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Entrepreneurial Orientation Increases Womenpreneur Business Performance: The Role of Customer-Centric Discovery, Market Responsiveness and Digital Literacy

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ABSTRACT

The research is motivated by the importance of women entrepreneurs' role in driving economic growth in the era of global competition, which demands adaptation to market and technological changes. Consequently, they are required to identify customer needs and respond quickly to market demands enabled by digitalization. The contribution of research on customer-centric discovery and market responsiveness to ensure women entrepreneurs achieve superior business performance and fill the research gap between entrepreneurial orientation and business performance. A quantitative approach with a purposive sampling technique of 384 female MSME actors registered with the Cooperative and MSME Office in several cities in East Kalimantan, Indonesia. data analysis using (PLS-SEM). The results of the study indicate that entrepreneurial orientation and customer-centric discovery have a significant effect. Customer-centric discovery has a significant effect on market responsiveness. Customer-centric discovery has a significant effect on the womenpreneur's performance. Market responsiveness has no significant impact on womenpreneur performance. Market responsiveness does not mediate the relationship between entrepreneurial orientation and womenpreneur performance, nor does it mediate the relationship between customer discovery and performance. Digitalization significantly moderates the relationship between customer-centric discovery and performance. This research provides a theoretical contribution by strengthening the role of digital literacy as a reinforcing factor in the customer-centric discovery relationship model on performance, as well as a practical contribution in the form of policy recommendations for women-owned MSMEs.

Keywords: Entrepreneurial Orientation, Customer-Centric Discovery, Market Responsiveness, Digital Literacy, Womenpreneur Business Performance
JEL Classifications: M310, M3, L25

1. INTRODUCTION

Data from the Financial Services Authority (OJK) and the Central Statistics Agency (BPS) (2024-2025), 64.5% of the approximately 64.2 million to 65.5 million MSMEs in Indonesia are managed by women. This number equates to more than 37 million female entrepreneurs, who play a strategic role in national economic growth. In addition to the predominance of micro-enterprises, data shows that women manage 62%, and 70% of women-owned MSMEs in East Kalimantan have not experienced significant growth due to external and internal factors. Key issues include a lack of product innovation, limited access to market information, low adoption of digital technology, and a low entrepreneurial orientation (Rochiyati et al., 2022). Limitations in understanding customer needs and slow response to market changes are also major obstacles to increasing competitiveness.

Meanwhile, business performance is determined by the important role of entrepreneurial orientation. Research (Covin and Lumpkin, 2011), (Allammaria et al., 2025) and (Suder and Duda, 2025) states that dimensions of entrepreneurial orientation, such as proactivity, innovation, and risk-taking, can encourage better performance. In

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addition, entrepreneurial orientation allows MSMEs to be more adaptive to market dynamics and create sustainable competitive advantages (Covin and Lumpkin, 2011). Previous research shows that entrepreneurial orientation has a positive influence on business growth, adaptability to change, and value creation (Rudawska, 2020), (Indriastuti, 2019), and entrepreneurial orientation has a positive and insignificant effect on the performance of female MSMEs (Nuryakin, 2024) and (Martínez-egea, 2026).

MSMEs with a high level of entrepreneurial orientation tend to be better able to identify market opportunities, respond to consumer dynamics, and carry out relevant innovations (Hunt et al., 2022). Gender aspects can influence how women manage risk, make strategic decisions, and build business networks. Research conducted (Paul and Hechavarrı, 2015) states that women tend to have a different approach to entrepreneurship than men, so the entrepreneurial orientation model needs to be studied more specifically and locally. However, this influence is indirect and highly dependent on internal organizational conditions, one of which is market responsiveness (Wei et al., 2014). In several studies, this variable is a mediator between strategic inputs (such as innovation, market orientation, and customer discovery) and business performance outcomes (O'Cass and Ngo, 2011). However, studies on the mediating role of market responsiveness in the context of MSMEs, particularly women-owned MSMEs in developing regions like East Kalimantan, are still very limited.

Furthermore, customer discovery, as an approach in lean startups and business innovation, is a key factor in value creation. One important strategy for improving MSME performance is through customer discovery, a systematic process of understanding who real customers are, what their needs are, and how the products/services offered can provide solutions. This concept was developed (Roy et al., 2025) in the customer development methodology and reinforced by (Matthew et al., 2025). Customer discovery helps businesses avoid false assumptions about the market and encourages relevant and valuable innovation.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Entrepreneurial Orientation

Study (Lumpkin and Dess, 1996a), in their entrepreneurial orientation, include proactiveness, innovativeness, and risk-taking. (Putro and Takahashi, 2024) showed that customer orientation and entrepreneurial orientation (EO) significantly influence the performance of MSMEs in both China and Korea. This finding can be directly linked to the concept of market orientation. Meanwhile, EO supports the ability of MSMEs to respond quickly and effectively to market dynamics, enabling companies not only to adapt to customer needs but also to create new, previously untapped opportunities (Ferdinand et al., 2023). The combination of EO and customer orientation results in a market-centric business strategy, where companies place customers as the primary focus while being adaptive to market changes, thereby increasing the competitiveness and sustainability of MSME performance. These findings confirm that effective market orientation not only relies on customer understanding but also requires entrepreneurial capabilities to translate market insights into tangible innovations and strategic actions, enabling MSMEs to compete more effectively in both domestic and international markets (Heng et al., 2020).

