactiveness, and risk-taking on the business performance with the mediation of ambidextrous learning in women entrepreneurs in Jabodetabek.

Theoretical Foundation: Maslow Hierarchy of Needs and Entrepreneurship

Maslow's hierarchy of needs theory explains that human needs are arranged hierarchically, where basic needs must be met first before reaching a higher level. In relevance to this research, recognition and high status at the self-esteem level provide additional motivation through awards, appreciation, or learning opportunities for greater responsibility in the organization. Using Maslow's hierarchy of needs theory, this study argues that the need for self-actualization through innovativeness and esteem through proactiveness motivates women entrepreneurs to develop ambidextrous learning capabilities to achieve sustainable business performance. Learning ambidexterity can be sharpened in the way female entrepreneur balancing explorative activities through identifying the new market and creating new product and service; and also exploitative activities such as adding new product feature, increasing business process efficiency and put service beyond customer expectation (Maziriri et al., 2023). This is also align with Resource Based View, which states that competitive advantages is obtained from a company's ability to manage its internal resources to be valuable and not easily imitated (Barney et al., 2001). With an entrepreneurial orientation through innovation, proactive, and risk taking balancing both side explorative and exploitative learning can lead entrepreneur to achieve a better business performance (Abbas et al., 2020).

According to Koyluoglu & Dogan (2021), innovativeness has a positive and significant effect on business performance in high-tech companies in Turkey, while Asiaei *et al.* (2023) shows that innovation capability positively influences business performance through the development of knowledge-based assets in knowledge-intensive firms. Messikh (2022) show that proactive behavior has a positive impact on export performance in clothing manufacturing companies in Bangladesh, while another research revealed that proactive actions do not have a significant influence on business performance in food and beverage businesses in West Jakarta (Kavana & Puspitowati, 2022). Based on the same research it was found that risk-taking as part of entrepreneurial orientation has a significant effect on export performance. Ambidextrous learning, in this study, reflects the firm's ability to balance both dimensions, explorative and exploitative are therefore critical to strengthening business performance. While exploration supports the creation of new technological capabilities, exploitation enhances the efficient use of existing knowledge; the balance between the two generates synergistic effects that contribute to firm growth (Martínez-Román et., 2026). This dual capability enables firms to pursue short-term efficiency through exploitation while also investing in long-term competitiveness through exploration (Wu *et al.,* 2023; Singh & Singh, 2024).

Hypothesis Development

Recent research found that innovation enhances both resource utilization and the development of new market opportunities through ambidextrous learning (Santoro *et al.,* 2023). This research was conducted on 300 company managers in various sectors in several countries that implement explorative and exploitative strategies in applying new knowledge. Similarly, other research also conclude that innovativeness and organizational openness are critical drivers of ambidextrous learning in 289 managers of SME in China (Tian *et al.,* 2021; Yuan *et al.,* 2021). They emphasize that dynamic novelty in knowledge, product and service will strengthen both way of exploration and exploitation activities, allowing firms to adapt their business models more effectively in different sectors. In this sense, we propose the first hypothesis H_1 innovativeness has an influence to ambidextrous learning.

Study held by Abbas *et al.,* 2020 found that innovation significantly improves organizational performance through effective knowledge management practices. Held this study in 311 owner and manager of SME in Pakistan, this research concludes that through sustainable daily management practice then financial and non-financial performance be enhanced. Similarly, (Khan *et al.,* 2021) highlighted that social capital and business model innovation, driven by innovativeness, positively influence SME performance by enhancing adaptability and market responsiveness. (Zighan *et al.,* 2023) further emphasized that SMEs engaging in sustainable innovation are more capable of achieving growth despite environmental uncertainties. In addition, (Gomes *et al.,* 2022) demonstrated that innovation capabilities, when aligned with organizational learning, directly contribute to service innovation and firm performance. Finally, (Anwar *et al.,* 2022) confirmed that innovativeness within entrepreneurial orientation enables SMEs in emerging markets to achieve superior performance through opportunity recognition and market responsiveness. Overall, these studies consistently indicate that innovativeness—

supported by effective knowledge management, social capital, sustainable practices, and organizational learning—enhances SME performance by strengthening adaptability, opportunity recognition, and market responsiveness in dynamic environments. Thus we come to our second hypothesis H_2 innovativeness has an influence to business performance.

