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The Influence of Digital Economic Literacy on Digital Marketing Competence for Women's Communities in Rural Areas

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Abstract

Background - The digital divide persists in rural Indonesia, where many women entrepreneurs remain largely excluded from digital economic activities. This gap is particularly urgent because it restricts women-led MSMEs from competing effectively in an increasingly digital marketplace.
Research Urgency - Addressing this gap is urgently needed as low digital economic literacy among housewives in rural areas continues to hinder effective digital marketing practices. Therefore, targeted interventions are necessary to strengthen digital capabilities within rural women's communities.
Research Objectives - This study analyzes the influence of digital economic literacy on digital marketing competency among women in the Local Hero Community in Lampegan Village, Ibun District, Bandung Regency, Indonesia.
Research Method - A quantitative approach with a survey method was employed. Questionnaires using a Likert scale (1–5) were distributed to all 25 members (census study) of the Local Hero Women's Community. Data were processed using simple linear regression analysis.
Research Findings - Digital economic literacy positively and significantly influences digital marketing competency ($R^2 = 0.715$; $p < 0.001$; t-calculated = 7.953 > t-table = 1.714). Digital economic literacy explains 71.5% of variance in digital marketing competency, with the regression equation $Y = 10.354 + 0.867X$.
Research Conclusion - Strengthening digital economic literacy significantly improves rural women's digital marketing competencies. The WanojaMart local marketplace serves not merely as a transactional platform but as a digital economic school, supporting sustainable women's empowerment aligned with SDG 5 (Gender Equality) and SDG 8 (Decent Work and Economic Growth).
Research Novelty - This study uniquely connects digital economic literacy with a locally embedded digital ecosystem (WanojaMart marketplace), demonstrating that effective women's empowerment requires a context-specific supportive network, not merely access to technology.

Keywords: digital economic literacy; digital marketing competency; women's empowerment; rural community; WanojaMart.

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INTRODUCTION

The development of digital technology has driven major transformations across various sectors, including the economy and entrepreneurship. In today's digital era, understanding digital economic literacy is key to increasing the competitiveness of Micro, Small, and Medium Enterprises (MSMEs), especially for home-based businesses (Erlanitasari et al., 2019; Sedej, 2019; Kannan & Li, 2017). Digital economic literacy includes proficiency in digital devices, understanding digital economic concepts, online marketing strategies, application-based financial management, and the use of marketplace platforms (Prasetyo & Anggraeni, 2020; Reddy et al., 2020; Spante et al., 2018).

Women's communities, particularly housewives who run home-based businesses in rural areas, represent a target group with significant potential for empowerment through digital economic literacy (Hilbert, 2011; Hufad et al., 2017). The Local Hero women's community in Lampegan Village, Ibun District, Bandung Regency, Indonesia, is a compelling case for study (Anzak & Sultana, 2020; Handayani, 2022). This community consists of 25 women, most of whom are housewives operating home-based businesses including handicrafts, processed foods, and local fashion products. Despite the high potential of their products, their businesses remained dominated by conventional practices, from production and packaging to marketing strategies limited to the surrounding area. Pre-training baseline data revealed that the community had low awareness of digital marketing and digital technology use. The average score for digital economic literacy (X) was 56.04, while the average score for digital marketing competency (Y) was 58.96. These baseline scores confirm the urgency of acting to narrow the digital divide and equip rural women entrepreneurs with effective digital marketing skills (Saputri et al., 2022; Umboh & Aryanto, 2023; Ragnedda, 2018; Hargittai, 2010).

Collaborative training sessions between Universitas Pendidikan Indonesia and the Local Hero community were organized to deepen digital economic understanding and equip participants with digital marketing skills. These interventions aim to facilitate a transition from traditional business models to digital technology adoption, fostering stronger academic-community ties (Wahyudin et al., 2019; Verhoef et al., 2021; Bouwman et al., 2019). Existing research has largely focused on MSMEs in urban settings (Jaya et al., 2025; Wibowo, 2021; Taiminen & Karjaluoto, 2015) and has not examined the specific intersection of digital economic literacy and local digital ecosystem development in rural women's communities. In particular, limited attention has been paid to how digital economic literacy shapes digital marketing competency among women-led home-based businesses operating within village-based entrepreneurial ecosystems.

This study addresses that gap by focusing on the Local Hero community and its engagement with the WanojaMart marketplace, a locally embedded digital ecosystem that combines digital marketing education with practical transactional opportunities (Irmatova & Akbarova, 2022; Lymperaki-Besson et al., 2021; Purnomo et al., 2024). The novelty of this study lies not only in its rural women-centered perspective, but also in its effort to connect individual literacy development with the functioning of a community-based digital marketplace. Accordingly, this study makes four contributions. First, it contributes theoretically by extending the concept of digital economic literacy beyond technical digital skills to include the applied economic and entrepreneurial capacities required for women-led home-based businesses in rural contexts. Second, it contributes empirically by providing evidence on the relationship between digital economic literacy and digital marketing competency in an underexplored population, namely rural women entrepreneurs in a community-based setting. Third, it contributes contextually by demonstrating how a local digital ecosystem, represented by WanojaMart, can mediate the transformation of conventional microbusiness practices into digitally supported entrepreneurial activities. Fourth, it contributes practically by offering an evidence-based model for community empowerment, university-community collaboration, and local policy intervention aimed at strengthening women's economic participation and family economic resilience.