2.2. Customer-Centric Discovery

On the other hand, the majority of research on Customer Centric Discovery focuses on the context of digital startups in developed countries or the technology sector in large cities (Firican, 2023). Research specifically examining the relationship between customer discovery and MSME performance among women entrepreneurs in developing countries is still very limited. However, the customer discovery approach is highly relevant in the context of women-owned MSMEs, which tend to rely on direct business experience but lack valid market data (Ardyan and Sentosa, 2025).

Previous research also shows inconsistent results, a study (Jiang et al., 2020) stated that customer orientation can boost small business performance through rapid product adaptation. Research (Hendar et al., 2017) emphasized that customer centricity only has a significant impact when combined with data-driven decision-making and technology support. This situation highlights the need for empirical testing in local contexts that consider the characteristics of women MSMEs.

2.3. Market Responsiveness

Market responsiveness is the ability of a company or business actor to identify, understand, and respond to changes in market needs and preferences quickly and accurately (Lee et al., 2009). In the context of women-owned MSMEs, market responsiveness reflects the extent to which women entrepreneurs can absorb market information and translate it into adaptive business decisions, such as product innovation, pricing adjustments, promotional strategies, and customer relationship management (Laidi et al., 2024).

Women-owned MSMEs lack adequate mechanisms to monitor changes in consumer behavior. Their products tend to be uniform and do not adapt to dynamic market trends or preferences. Some entrepreneurs even rely on the same strategies for years, without any customer-driven innovation (Huang et al., 2022).

2.4. Digital Literacy

One of the key opportunities and challenges emerging in the digital economy era is the ability of MSMEs to effectively adopt digital technology (Caputo et al., 2021). Digital transformation is not just a trend, but a strategic necessity to increase the competitiveness of MSMEs amidst increasingly digital-oriented consumer behavior (Samsuden et al., 2024). Digitalization enables businesses to expand market access, improve operational efficiency, and develop innovative products and services based on customer data (Ononiwu et al., 2024). However, many women-owned MSMEs have not yet optimally utilized digitalization as part of their business strategy (Hussein et al., 2026).

2.5. Womenpreneurs Business Performance

According to several experts, several factors influence the performance of MSMEs run by women. (Byrne and Paco, 2025) identified factors influencing the performance of women-owned

MSMEs, including access to capital, business networks, and education and training. Meanwhile, (Ardyan and Sentosa, 2025) identified the following factors influencing the performance of women-owned MSMEs: Social and family roles, access to financing, and gender stereotypes. Furthermore, several factors influencing the performance of women-owned MSMEs, including culture and social norms, work-life balance, and limited access to resources (Hendrayati and Gaffar, 2016).

(Ruangchoengchum, 2017) and (Sin et al., 2005) identified several indicators that can be used to assess the performance of MSMEs, including those managed by women. These indicators focus on various aspects that include the ability or Increase in Sales Volume, Market Coverage Development, increase in Assets, Increased Workforce, and sales growth (Gil et al., 2026).

2.6. Development Hypothesis

2.6.1. Entrepreneurial orientation on customer-centric discovery

(Firican, 2023) showed that customer orientation and entrepreneurial orientation (EO) significantly influence the performance of MSMEs. Customer orientation is one of the main pillars of market orientation because it emphasizes a deep understanding of consumer needs, preferences, and behavior, which forms the basis for business decision-making and product development, enabling companies to respond quickly and effectively to market dynamics, enabling companies not only to adapt to customer needs but also to create new, previously untapped opportunities (Nuryakin, 2024). The combination of EO and customer orientation results in a market-centric business strategy, where companies place customers as the primary focus while being adaptive to market changes, thereby enhancing the competitiveness and sustainability of MSME performance. These findings confirm that effective market orientation relies not only on customer understanding but also requires entrepreneurial capabilities to translate market insights into tangible innovations and strategic actions (Szczepanek et al., 2025).

H_1: Entrepreneurial orientation supports customer-centric discovery.

2.6.2. Customer centric discovery on market responsiveness

Empirical research shows that customer-centric discovery has a positive and significant influence on market responsiveness. A study (Farida, 2016) confirmed that companies exhibiting high levels of customer-centric discovery tend to be quick and flexible in responding to market needs. This is because customer-centricity fosters an innovative culture and an active search for opportunities, which ultimately strengthens sensitivity to external changes. (Rochiyati et al., 2022) found that CCD dimensions such as proactivity and innovation are strongly correlated with an organization's ability to respond more effectively to market changes. Several studies, such as those (Garrett et al., 2009), show that the relationship between CCD and market responsiveness can vary depending on contextual factors such as resources, digitalization support, and market characteristics. This suggests that while CCD is important, market responsiveness is also influenced by the ability to implement strategies and adequate access to information.