Proactive behavior encourages 253 enterprises in China to search for emerging market opportunities while simultaneously improving efficiency through resource optimization (Wang & Zhang, 2022). Proactiveness strengthens balanced innovation for superior performance by reducing conflicts between exploration and exploitation in 370 manufacturing company in Greek (Kafetzopoulos, 2020). Similarly, (Tian *et al.,* 2021) found that proactiveness acting as an essential driver to ambidexterity learning in 289 manager and owner of SME in China. Gomes *et al.,* (2022) further revealed from 249 service manager in Brazil which organization develop innovation through learning capability, found that proactiveness is positively associated with organizational learning capability. This capability will directly enhance both explorative and exploitative aspect in business process. Thus, our studies suggest that proactiveness plays a crucial role in enhancing firm performance by driving opportunity seeking, strengthening organizational learning capabilities, and facilitating ambidextrous innovation through the balance of exploration and exploitation. Taken together, these findings underline the third hypothesis H_3 proactiveness has an influence to ambidextrous learning.

Maziriri *et al.* (2023) demonstrated that proactive personality significantly enhances the performance of 304 women entrepreneurs in South Africa, showing its relevance in developing economies. Similarly, (Anwar *et al.,* 2022) found in 220 founder and top manager of startup companies in emerging market from Asia and Afrika, that proactivity facilitates opportunity recognition, which mediates the relationship between entrepreneurial orientation and new venture performance in emerging markets. Here we can argue that both direct and indirect role of proactive has its significant positive impact on business performance in general. Donbesuur *et al.* (2020) also confirmed that proactive entrepreneurial actions are essential for improving new venture performance by adapting to environmental changes. This research was held in Ghana with 230 founder and top managers of new ventures companies. Further study found that proactivity drives innovation and service performance in SMEs, thereby improving overall outcomes (Gomes *et al.,* 2022). Another research in hospitality context at China from 312 hotel and manager restaurants, proactive behavior enhances store performance by leveraging knowledge-based dynamic capabilities (Chien & Tsai, 2021). From all of these studies we conclude that proactiveness significantly improves business performance by enabling opportunity recognition, driving innovation, strengthening dynamic capabilities, and helping firms adapt to environmental changes across various organizational contexts. Collectively, these studies suggest the fourth hypothesis H_4 proactiveness has an influence to business performance.

Recent study reinforces that risk taking drives ambidextrous learning in SMEs by encouraging experimentation with new opportunities while optimizing existing resources in 214 pharmaceutical firm in Iran, with respondent of owner and manager of SME (Farzaneh *et al.,* 2022). Entrepreneurial risk taking strengthens organizational

learning capabilities, enabling firms to simultaneously innovate and improve efficiency. This character is found in 185 manager and owner of new SME and startup business in Indonesia (Nurwendi & Haryadi, 2022). Another research at 300 senior managers in multi country data set that deliver ambidexterity in their strategy, found that firms with higher risk-taking propensities are more likely to develop ambidextrous capability that integrate radical exploration with incremental exploitation (Vrontis *et al.,* 2020). It enhance explorative and exploitative learning capability learning by fostering adaptive capacity from balancing opportunity-seeking. Overall, these studies indicate that risk-taking behaviour strengthens SMEs' ambidextrous learning by encouraging experimentation, fostering adaptive capacity, and enabling firms to balance explorative innovation with exploitative efficiency. Collectively, these findings suggest the next hypothesis H_5 risk-taking has an influence to ambidextrous learning.

