The Role of Women Entrepreneurship and Eco-Friendly Entrepreneurship on Market Orientation and Marketing Performance of Female Entrepreneurs

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ABSTRACT

Background: In contemporary business landscapes, women entrepreneurs have emerged as a significant driving force, contributing to economic growth and innovation. Simultaneously, eco-friendly entrepreneurship has gained prominence, reflecting a growing global awareness of environmental sustainability in business practices. This study aims to examine the synergy between women's entrepreneurship and eco-friendly initiatives in shaping market orientation and marketing performance among female entrepreneurs. Method: The empirical analysis was conducted using a sample of 131 female entrepreneurs. This study used online survey for the data collection. After passing reliability and validity tests, the data were analyzed with partial least squares structural equation modeling. Results: The research results indicate that women entrepreneurship has a significant positive direct influence on market orientation. Eco-friendly also has a significant direct positive influence on market orientation. Finally, market orientation also has a significant positive influence on market performance. Conclusion: This study illuminates the intertwined dynamics of women's entrepreneurship and eco-friendly practices in influencing market orientation and marketing performance among female entrepreneurs. The findings underscore the potential for sustainable, gender-inclusive business strategies to not only drive business success but also contribute to environmental stewardship and societal progress. As women continue to play a pivotal role in the entrepreneurial landscape, fostering eco-friendly entrepreneurship offers a promising avenue for holistic economic and environmental advancement.

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1. INTRODUCTION

Women have an increasingly important role in the world of entrepreneurship and business. It is evident that more and more women are involved in various types of ventures and businesses across different sectors. They have demonstrated remarkable potential for running enterprises and actively contributing to the development of the global economy. According to [1], female entrepreneurs have significant potential in supporting economic development.

One of the factors influencing the performance of female entrepreneurs is entrepreneurship, which focuses on specific aspects such as women's entrepreneurship and eco-friendly entrepreneurship. Women's entrepreneurship refers to female entrepreneurs who take a leading role in developing their own businesses, with a focus on their unique gender roles and the challenges they face. On the other hand, eco-friendly entrepreneurship is a business approach that focuses on environmental awareness and environmentally friendly business practices.

Market orientation and marketing performance are two crucial factors in business success. Market orientation refers to the extent to which a business focuses on the needs and desires of its target market. Marketing performance encompasses how successfully a business markets its products or services to customers, achieves sales targets, and builds a strong brand. Therefore, it is important to understand how women's entrepreneurship and eco-friendly entrepreneurship impact the market orientation and marketing performance of female entrepreneurs.

Some of the findings from previous research still yield differing information or there are research gaps. According to [2], women's participation in entrepreneurship has increased in parallel with society's growing awareness of the crucial role women play not only within their families but also in a broader social context, thereby highlighting their significant potential in the business world. However, in contrast to the findings of [3] and [4], emale entrepreneurs exhibit limited enthusiasm for business processes that offer assistance in creating a sustainable economy for small and medium-sized enterprises. Furthermore, this research connects women entrepreneurship and eco-friendly entrepreneurship, which has not been done by [4]. According to [5], entrepreneurship has transformed with the advent of eco-friendly women entrepreneurship, which has been shown to play a significant role in economic self-sufficiency. Previous research was conducted in the province of Jambi, Indonesia [4]. This research was carried out in the province of South Sulawesi, Indonesia. Each region presents unique social challenges and cultural aspects that affect women in business in diverse ways [6]. Therefore, to provide a deeper understanding in this research field, this study aims to examine the relationship between women entrepreneurship, eco-friendly entrepreneurship, market orientation, and marketing performance.

2. RESEARCH METHOD

This research adopts a quantitative research method, where the population includes all objects or subjects in a specific area that meet the criteria established in relation to the research problem. Then, conclusions are drawn from the entire group of individuals included within the scope of the research [7]. The population in this study were all female entrepreneurs in North Luwu Regency, Indonesia. Given the uncertainty surrounding the complete sampling framework in this research, as well as the difficulty in ascertaining the total number of respondents, the application of probability sampling methods to obtain a random and representative sample is not feasible. Therefore, non-probability sampling techniques were employed to gather data in this study. [8], suggest the use of non-probability samples when the number of respondents is extensive and not counted. The sample size is determined based on the minimum sample size, which is ten times the number of measurement items specified in the research [9]. This study has 12 measurement indicators, so the minimum sample required is 10 x 12 = 120. Thus, the minimum sample size needed for this study is 120 samples. The total number of questionnaires returned in this study is 131 samples, which exceeds the minimum sample size requirement.