Market responsiveness refers to an organization's ability to detect, understand, and respond quickly to changes in consumer needs, desires, and behavior, as well as other market dynamics (Olavarrieta and Friedmann, 2008). In the context of MSMEs, especially those managed by women, market responsiveness is a key factor in maintaining business continuity and competitiveness.

H_2: Customer centric discovery supports market responsiveness.

2.6.3. Customer-centric discovery on womenpreneur business performance

Customer-Centric Discovery is an early part of the lean startup approach that focuses on understanding market and customer needs before developing a product (Al Saed and Abu Saleh, 2017) emphasize the importance of early market validation for the success of small and medium-sized businesses. Research (Killa, 2017) shows that an effective Customer-Centric process can help MSMEs identify specific customer needs, accelerate product adaptation, and reduce failure costs. For women-owned MSMEs, this is especially important because limited resources can be utilized more strategically.

H_3: Customer-centric discovery supports womenpreneur business performance.

2.6.4. Market responsiveness on womenpreneur business performance

Market responsiveness refers to a business's ability to respond quickly and appropriately to market needs and changes. As a mediator, market responsiveness bridges the influence of entrepreneurial orientation and customer discovery on business performance. Research by (Kohli and Jaworski, 1990) confirms that market responsiveness plays a role in creating competitive advantage and driving relevant innovation. Research (Slater and Narver, 2000) also shows that responsive market orientation significantly mediates the relationship between innovation and business performance. In the context of women-owned MSMEs, market responsiveness mediates how entrepreneurial spirit and market knowledge (results from customer-centric discovery) are translated into relevant business practices and impact performance (O'Cass and Ngo, 2011) and (Wei et al., 2014).

H_4: Market responsiveness supports womenpreneur business performance.

2.6.5. Digital literacy moderates the effect of customer discovery on womenpreneur business performance

The relationship between literacy and the performance of women-owned MSMEs can be explained through several important dimensions that illustrate how digitalization directly impacts the performance of women-owned MSMEs (Gburov et al., 2026). Digital literacy provides women-owned MSMEs with access to technology-based business management systems that improve operational efficiency. Based on research (Maghsoudi et al., 2025). Another source discussing the influence of digital literacy on the performance of women-owned MSMEs (Ayu Kusumawardhany et al., 2025). Digitalization opens opportunities for women-owned MSMEs to reach global markets through e-commerce platforms and social media. This makes it easier for them to export products to various countries without requiring large physical infrastructure.

Research (Laidi et al., 2024) found that MSMEs are often hesitant to adopt new technologies due to limited resources, but adopting social customer relationship management can increase customer engagement and market expansion. Attitude significantly mediates the effects of performance expectations and business expectations on adoption intentions. However, according to research (Kim and Jin, 2024) Digitalization has a significant positive impact on the performance of women-owned MSMEs by expanding market access, increasing operational efficiency, supporting product innovation, and assisting data-driven decision-making.

H_5: Digital literacy moderates the effect of customer discovery, on womenpreneur performance.

2.6.6. The influence of entrepreneurial orientation mediated by customer centric discovery on the market responsiveness

Entrepreneurial orientation is a strategy that emphasizes innovation, risk-taking, and proactivity. Many studies have shown that this orientation positively impacts business performance, particularly MSMEs. (Lumpkin and Dess, 1996b) stated that entrepreneurial orientation helps small and medium-sized enterprises survive in a dynamic business environment. Research (Wiklund and Shepherd, 2005) demonstrated that entrepreneurial orientation improves business performance, especially in uncertain market conditions. In the context of women-owned MSMEs, this orientation is key to creating business empowerment because limited capital and access to information can be overcome through innovation and proactivity (Jiang et al., 2020).

Customer-Centric focuses on understanding market and customer needs before developing a product. (Heng et al., 2020) emphasizes the importance of early market validation for the success of small and medium-sized businesses. Research shows that an effective Customer-Centric Discovery process can help MSMEs identify specific customer needs, accelerate product adaptation, and reduce failure costs. For women-owned MSMEs, this is especially important because it allows for more strategic use of limited resources (Fang et al., 2016).

H_6: Entrepreneurial orientation, mediated by customer discovery, on market responsiveness.

2.6.7. The influence of entrepreneurial orientation, mediated by customer discovery, on the womenpreneur business performance

Entrepreneurial orientation (EO) is an organizational strategic stance that reflects the extent to which a company demonstrates innovation, risk-taking, and proactivity in responding to market opportunities (Covin and Lumpkin, 2011) and (Wiklund and Shepherd, 2003). Meanwhile, market responsiveness refers to an organization's ability to quickly and appropriately respond to changes in customer preferences, needs, and behavior (Ramadani, 2024).