Some studies emphasized that risk-taking enhances competitiveness by enabling firms to act decisively under uncertainty. Both researches held in Algeria mention that when their decision-making lean toward proactive behavior, it effects their performance. (Messikh, 2022; Tang *et al.,* 2020) More recent evidence strengthens an argument demonstrated that risk-taking significantly improves new venture performance in emerging markets by facilitating opportunity recognition and adaptive strategies (Anwar *et al.,* 2022). Likewise, risk-taking drives proactive entrepreneurial actions that positively influence business outcomes in dynamic environments (Donbesuur *et al.,* 2020). In addition, calculated risk-taking orientation not only promotes innovation but also sustains long-term firm performance. This finding concluded in the research of 324 managers and owners of high-tech firms that implemented learning. While the nature of high-tech firm is continuously and gradually change, this ability to calculate risk and mitigate it will directly support business performance (Liu *et al.,* 2023). These findings underline the next hypothesis which is H_6 risk-taking has an influence to business performance.

Few years back before Covid, ambidextrous learning significantly enhances innovation outcomes and market performance in 245 top managers at Chinese high tech manufacturing firms (Wei *et al.,* 2019). Now days, SMEs leveraging both explorative and exploitative learning simultaneously are able to combine short-term efficiency with long-term adaptability, thereby achieving stronger competitive advantage (Farzaneh *et al.,* 2022). In knowledge-intensive firms, showed that ambidextrous learning mediates the effect of strategic resources such as human and structural capital, reinforcing performance improvements (Asiaei *et al.,* 2023). Among women entrepreneurs in developing economies, ambidextrous learning positively affected business performance by acting as crucial mechanism linking entrepreneurial orientation to sustainable business outcomes (Yu *et al.,* 2023). Recent study highlighted that ambidextrous learning fosters adaptive capacity in high-tech firms, enabling them to balance opportunity-seeking behaviors with efficiency-driven practices, which ultimately strengthens long-term financial performance (Liu *et al.,* 2023). The literatures consistently indicates that through the simultaneous integration of explorative and exploitative learning—decision makers plays a crucial role in improving innovation outcomes and enhancing both short-term efficiency and long-term business performance. Studies across different contexts,

including SMEs women entrepreneurs in developing economies, demonstrate that ambidextrous learning also acts as an important mediating mechanism that links strategic resources and entrepreneurial orientation with sustainable competitive advantage and improved financial performance. Thus, the highlighted next hypothesis is H_7 ambidextrous learning has an influence to business performance.

Balancing exploration and exploitation enable SMEs to achieve efficiency while maintaining long-term growth (Wei *et al.,* 2019). Ambidextrous learning especially internally exploitative knowledge sharing mediates the effect of innovation resources on firm performance in knowledge-intensive contexts (Asiaei *et al.,* 2023). According to (Yu *et al.,* 2023) innovativeness support ambidexterity learning among 236 women entrepreneurs in Vietnam by creating and identifying added value business process and identifying new market possibilities. Although these studies were conducted in different research contexts and involved diverse respondents from various countries, they consistently highlight that balancing explorative and exploitative learning processes supports the achievement of firm performance. These studies demonstrate that balancing explorative and exploitative learning plays a crucial role in enhancing firm performance by enabling efficiency internally and sustaining long-term growth. Thus, our H_8 is ambidextrous learning mediates the relationship between innovativeness and business performance.

A study demonstrated that proactive entrepreneurs in emerging markets leverage ambidextrous learning to strengthen business outcomes (Yu *et al.,* 2023). Proactive behavior motivates firms to balance exploration and exploitation, thereby enhancing organizational adaptability and performance (Wang *et al.,* 2024). Proactivity reduces tensions between exploration and exploitation, enabling firms to achieve superior results (Zhang & Zhu, 2020). Proactive entrepreneurial behavior supports resilience and innovation, mediated through ambidextrous practices (Maziriri *et al.,* 2023). Another study also found that proactivity enhances firm performance when ambidextrous learning channels exploratory and exploitative activities effectively (Asiaei *et al.,* 2023). Proactive entrepreneurial behaviour encourages firms to engage in ambidextrous learning by various explorative and exploitative activities, which enhances adaptability, resilience, and innovation. Through this mechanism, proactivity reduces tensions between exploration and exploitation and ultimately strengthens organizational performance and business outcomes. These findings suggest the ninth hypothesis H_9 ambidextrous learning mediates the relationship between proactiveness and business performance.