Quantitative research has a core component that can impact research results, namely measurement items and scales. This study adopts measurement items from previous empirical studies (Table 1). In data collection, this research uses online questionnaires distributed to respondents through social media using the snowball sampling technique. The twelve items related to women entrepreneurship, eco-friendly entrepreneurship, market orientation and market performance use a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 1. Measurement Items

Construct	Loadings
Women Entrepreneurship (WE). Adapted from [10] [4]; alpha = 0.896; CR = 0.901; AVE = 0.751.	
Client and Branding (WE1)	0.865
Organizational Values and Culture (WE2)	0.863
Network Behavior (WE3)	0.871
Eco-Friendly Entrepreneurship (EFE). Adapted from [11] [4]; alpha = 0.864; CR = 0.884; AVE = 0.718.	
Identifying (EFE1)	0.823
Evaluating (EFE2)	0.843
Seizing opportunities (EFE3)	0.875
Market Orientation (MO). Adapted from [4] [12]; alpha = 0.862; CR = 0.871; AVE = 0.692.	

Construct	Loadings
Customer (MO1)	0.820
Competitor (MO2)	0.839
Market (MO3)	0.836
Market Performance (MP). Adapted from [13] [4]; alpha = 0.814; CR = 0.855; AVE = 0.664.	
Innovation (MP1)	0.757
Orientation (MP2)	0.889
Performance (MP3)	0.793

3. RESULT AND DISCUSSIONS

3.1 Responden Characteristics

Finally, in terms of business turnover, < 500,000 thousand (66.41%) is the most dominant, namely 87 female business actors. Followed by a total business turnover ranging from 1,000,000 million to 5,000,000 million (24.43%), or as many as 32 female business actors. Furthermore, the turnover amount is 6,000,000 million to 10,000,000 million and > 11,000,000 million, the same amount (4.58%) or as many as 6 female business actors.

Table 2. Description of respondents

Variable	Cases (%)	Variable	Cases (%)
Type of a business		**Education**	
Culinary	54 (41.22%)	Elementary School	3 (2.29%)
Manufacture (clothing)	21 (16.03%)	Junior High School	15 (11.45%)
Services	37 (28.24%)	Senior High School	76 (58.02%)
Basic trading	19 (14.50%)	Bachelor of Science	37 (28.24%)
Business Turnover			
< 500,000 thousand	87 (66.41%)		
1,000,000 – 5,000,000 million	32 (24.43%)		
6,000,000 – 10,000,000 million	6 (4.58%)		
> 11,000,000 thousand	6 (4.58%)		

3.2 Outer Model

The criteria for assessing the structural model (outer model) using SEM-PLS are as follows: (i) convergent validity, which can be observed from factor loading values and average variance extracted (AVE); (ii) discriminant validity, which can be observed from the square root of AVE and correlations among latent constructs; and (iii) reliability testing, which can be assessed through composite reliability and Cronbach's alpha values.

3.2.1 Assessing the Outer Model with Convergent Validity and Discriminant Validity

Convergent validity is related to the principle that measures (manifest variables) of a construct should have high correlations. Convergent validity is tested by examining the factor loading values and comparing them to the rule of thumb (> 0.60). Additionally, the average variance extracted (AVE) values are considered, and they should surpass the rule of thumb (> 0.50). To test discriminant validity, one looks at the square root of AVE and compares it to the correlations among latent constructs, following the rule of thumb that the square root of AVE should be greater than the correlations among latent constructs [14]. Based on the results of the convergent validity test (Table 1), the factor loading values for each construct are as follows: women entrepreneurship, consisting of two measurement indicators with values of (WE1 = 0.865; WE2 = 0.863 and WE3 = 0.871); eco-friendly entrepreneurship (EFE1 = 0.823; EFE2 = 0.843 and EFE3 = 0.875); market orientation (MO1 = 0.820; MO2 = 0.839; and MO3 = 0.836); and market prformance construct (MP1 = 0.757; MP2 = 0.889; and MP3 = 0.793), all of which have values greater than the rule of thumb (> 0.60). The average variance extracted (AVE) values for each construct, women entrepreneurship = 0.751; eco-friendly = 0.718; market orientation = 0.692; and market performance = 0.664, are also greater than the rule of thumb (> 0.50).