A study by (Indriastuti, 2017) and (Indriastuti et al., 2021) also confirmed that market responsiveness is a crucial link between EO and performance, as it acts as a channel for translating entrepreneurial ideas into concrete actions that meet customer needs. In other words, market responsiveness enables innovative ideas from women MSMEs to not only remain at the conceptual stage but also be realized in the form of perceived value for customers. (Matthew et al., 2025) stated that business performance is the result of organizational goals achieved through effective strategies and techniques. (Peemanee, 2022) explained business performance as profit levels, sales growth, product quality, service quality, and customer retention rates.

H_7: Entrepreneurial orientation, mediated by customer discovery, on womenpreneur business performance.

2.6.8. The influence of customer centric discovery, mediated by market responsiveness, on womenpreneur business performance

Customer-centric discovery is an initial process in customer development that aims to deeply understand customer needs, problems, and behaviors before designing and offering solutions (Heng et al., 2020). This process is especially crucial for women-owned MSMEs, who typically operate with limited resources and rely more heavily on direct understanding of the local market.

Meanwhile, market responsiveness is an organization's ability to quickly and accurately respond to changes in customer demand, tastes, and needs (Morgan, 2012). Market responsiveness indicates the level of sensitivity of business actors in adapting their products, services, and strategies to the dynamics of the external environment. The influence of customer-centric discovery on business performance has been widely discussed in the innovation and entrepreneurship literature. According to (Matthew et al., 2025), the customer discovery process can help business actors ensure that the products they develop truly solve real customer problems, thus having greater potential for market success. However, this success does not automatically improve performance unless the results of the discovery process are truly responded to and implemented in real terms—this is where the role of market responsiveness as a mediator becomes important. Theoretically, this approach is supported by market-driven innovation theory, which emphasizes that in-depth customer understanding needs to be combined with strategic and tactical responses to market signals to generate superior performance (Wambui and Muathe, 2021).

Research (Abu-Rumman et al., 2021) shows that small and medium-sized enterprises that actively engage in market discovery, while also continuously responding to market feedback, have a higher chance of achieving product-market fit and sustainable performance. Another study (Ngugi et al., 2010) found that engaging in value co-creation with customers (which is part of market discovery) can increase market responsiveness, ultimately positively impacting MSME performance. This strengthens market responsiveness's position as a mediator that enables the results of the customer discovery process to truly impact performance (Warsame et al., 2025).

H_8: Customer centric discovery, mediated by market responsiveness, on womenpreneur business performance.

3. METHODOLOGY

This study employed a survey technique by distributing questionnaires. The data obtained were then processed statistically using SEM PLS

software. The data analysis method used PLS (partial least squares). The research sample was drawn using a table (Krejcie & Morgan, 1970). From a population of 44,821 female MSMEs in the culinary sector, according to the Krejcie and Morgan table, the following general rule applies: For a population of 40,000-100,000, the required sample size is 384. For a population between 100,000 and 150,000, the required sample size remains approximately 384-386. Therefore, for a population of 44,821, the recommended sample size based on the Krejcie and Morgan table is 384 respondents. Therefore, the sample size for this study was 384 female MSMEs.

The sampling technique in this study used purposive sampling. The sample criteria in this study are as follows: Respondents are business actors for more than 3 years, Respondents are micro/small-scale business actors, and Respondents use online marketing media. The performance of women's MSMEs refers to the results or achievements of an activity, individual, or organization within a certain period, which reflects how effectively and efficiently the desired goals have been achieved. (Rochiyati et al., 2022) identified several indicators that can be used to assess the performance of MSMEs, including those managed by women. These indicators focus on various aspects that include the ability or increase in sales volume, market coverage development, increase in Assets, Increased Workforce, and sales growth. Entrepreneurial Orientation refers to how entrepreneurial attitudes and behaviors are translated into measurable actions in the context of a business or organization, and the indicators used according to (Wiklund and Shepherd, 2005) and (Avlonitis and Salavou, 2007): Innovativeness, proactiveness, risk-taking, competitive aggressiveness, autonomy. Customer Centric Discovery is a strategic approach that combines a focus on markets and customers with a market discovery process to identify unmet needs, preferences, and opportunities before developing a product or service. (Heng et al., 2020) as the ability to understand trends, understand customer needs and preferences, and find gaps or strategic opportunities in the market. Market responsiveness is operationally defined as the ability of MSMEs to quickly recognize market changes and respond to them through adjustments to relevant strategies, products, or services. According to (Garrett et al., 2009), These include speed in responding to customer needs, responsiveness to market changes, operational flexibility, product service adjustments, and utilization of market information. Digital Literacy generally refers to the process of converting information, data, or activities from analog (physical) formats into digital (electronic) formats that can be processed, stored, and accessed using digital technology. These include access to digital information, understanding digital information, evaluating digital information, using digital applications, and creating digital content.

4. DATA ANALYSIS RESULTS

4.1. Descriptive Statistical Analysis

Each answer to the alternative questions will be scored using a Likert scale. Strongly agree (SS) is given a score of 5, Agree (S) is given a score of 4, somewhat agree (CS) is given a score of 3, Disagree (TS) is given a score of 2, and strongly disagree (STS) is given a score of 1. The research will be conducted on women-owned MSMEs (micro, small, and medium enterprises) in East Kalimantan, specifically in Samarinda, Balikpapan, Tenggarong, and Bontang. The research will be conducted over one semester. Several questions for each variable will be administered online via Google Form to respondents, namely female MSME owners in East Kalimantan, and then analyzed statistically.