Risk propensity fosters ambidextrous innovation in dynamic markets, enhancing strategic agility and firm outcomes. Risk-taking drives both exploration of new opportunities and exploitation of existing knowledge, strengthening innovation performance (Zhou *et al.,* 2023). Risk-taking orientation also develops adaptive capacity, balancing opportunity-seeking with operational efficiency through ambidextrous learning (Liu *et al.,* 2023). Firms with higher risk orientation utilize ambidexterity to achieve long-term growth and competitiveness (Vrontis *et al.,* 2020). Risk-taking orientation encourages firms to adopt ambidextrous learning by simultaneously exploring new opportunities and exploiting existing knowledge, which strengthens

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innovation performance and strategic agility. Through this balance, risk propensity enhances adaptive capacity, enabling firms to achieve sustained competitiveness and long-term growth in dynamic markets. Taken together, these findings indicate the last hypothesis which is H_{10} ambidextrous learning mediates the relationship between risk-taking and business performance.

RESEARCH METHOD

Innovativeness, defined as the firm's willingness to develop new products, services, and processes creatively (Farzaneh *et al.,* 2022). The measurement is business being recognized as innovative, promoting new products and services innovatively, continuously developing the latest offerings, and using the latest tools in operations. Proactiveness, which reflects the tendency to anticipate and act upon future market demands (Sahi *et al.,* 2020), is operationalized by taking initiative in responding to competition, staying one step ahead with new ideas, and being the first to introduce new products, services, or technologies. Risk-taking, understood as the willingness to commit resources to uncertain but potentially rewarding projects (Sahi *et al.,* 2020), is measured by strong determination to pursue risky projects, making bold and comprehensive decisions, and aggressively maximizing opportunities. Ambidextrous learning as mediating variables (Yu *et al.,* 2023), is represented by accepting demands beyond existing operations, experimenting with new products and services, pursuing opportunities in new markets, adapting existing products and services, improving existing offerings for the local market, and enhancing efficiency through economies of scale. Finally, business performance, referring to outcomes in financial and market dimensions (Sahi *et al.,* 2020), is assessed through actively seizing market opportunities to increase revenue, the positive impact of bold decision-making on market share, and the ability to sustain profit stability through innovation and exploration.

This research is a quantitative descriptive study that employs a purposive sampling method with some criterions applied. There are five criterion that's being used which are business categorized, age, ownership, location and running period. Respondents need to be classified as micro (business capital below Rp 1 billion per year, and turnover below Rp 2 billion per year), all respondents are women owners or manager with aged 18-50 years, business locations are in Jabodetabek, and the business must have been running for at least 1 year. With a power of 0.95 and 5 variables, a minimum sample of 85 respondents was required. Therefore, a sample of 110 was considered adequate. The data analysis method is using structured equation modeling with SEM PLS 4.0 and SPSS as tools. The data analysis consists of outer model testing, inner model testing and hypothesis testing.

RESULTS AND DISCUSSION

Results

Table 1. Statistics Descriptive

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Innovativeness	110	4	20	16.05	3.006
Proactiveness	110	6	15	11.74	2.433
Risk taking	110	4	15	12.05	2.359
Ambidextrous Learning	110	6	30	21.00	3.566
Business Performance	110	3	15	12.64	2.119

Source: Statistical processing result

The descriptive statistics indicate that respondents exhibit relatively high levels of innovativeness with mean = 16.05 out of 20, along with moderately high proactive mean = 11.74 out of 15 and risk-taking with mean = 12.05 out of 15. This suggests that majority female entrepreneurs in the Jabodetabek region possess strong entrepreneurial characteristics, particularly in terms of innovation, opportunity-seeking behavior, and risk tolerance and quiet agree with the statements in the questionnaire. These attributes are also reflected in the level of ambidextrous learning with the mean 21.00 out of 30, indicating a solid capability to balance exploration and exploitation activities, as well as in business performance with mean = 12.64 out of 15, which demonstrates relatively favorable firm outcomes.