We employed two criteria to evaluate discriminant validity. First, we applied the [15] criterion, where the square root of the AVE (average variance extracted) for a variable should be higher than its correlation with other variables. Second, we assessed the heterotrait-monotrait ratio (HTMT) of correlations. According to [16], HTMT is more sensitive to the lack of discriminant validity compared to other criteria. To demonstrate discriminant validity, the HTMT between two constructs should be less than 0.90. Both of these criteria support discriminant validity for all our variables (Table 3).

Table 3. Reliability, Convergent and Discriminant Validity

Constructs	1	2	3	4
Women entrepreneurship (1)	**0.867**	0.112	0.216	0.344
Eco-friendly entrepreneurship (2)	0.224	**0.847**	0.126	0.516
Market orientation (3)	0.152	0.056	**0.832**	0.136
Market performance (4)	0.082	0.284	0.018	**0.815**

Note: The values on the diagonal in bold are the square root of the Average Variance Extracted (AVE) of each factor. The values below the diagonal are correlations between the factors, and the values above the diagonal are the HTMT ratios

1 Heterotrait-Monotrait; the criteria confidence interval does not include 1; HTMT90 – [16]

3.2.2   Assessing the Outer Model with Reliability

Furthermore, the outer model is evaluated through reliability testing with the aim of demonstrating the accuracy, consistency, and precision of the instruments in measuring constructs. Reliability testing is conducted by examining the values of composite reliability (Table 1) and then comparing them to the rule of thumb (> 0.70) [14]. The results of the reliability testing for the composite reliability values of each construct are as follows: women entrepreneurship = 0.901; eco-friendly = 0.884; market orientation = 0.871; and market performance = 0.855. These values are found to be greater than the rule of thumb (> 0.70), indicating the ability of the measures to produce reliable results.

3.3   Structural Model (Inner Model)

The criteria for evaluating the structural model (inner model) using SEM-PLS include (i) R-square for dependent constructs and (ii) assessing significance values through the bootstrapping procedure (t-value 1.96, significance level = 5%). The results of the evaluation of the structural model (inner model) through the bootstrapping procedure for testing the hypotheses proposed in this study are presented in Table 4.

3.3.1   Evaluation of R Square and Q2 Values

The structural or inner model is evaluated by examining the percentage of variance explained, specifically by looking at the R Square and Q2 values for the latent dependent constructs. According to [14], the rule of thumb values for R square are categorized as follows: 0.75 is considered strong, 0.50 is considered moderate, and 0.25 is considered weak. As for the rule of thumb values for Q2, a value greater than 0 indicates that the model has predictive relevance, while a value less than 0 suggests that the model lacks predictive relevance. From the analysis results (Table 4), the R square value for the market orientation construct is 0.351, indicating that 35.1% of the variability in market orientation can be explained by the variables women entrepreneurship and eco-friendly entrepreneurship in the model, placing it in the weak model category. Furthermore, the R square value for the market performance construct is 0.760, meaning that 76% of the variability in personal market performance can be explained by the market orientation variable in the model, also falling into the strong model category. The Q2 values for the market orientation construct (0.245 > 0) and the personal market performance construct (0.498 > 0) indicate that the model possesses predictive relevance.