Based on the results of the questionnaire involving 384 respondents and using a purposive sampling technique (Memon et al., 2020). The characteristics of respondents by age group show a predominance of adults. The largest group is those aged 40 and over, with 189 respondents, or 49%, almost half of the total. This indicates that MSMEs across various districts/cities are mostly run by mature, experienced, stable entrepreneurs with stronger social networks. The 17-25 age group accounts for only 5%. The 26-35 age group accounts for 19%, the 36-40 age group 27%. MSMEs with fewer than 2 employees are the most dominant across all regencies/cities. In West Kutai Regency, 87% of MSMEs have fewer than 2 employees. Similar conditions are also seen in Samarinda (79%), Tenggarong (79%), Balikpapan (71%), and Bontang City (75%). This indicates that most MSMEs still operate on a micro scale with a limited workforce. The majority of MSMEs in East Kalimantan still have relatively low turnover. Of the 383 MSMEs surveyed, 239 units (62%) recorded a turnover of less than IDR 10 million per month. Furthermore, 97 MSMEs (25%) had a turnover between IDR 10-30 million, 29 MSMEs (8%) were in the range of IDR 30-75 million, and only 18 MSMEs (5%) recorded a turnover of more than IDR 75 million per month.

There are two stages in testing a research model: The Outer Model and the Inner Model. The Outer Model focuses on the validity and reliability of the indicators used to measure latent variables, using Convergent Validity, discriminant validity, and construct reliability tests. The Inner Model focuses on the relationships between latent variables and testing the strength and significance of those relationships, using tests such as R^2, path coefficients, and path significance.

4.2. Full Model 1

The output of the outer loading estimation model is measured by the correlation between the indicator (instrument) score and its construct (variable). Indicators are considered valid if their correlation value is above 0.70, or 0.6 is considered sufficiently valid. Indicators that do not meet this requirement must be discarded. The results of convergent validity, Cronbach's alpha, and average validity for the first stage of the study are presented in Table 1.

A high Cronbach's Alpha value indicates that the constructs/variables are measured well and consistently, ensuring measurement validity in PLS analysis. The results of construct reliability testing using Cronbach's Alpha values indicate that all research variables are reliable, as the values obtained are greater than the minimum threshold of 0.70. From the above results, it can be concluded that all variables in this study have good reliability and are suitable for use in the research model analysis.

Composite reliability is used to ensure the internal consistency of the indicators that make up the latent variables. In SmartPLS version 4.1.1.4, Composite Reliability is the primary tool for measuring reliability, and a CR value ≥0.7 is considered to meet

Table 1: Value of loading items, composite reliability, and AVE

Indicators	Loading factors	Cronbach alpha	CR	AVE
Entrepreneur orientation:				
1. Innovativeness	0.596	0.710	0.818	0.533
2. Proactiveness	0.783			
3. Risk-taking	0.634			
4. Aggressiveness,	0.810			
5. Autonomy.	0.608			
Customer centric discovery				
1. Tren adaptability	0.830	0.838	0.892	0.674
2. Understanding customer needs and preferences	0.822			
3. Ability find opportunities and gaps	0.778			
4. Seize market opportunities	0.853			
Market responsiveness:				
1. Speed of responding to customer needs	0.820	0.901	0.928	0.669
2. Response to market changes,	0.873			
3. Operational flexibility	0.813			
4. Product service adjustments,	0.802			
5. Utilization of market information	0.758			
6. Responding to strategic adjustments, relevant service products	0.837			
Digital literation:				
1. Access to digital information	0.872	0.917	0.938	0.754
2. Understanding digital information	0.902			
3. Evaluating digital information	0.722			
4. Using digital applications	0.904			
5. Creating digital content	0.928			
Womenpreneur performance:				
1. Increase in sales volume	0.816	0.838	0.882	0.557
2. Market coverage development	0.626			
3. Increase in assets	0.831			
4. Increased workforce	0.798			
5. Sales growth	0.651			
6. Product increased	0.732			

Source: Processed primary data, 2026

Table 2: R-square (R^2) test results

Var. Dependen	R-square	R-square adjusted
Customer centric discovery	0.463	0.461
Women SME performance	0.287	0.279
Market responsive	0.606	0.605

Source: Processed primary data, 2026

research standards. Based on the table above, all variables in the model have Composite Reliability values above the minimum threshold of 0.70, thus being considered reliable. This value indicates that the indicators in each construct/variable have excellent consistency in measuring the variables.

The output of the average variance extracted (AVE) estimation results can be seen in Table 3. A variable is said to be valid if it has an average variance extracted (AVE) value >0.5. Based on the results of the convergent validity test using the average variance extracted (AVE) value in Table 3, all variables have an AVE value above the minimum threshold of 0.50, so all are declared valid. The results of the convergent validity test through the average variance extracted (AVE) value show that all variables in this study have met the valid criteria.