Table 2. Respondent's Profile

Criterion		Frequency	Percent (%)
Age	18-28	93	84.5
	29-39	11	10
	40-50	5	4.5
	>50	1	1
Business Location	Jakarta	25	22.7
	Bogor	6	5.5
	Depok	4	3.6
	Tangerang	7	6.4
	Bekasi	68	61.8
Business Establishment (year)	1	54	49.1
	2-3	33	30
	4-6	14	12.7
	>6	9	8.2

Source: data processing result

This study involved 110 entrepreneurs domiciled in the Jakarta area (Jabodetabek) who met specific criteria related to age, business location, and year of establishment. The majority of respondents were aged 18–28 years (84.5%), were primarily located in Bekasi (61.8%), and had been operating their businesses for one year (49.1%).

The following are the results of the inner and outer model analysis and the results of hypothesis testing. The data examination is explained here in Table 3 until Table 8.

Table 3. Convergent Validity & Reliability

Question Items	Outer Loading	AVE	CA	CR
Ambidextrous Learning (Yu et al., 2023) (Sahi et al., 2020)				
M1.1 – I accept demands that go beyond existing operations.	0.700			
M1.2 – I experiment with new products and services in my local market.	0.846			
M1.3 – I frequently pursue opportunities in new markets.	0.879			
M1.4 – I regularly make small adaptations to existing products and services.	0.824	0.724	0.900	0.924
M1.5 – I introduce improved but existing products and services to my local market.	0.842			
M1.6 – I increase efficiency by expanding economies of scale in existing markets.	0.809			
Business Performance (Yu et al., 2023) (Sahi et al., 2020)				
Y1.1 - I actively take advantage of market opportunities to drive increased revenue.	0.906			
Y1.2 - My bold decision-making had a positive impact on increasing market share.	0.890	0.817	0.888	0.930
Y1.3 - I innovate and explore so that I can maintain the stability of profits.	0.914			
Innovativeness (Yu et al., 2023) (Farzaneh et al., 2022)				
XA.1 - The business I do is known to be innovative	0.862			
XA.2 - I promote new products and services innovatively.	0.899	0.729	0.876	0.915
XA.3 - I am always developing the latest products and services.	0.864			
XA.4 - I use the latest tools in running my business.	0.788			
Proactiveness (Yu et al., 2023) (Sahi et al., 2020)				
XB.1 - I took the initiative in responding to the competition.	0.821			
XB.2 - I am always one step ahead in introducing new ideas.	0.879	0.719	0.804	0.885
XB.3 - I was the first to introduce new products and services and features in administrative services and technology.	0.843			
Risk-Taking (Yu et al., 2023) (Sahi et al., 2020)				
XC.1 - I have a strong determination to run risky projects.	0.910			
XC.2 - I made bold decisions and acted comprehensively.	0.895	0.781	0.860	0.915
XC.3 - I am aggressive in maximizing the opportunities that exist.	0.846			

Source: data processing result

From Table 3, it can be observed that all indicators demonstrate outer loading greater than 0.70, which confirm adequate convergent validity at the indicator level. Furthermore, convergent validity is also supported by the Average Variance Extracted (AVE) values, which exceed the recommended threshold of 0.50 for all constructs. This indicates that the variance of the indicators is captured by the latent constructs rather than by measurement error. In addition, reliability assessment using Cronbach's alpha

(CA) and composite reliability (CR) shows values above 0.70 across all constructs, confirming internal consistency reliability.