3.3.2   Evaluation of Significance Values (t-value 1.96, and significance level = 5%)

The evaluation of significance values involves observing the path coefficient values obtained from partial least squares (PLS) testing with bootstrapping calculations (Table 4). From the path coefficient results, it can be determined that for (H1), women entrepreneurship has a significant positive influence on eco-friendly entrepreneurship, with a significance value of 0.032 < the 5% alpha level, as also indicated by a T statistic value of 2.024 > 1.96. For (H2), women entrepreneurship has a significant and direct positive influence on marketing orientation, with significance values and T statistic values for each direct influence being 0.001 < the 5% alpha level and 4.115 > 1.96, respectively. For (H3), eco-friendly entrepreneurship has an insignificant influence on marketing orientation, with a significance value of 0.725 > 5% alpha level; this is also indicated by a statistical T value of 0.351 < 1.96. Furthermore, for (H4), marketing orientation has a significant and direct positive influence on marketing performance, with significance values and T statistic values for each direct influence being 0.001 < the 5% alpha level and 28.401 > 1.96, respectively.

Table 4. Hypothesis testing

Hypotheses	Relationships	Path coefficients	t-Statistic	R2	Q2	p-Values	Decision
Direct effect							
H1	WE – EFE	0.388	2.024			0.032	Supported
H2	WE – MO	0.644	4.115			0.001	Supported

Hypotheses	Relationships	Path coefficients	t-Statistic	R2	Q2	p-Values	Decision
H3	EFE – MO	0.051	0.351			0.725	Not Supported
H4	MO – MP	0.872	28.401			0.001	Supported
MO				0.471	0.245		
MP				0.760	0.498		

Through a comprehensive survey and analysis of data (Table 4) collected from various samples of women entrepreneurs, it is known that women's entrepreneurship has a significant impact on eco-friendly entrepreneurship. These findings imply that entrepreneurial women have great potential to have a positive impact on eco-friendly entrepreneurship because they often have high environmental awareness, innovative perspectives, strong social connections, and the ability to inspire social change. Women can also promote sustainable development in business, create a work-life balance that supports sustainable business practices, and serve as role models who encourage others, including women, to get involved in businesses that care about the environment. This study is consistent with previous research findings [5].

The next findings can prove that women's entrepreneurship plays a crucial role in supporting market orientation. Women entrepreneurs often have a deep understanding of the market and consumers, enabling them to identify business opportunities that align with consumer needs and preferences. This ability can lead to the development of products and services that are more aligned with the market, ultimately enhancing overall business competitiveness and growth. The result of this finding is able to support the previous results [4]. However, from the research findings, it was found that eco-friendly entrepreneurship does not significantly influence market orientation. This finding indicates that, in the context of female entrepreneurship, market orientation is not significantly affected by sustainability factors or environmental awareness. This could be due to various factors, including market dynamics, available resources, or the primary focus of female entrepreneurs, which may be more centered on other business aspects. These research findings do not support the previous research findings [4]. Finally, this research is able to demonstrate that market orientation has a significant impact on market performance. This finding indicates that the ability to understand the market and effectively respond to consumer needs has a positive influence on business performance. This can imply that female entrepreneurs with a strong market orientation tend to be more successful in understanding market needs, adapting their products and services, and achieving better market performance. In this context, it is important to develop and maintain a strong market orientation through marketing strategies, market research, and a deep understanding of consumers, as this can be a key factor in the success of female entrepreneurs' businesses. This study is consistent with previous research findings [4]

4. CONCLUSION AND RECOMMENDATION

This study illuminates the intertwined dynamisc of women's entrepreneurship and eco-friendly practices in influencing market orientation and marketing perfomance among female entrepreneurs. The findings underscore the potential for sustainable, gender-inclusive business strategies to not only drive business success but also contribute to environmental stewardship and societal progress. As women continue to play a pivotal role in the entreprenuerial landscape, fostering eco-friendly entrepreneurship offers a promising avenue for holistic economic and environmental advancement.

There are several weaknesses in this study. The empirical data gathered for our study originated from a singular country, thus preventing the extrapolation of our findings to diverse international contexts. Therefore, future empirical investigations recommend expanding this research to cover other regions in Indonesia, especially on the islands of Java or Kalimantan, Indonesia, as well as developing countries in Southeast Asia, such as Thailand. The R square and Q2 metrics still fall within the low range, indicating the potential for exploring additional influential factors, including those related to customer orientation aspects. Apart from that, the influence of eco-friendly entrepreneurship on market orientation needs to be re-identified in further research.

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