Table 2 R-Square in PLS-SEM measures how well the latent independent variables in the model explain the variability of the latent dependent variable. The R^2 value indicates the overall\ predictive power of the model. R^2 values range from 0 to 1, with higher values indicating a better model at explaining variance. The R-square values in this analysis are as follows.

R square (R^2) test results. First, on the dependent variable customer centric discovery, the R square (R^2) value is 0.463, and the adjusted R Square (R^2) value is 0.461; the model is able to explain approximately 46.3% of the variation in the medium/moderate category. Second, for the dependent variable Women's MSME performance, the R square (R^2) value is 0.287, and the adjusted R square (R^2) is 0.279 weak category. Third, on the dependent variable market responsive, the R square (R^2) value is 0.606, and the adjusted R square (R^2) is 0.605. This indicates that the model can explain approximately 60.6% of the variation in Market responsiveness.

4.3. Full Model 2

Effect size (F^2) is used to evaluate the specific impact of an independent variable on predicting the dependent variable. This measurement is performed by observing the change in the R^2 value after a particular independent variable is removed from the model. The f^2 value is interpreted as follows: $f^2 < 0.02$ (very small), $0.02 \leq f^2 < 0.15$ (small effect), $0.15 \leq f^2 < 0.35$ (moderate effect), $f^2 \geq 0.35$ (large effect). By calculating f^2, researchers can identify which independent variables have the greatest influence on the dependent variable in the model.

4.4. Significance (Hypothesis Testing)

The significance test for relationships in PLS-SEM is conducted to determine whether the relationship between latent variables in the model can be considered statistically significant. This process uses a bootstrapping technique, where data is resampled to calculate the path coefficient and its standard error. The results are in the form of a t-statistic or P-value. A relationship is considered significant if the P-value is less than a predetermined significance level (in this study, a significance level of 0.05 was used) bootstrapping results for direct effects.

The bootstrapping results for the indirect effect can be seen in Table 4 as follows:

The path coefficient is 0.529 with a t-statistic of 18.744 and a P = 0.000. This indicates that entrepreneurial orientation has a significant influence on market responsiveness through customer-centric discovery. Entrepreneurial Orientation → Customer-centric Discovery → Womenpreneur performance, the path coefficient value (Original Sample, O) is 0.356 with a T-statistic value of 5.833 and a P = 0.000. This indicates that entrepreneurial orientation has a significant effect on the performance of women's MSMEs through Customer Centric Discovery. Customer Centric Discovery → Market Responsiveness → Womenpreneur Performance, the path coefficient is −0.065, the T-statistic is 0.815, and the P = 0.207. This indicates that the indirect effect of Customer Centric Discovery on Womenpreneur performance through Market Responsiveness is not significant.

Entrepreneurial orientation (EO) is a strategic organizational characteristic that reflects the extent to which a company demonstrates innovation, proactivity, and risk-taking in pursuing market opportunities (Wiklund and Shepherd, 2003) and (Wiklund and Shepherd, 2005). EO is considered a crucial foundation for fostering a company's responsiveness to market changes.

5. RESULTS AND DISCUSSION

The results of the hypothesis test indicate a significant relationship between customer-centric discovery orientation, market responsiveness, and womenpreneur performance. Market responsiveness is not significant for MSME performance. The indirect relationship between digital literacy and customer-centric discovery moderation on MSME performance is significant. Entrepreneurial orientation toward customer-centricity and market responsiveness, as well as on MSME performance, is significant. Meanwhile, Customer-Centric Discovery -> Market Responsiveness -> Performance of Women-owned MSMEs is not significant.

H_1. The results of the first hypothesis show that the relationship between entrepreneurial orientation and customer-centric discovery is positive and significant. (Lumpkin and Dess, 1996) stated that entrepreneurial orientation helps small and medium-sized enterprises survive in a dynamic business environment, companies must focus on consumers, on Tren adaptability, understanding customer needs and preferences, ability find opportunities and gaps, seize market opportunities.

H_2. The results of the relationship between customer centricity and market responsiveness are significant, which is in line with research. A study (Farida, 2016) confirmed that companies exhibiting high levels of customer-centric discovery tend to be quick and flexible in responding to market needs. This is because customer-centricity fosters an innovative culture and an active search for opportunities, which ultimately strengthens sensitivity to external changes.

H_3: The third hypothesis shows significant results between customer-centric discovery and womenpreneur performance, which is supported by research Research (Killa, 2017) shows that an effective Customer-Centric Discovery process can help MSMEs identify specific customer needs, accelerate product adaptation, and reduce failure costs. For women-owned MSMEs, this is especially important because limited resources can be utilized more strategically.