Table 4. Heterotrait-Monotrait Ratio (HTMT)

	M	X1	X2	X3	Y
M					
X1	0.512				
X2	0.707	0.324			
X3	0.581	0.099	0.137		
Y	0.820	0.571	0.634	0.597	

Source: data processing result

Table 5. Fornell-Larcker criterion

	M	X1	X2	X3	Y
M	0.836				
X1	0.450	0.827			
X2	0.595	0.268	0.834		
X3	0.494	0.035	0.085	0.843	
Y	0.697	0.472	0.504	0.478	0.842

Source: data processing result

The Fornell–Larcker results indicate that the square root of the Average Variance Extracted (AVE) for each construct is greater than its correlations with other constructs, demonstrating that each latent variable shares more variance with its own indicators than with other constructs. In addition, the HTMT values for all construct pairs are below the conservative threshold of 0.9, indicates the data fulfilled discriminant validity.

Table 6. Structural Model Evaluation

	R2	Adj. R^2	Q^2
Ambidextrous Learning	0.648	0.638	0.601
Business Performance	0.715	0.704	0.621

Source: data processing result

From Table 6, the results of the coefficient of determination (R^2) test, show that the R^2 value for ambidextrous learning is 0,648 and for the business performance is 0,715. The R^2 value of 0,648 is categorized as moderate while the R^2 value of 0,715 is categorized as strong. This number means that 64.8% of its variance is explained by innovativeness, proactiveness, and risk-taking, confirming their significant contribution to dual learning capabilities. Similarly, the R^2 for business performance (0, 715; adjusted R^2 = 0.704) shows that 71.5% of performance is explained by the model, including ambidextrous learning, suggesting that strong entrepreneurial traits enhance both learning capacity and business performance in women entrepreneur in Jabodetabek. Meanwhile, the remaining 29,6% is influenced by other factors outside this model. The Q^2 result of ambidextrous learning is 0,601 and the business performance is 0,621 which means significantly above zero demonstrate strong predictive relevance, indicating that the model effectively predicts how these entrepreneurial characteristics influence learning and performance in women

entrepreneur in Jabodetabek through adaptation to products and services, willingness to meet market demand that sometimes exceeds production capacity, and readiness to experiment with new products, services, and business processes in order to fulfill consumer needs. These align with hierarchy of needs theory, suggesting that women entrepreneurs' strong capacity to balance explorative and exploitative learning reflects the fulfillment of esteem and self-actualization needs, where ambidextrous learning explain both performance outcomes and intrinsic motivation for growth.

Table 7. Direct Effect Hypothesis Test Result

Hypothesis	Path	Original Sample (O)	Standard Deviation (STDEV)	T-Statistics (|O/STDEV|)	P-Value	Supported
H1	I → AL	0.307	0.053	5.847	0.000	Yes
H2	I → BP	0.272	0.071	3.834	0.000	Yes
H3	P → AL	0.475	0.051	9.371	0.000	Yes
H4	P → BP	0.239	0.070	3.403	0.001	Yes
H5	RT → AL	0.443	0.069	6.422	0.000	Yes
H6	RT → BP	0.311	0.078	3.996	0.000	Yes
H7	AL → BP	0.278	0.098	2.832	0.005	Yes

Source: data processing result

The results presented in Table 7 show that H_1 is accepted, with a p-value of 0.000 < 0.05 and a t-statistic of 5.847 > 1.96, indicating that innovativeness has a positive influence on ambidextrous learning. This means innovativeness in women entrepreneur often pursue explorative activities such as developing new products, promoting creative offerings, and adopting advanced technologies, while exploitative activities such as optimizing existing resources, skills, and processes, may be overlooked.

Meanwhile, H_2 is accepted, as indicated by a p-value of 0.000 > 0.05 and a t-statistic of 3.834 < 1.96, showing that innovativeness has a positive influence on business performance. In other words, innovativeness is proven to directly improve business performance. This finding that innovativeness directly improves business performance confirms the crucial role of innovation for women entrepreneurs in Jabodetabek. In a competitive market, the ability to develop new products or use the latest technologies (as reflected in indicator XA.4) allows them to differentiate themselves from competitors and directly attract more customers, thereby increasing revenue (Y1.1).