H_4. The fourth hypothesis shows no significant results between market responsiveness and womenpreneur performance. This could be because a rapid market responsiveness is not necessarily accompanied by an effective implementation strategy, as women-owned MSMEs rely more on other factors, such as digital literacy and customer orientation, to

Table 3: Path coefficient results bootstrapping direct effects

Variables	Original sample (O)	T statistics	P-values	Description
Entrepreneurial orientation→customer centric discovery	0.680	25.724	0.000	Significant
Customer centric discovery→market responsiveness	0.778	35.536	0.000	Significant
Customer centric discovery→womenpreneur performance	0.524	6.468	0.000	Significant
Market responsiveness→womenpreneur performance	−0.084	0.82	0.206	Not significant
Digital literation moderated customer centric discovery to womenpreneur performance	0.186	3.301	0.000	Significant

Sources: SmartPLS versi 4.1.1.4

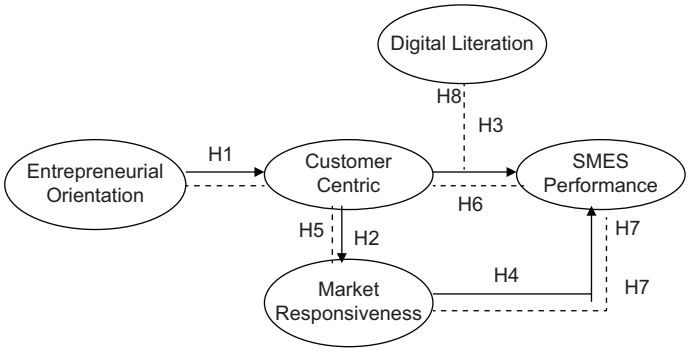
Table 4: Path coefficient bootstrapping results for the indirect effect

Variables	Original sample (O)	T statistics (|O/STDEV|)	P-values	Description
Entrepreneurial orientation -> customer centric discovery -> market responsiveness	0.529	18.744	0.000	Significant
Entrepreneurial orientation -> customer centric discovery -> women's performance	0.356	5.833	0.000	Significant
Customer centric discovery -> market responsiveness -> women's performance	−0.065	0.815	0.207	Not significant

Source: SmartPLS version 4.1.1.4

improve performance. (Pratono et al., 2019) Research found that market responsiveness is not always significantly related to performance due to resource limitations. (Ichwan and Nursyamsiah, 2019) found that market responsiveness will only have a positive impact on performance if supported by innovation capabilities; without innovation, the effect may be insignificant. (Aulia et al., 2025) - A study of MSMEs in Central Java found that market responsiveness is insignificant to performance because many MSMEs focus more on survival than long-term strategies.

Figure 1: Concept framework



H_5 Digital Literacy as a moderating variable. Digital literacy acts as an external force that can strengthen or weaken the influence of independent variables on mediating and dependent variables. In this context, digitalization moderates the relationship between: Entrepreneurial orientation → market responsiveness, Customer-Centric Discovery → market responsiveness, and Market responsiveness → Womenpreneur performance. Research (Gupta et al., 2018) and (Caputo et al., 2021) confirms that digitalization accelerates decision-making processes, customer understanding, and agile product development. In women-owned MSMEs, the use of digital

Figure 2: Full model before bootstrapping

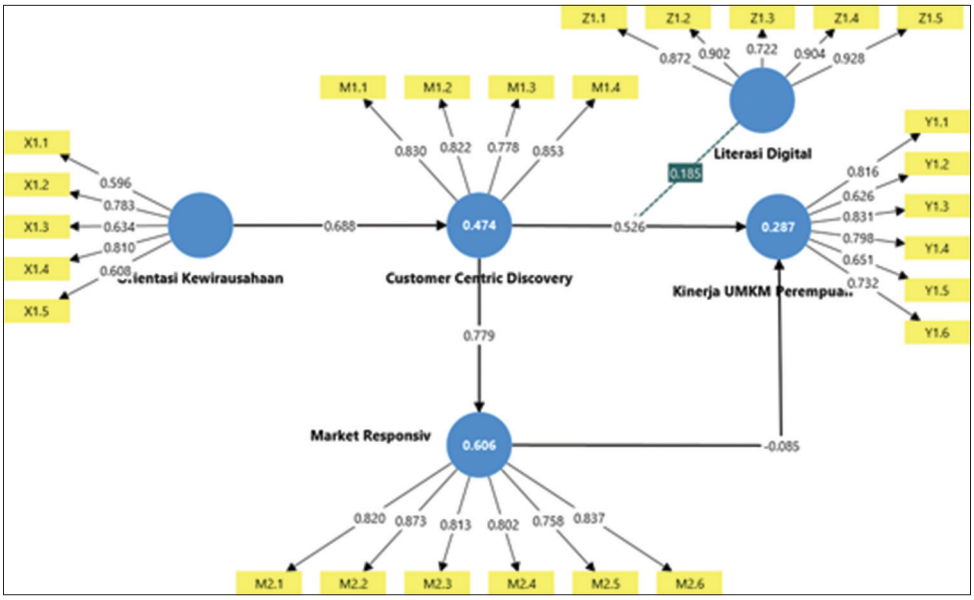
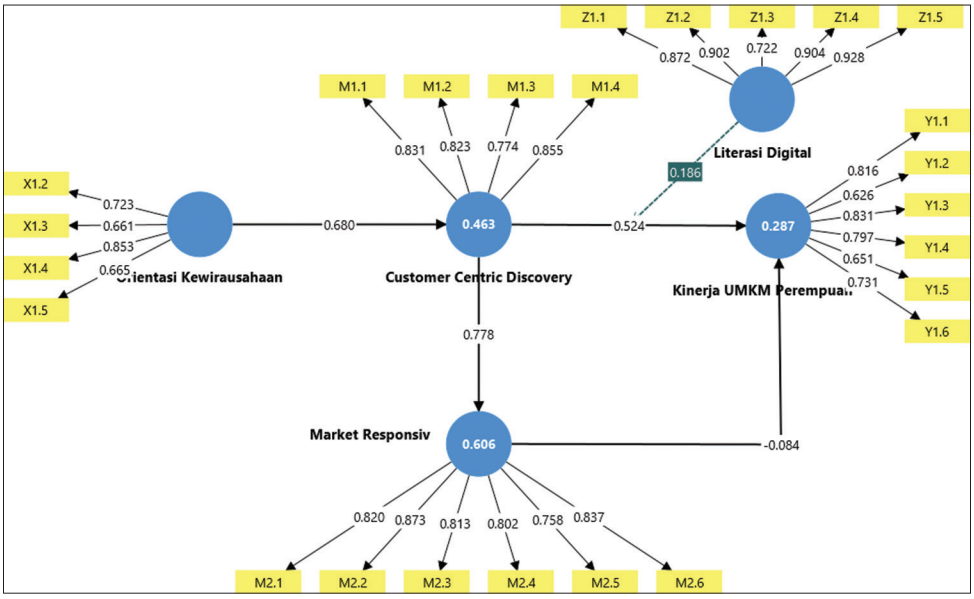