The results show that H_3 is accepted, with a p-value of 0.000 < 0.05 and a t-statistic of 9.371 > 1.96, indicating that being proactiveness has a positive effect on ambidextrous learning. This means that proactiveness, reflected in responsiveness to competition and the pioneering of new ideas, products, and technologies, encourages firms to engage in both explorative and exploitative learning. This dual orientation strengthens ambidextrous learning, enabling organizations to simultaneously pursue new opportunities and optimize existing operations for improved performance.

For H_4 is accepted, as shown by a p-value of 0.001 > 0.05 and a t-statistic of 3.403 < 1.96, indicating that proactiveness behavior has a significant effect on business performance. This shows that when businesses take initiative and lead in introducing new ideas and features such as measured in XB.2, these kind of efforts alone significantly

and directly improve market share, revenue and profit as measured in Y1.1, Y1.2 and Y1.3.

Next, H_5 is accepted, with a p-value of 0.000 < 0.05 and a t-statistic of 6.422 > 1.96, which means that risk-taking positively influences ambidextrous learning. This can be seen through the willingness to pursue risky projects, bold strategic decision-making, and assertive opportunity exploitation, simultaneously fosters explorative innovation by encouraging the pursuit of novel approaches and exploitative innovation by reinforcing process optimization and capability enhancement. Through this dual effect, risk-taking strengthens ambidextrous learning, enabling firms to balance exploration and exploitation as a foundation for sustained performance improvement.

Furthermore, H_6 is accepted, with a p-value of 0.000 < 0.05 and a t-statistic of 3.996 > 1.96, meaning that risk-taking has a positive impact on business performance. This result reflects that when entrepreneurs are willing to take calculated risks and act boldly, they are better able to seize opportunities and strengthen business outcomes.

Finally, H_7 is accepted, with a p-value of 0.005 < 0.05 and a t-statistic of 2.832 > 1.96, showing that ambidextrous learning positively affects business performance. This is supported by adapt existing product continuously, scale expansion, consistently seeking and developing new skills, and go beyond existing operations enable firms to simultaneously strengthen explorative and exploitative capabilities.

Table 8. Indirect Effect Hypothesis Test Result

Hypo-thesis	Path	Original Sample (O)	Standard Deviation (STDEV)	T-Statistics (|O/STDEV|)	P-Value	Sup-ported
H8	I → AL → BP	0.133	0.066	2.021	0.043	Yes
H9	P → AL → BP	0.110	0.055	2.008	0.045	Yes
H10	RT → AL → BP	0.118	0.057	2.081	0.037	Yes

Source: data processing result

Table 8 shows that H_8 is supported, with a p-value of 0.043 < 0.05, which means that innovativeness has an indirect effect on business performance through ambidextrous learning. Innovation encourages firms to pursue explorative activities such as developing new products and adopting advanced technologies, while also reinforcing exploitative practices through the refinement of existing resources and processes. Through this dual pathway, ambidextrous learning mediates the relationship between innovation and business performance by fostering adaptability and sustainable growth. Align with previous hypothesis, H_9 is also supported, with p-value of 0.045 < 0.05, demonstrating that proactiveness behavior has an indirect effect on business performance through ambidextrous learning. Proactiveness, reflected in responsiveness to competition and the pioneering of new ideas, drives both explorative innovation and exploitative optimization. This dual orientation strengthens ambidextrous learning, enabling firms to balance adaptability with efficiency in enhancing business performance. Likewise, H_{10} is also supported, with a p-value of 0.037 < 0.05, confirming that risk-taking has an indirect effect on business performance through ambidextrous learning. Risk taking, expressed through bold decision-making and assertive opportunity pursuit, stimulates explorative

innovation while also reinforcing exploitative capabilities by optimizing existing processes.

Discussion

The first analysis of the study being showed with the statistical descriptive analysis of respondent characteristic result in Table 1 and 2 about the distribution of female entrepreneurs. The result supported by the study from (Hendratmi et al., 2022) which also demonstrates the same distribution with up to 35% of female entrepreneur residing in Jakarta and West Java. This provides commonalities in the distribution of the respondent as well as in the context of location and respondent's character. Overall, the results indicate that most respondents are young entrepreneurs managing relatively early-stage businesses. The following analysis presented in Table 3 also confirm that the measurement model demonstrates adequate convergent validity and reliability and is suitable for further structural model analysis. This result align with the study of entrepreneurial orientation antecedent analysis conducted by (Hernández-Perlines et al., 2020) at 218 family business on numerous sectors in Spain which state that the reliability and validity scores for innovativeness, proactivity, and risk taking are quite satisfactory to measure business performance. For inner model analysis of structural model presented in Table 4,5 and 6 conclude the result that allowed this study to be continued since the result met the criterion of divergent validity and structural model evaluation.

From the hypothesis testing presented above we can see that all of direct effect of entrepreneurial orientation dimension to ambidextrous learning and to business performance presented in H_1-H_7 in alignment with Kruja (2020) which demonstrates that the collaboration of entrepreneurs, government, and researchers creates innovation, risk-taking, and proactivity that significantly improve business performance at the agribusiness sector in Albania. Women entrepreneurs' business performance has been shown to be improved by collaboration among entrepreneurs, government and researchers, in the creation of innovation atmosphere, initiatives among competition, and willingness to take a calculated risk project to meet market demand.

We can also see that from the indirect hypothesis testing this research provide alignment to literature study from (Irawan et al., 2023) which conclude that risk taking, innovative, and proactive have a positive and significant effect on company performance, especially in the role of entrepreneurial orientation as a source of strategic resources.

These study result align with Maslow's Needs Theory at higher-order needs, particularly esteem and self-actualization, which emphasize innovation and proactive behaviour and personal growth at risk taking capability, beyond economic survival. In the context of women entrepreneurs in Jabodetabek, ambidextrous learning reflects intrinsic motivation to simultaneously explore and exploit attempt that lead to better business performance. Consequently, this research indicates that higher-level motivational drivers play a crucial role in shaping the impact of entrepreneurial orientation through ambidextrous learning on business performance.

CONCLUSION

Fundamental Findings. The study finds that innovativeness, proactiveness, and risk-taking significantly improve women entrepreneurs' business performance, both directly and through ambidextrous learning. Ambidextrous learning emerges as a key

mechanism that enables short-term efficiency and long-term adaptability, strengthening sustainable performance through increasing market share, profit and revenue **Implications**. The findings enrich Hierarchy of Needs Theory by highlighting ambidextrous learning as a crucial link between entrepreneurial orientation and performance in a gender-specific context in the form of higher needs fulfilment. Practically, it suggests the women entrepreneur to focus on developing environment of learning capabilities that help themselves through competition, support system and external institution that provides access to ambidextrous learning activities. **Limitations.** This study is limited by the sample numbers which restricted to women entrepreneurs in the Jabodetabek region, most of whom operate early-stage businesses. These factors may limit causal interpretation and generalizability to other contexts. **Future Research**. Future research will be enlightened to use another comprehensive method such as mixed-method approaches, include broader regional and sectoral samples, and examine additional contextual factors such as institutional support or digital capability. Exploring moderating variables could further clarify when ambidextrous learning most effectively enhances business performance.

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***Denta Felli Ananda (Corresponding Author)**
Department of Management
Sekolah Tinggi Ilmu Ekonomi Trisakti, Indonesia
Address: Jalan Kyai Tapa No.20 Grogol Jakarta Barat 11440 Phone. 021-5666717
Email: denta@stietrisakti.ac.id

Ilone Shantia Gultom
Department of Management
Sekolah Tinggi Ilmu Ekonomi Trisakti, Indonesia
Address: Jalan Kyai Tapa No.20 Grogol Jakarta Barat 11440 Phone. 021-5666717
Email: shantianastasia04@gmail.com