Figure 3: Full model after bootstrapping



platforms can strengthen the effect of customer discovery on market responsiveness and business outcomes (Dewi and Lusikooy, 2024) and (Ahmad et al., 2022).

H_6 The sixth hypothesis shows significant results between entrepreneurial orientation, customer-centric discovery, and market responsiveness. (Indriastuti et al., 2021) also confirmed that market responsiveness is a crucial link between EO and performance, as it acts as a channel for translating entrepreneurial ideas into concrete actions that meet customer needs. In other words, market responsiveness enables innovative ideas from women MSMEs to not only remain at the conceptual stage but also be realized in the form of perceived value for customers.

H_7 The seventh hypothesis shows significant results between entrepreneurial orientation, customer-centric discovery, and womenpreneurs. Customer orientation and entrepreneurial orientation (EO) significantly influence the performance of MSMEs. Customer orientation is one of the main pillars of market orientation because it emphasizes a deep understanding of consumer needs, preferences, and behavior, which forms the basis for business decision-making and product development, to respond to market dynamics quickly and effectively, thus enabling companies not only to adapt to customer needs but also to create new, previously untapped opportunities. The combination of EO and customer orientation results in a market-centric business strategy, where companies place customers at the center while remaining adaptive to market changes, thereby enhancing the competitiveness and sustainability of MSME performance. These findings confirm that effective market orientation not only relies on customer understanding but also requires entrepreneurial capabilities to translate market insights into tangible innovations and strategic actions.

H_8 The eighth hypothesis shows that the relationship between Customer Centric Discovery -> Market Responsiveness -> Womenpreneur performance is not significant. The customer discovery process can help businesses ensure that the products they develop truly solve real customer problems, thus increasing their potential for market success. However, this success doesn't automatically improve performance unless the results of the discovery process are truly responded to and implemented—this is where the role of market responsiveness as a mediator becomes crucial (Ngugi et al., 2010).

These findings indicate that the success of women's MSMEs in East Kalimantan is more influenced by entrepreneurial orientation and customer-centric discovery capabilities combined with the use of digital technology. This study provides a theoretical contribution by strengthening the role of digital literacy as a reinforcing factor in the relationship model between customer-centric discovery and performance, as well as a practical contribution in the form of policy recommendations for women's MSMEs.

6. CONCLUSION

The originality of this research contributes to the development of a gender-based and local context-based digital entrepreneurship model (place-based entrepreneurship research). This research's contribution, customer-centric discovery, bridges the research gap between entrepreneurial orientation and the performance of women's MSMEs, while moderating with digital literacy. The focus on customer discovery also strengthens the relationship between entrepreneurial orientation and market responsiveness, enhancing the ability of women's MSMEs to respond effectively and adaptively to market changes.

Effective implementation of a customer discovery-centric focus can improve understanding of customer needs, strengthen relationships with consumers, and enhance the ability of women-owned MSMEs to respond quickly and appropriately to market changes. High digital literacy will make the customer-centric discovery process more effective and positively impact the performance of women-owned MSMEs.

The study's limitations include the limited coverage of respondents within East Kalimantan Province, making the results infeasible for generalization to other regions or groups. This study is cross-sectional in nature, thus not capturing temporal dynamics. These limitations serve as the basis for future research.

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