Against this background, the research question is formulated as follows: How does digital economic literacy influence digital marketing competency among women in the Local Hero rural community? By answering this question, the study seeks to enrich the scholarship on digital empowerment, rural

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entrepreneurship, and nonformal community-based learning, while also providing practical recommendations for inclusive digital transformation initiatives targeting women in rural areas.

METHOD

Research Approach and Design

This study employed a quantitative approach using a survey method. This design is appropriate because it provides empirical evidence regarding relationships between variables, with results that can be generalized to similar contexts (Klassen et al., 2012; Creswell & Creswell, 2018). The quantitative survey approach enables objective and measurable investigation of the correlation and influence between digital economic literacy and digital marketing competency using structured statistical analysis.

Population and Sample

The population and sample comprised all 25 active members of the Local Hero Women's Community in Lampegan Village, Ibun District, Bandung Regency. Because the entire population was included in data collection, this study constitutes a census study, which justifies the sample size of 25 participants for parametric linear regression analysis. This approach is consistent with studies utilizing complete population data in bounded community-based research settings (Klassen et al., 2012).

Variables

The independent variable (X) was digital economic literacy, defined as an individual's understanding and ability to use digital technology for economic activities including transactions, financial management, and informed decision-making in a digital environment. The dependent variable (Y) was digital marketing competency, defined as an individual's ability to plan, implement, and evaluate marketing strategies using digital channels and technologies to achieve business goals (Puro & Achmad, 2022; Kaplan & Haenlein, 2010).

Data Collection

Data were collected through a closed-ended questionnaire based on a 1–5 Likert scale, distributed directly to respondents via Google Forms during a Focus Group Discussion (FGD) attended by all 25 community members. Each participant completed the instrument using their smartphone by scanning the provided Google Form QR code. This method ensured high data completeness and authenticity.

Research Model Framework

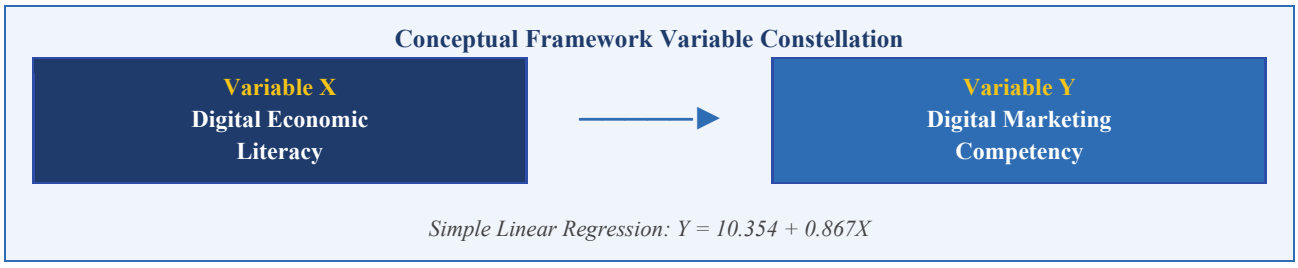

Figure 1. Research Variable Constellation

Data Analysis

The data analysis technique used was simple linear regression (Y = a + bX) to determine whether digital economic literacy significantly influences digital marketing competency. Analysis was performed using SPSS, covering: (1) general score tendency calculation, (2) normality test using the One-Sample Kolmogorov-Smirnov test, (3) simple linear regression analysis, (4) ANOVA for regression, (5) correlation coefficient testing using the Product Moment formula, and (6) calculation of the coefficient of determination.

RESULTS AND DISCUSSION

General Score Tendency

Descriptive statistics revealed that for Variable X (Digital Economic Literacy), respondents obtained a mean score of 56.04 (SD = 13.461), yielding a respondent trend score of 65.92% when compared to the ideal score. This places the variable in the "moderate" category on the Guilford scale. For Variable Y (Digital Marketing Competency), the mean score was 58.96 (SD = 13.810), producing a respondent trend score of 69.36% also categorized as "moderate" or satisfactory. These results indicate that both digital economic literacy and digital marketing competency among the Local Hero women's community were at moderate levels prior to intervention, confirming the baseline need for targeted training programs (Muhidin et al., 2022; Spante et al., 2018).

Table 1. Descriptive Statistics of Research Variables

Variable	N	Min	Max	Mean	Std. Dev
X Digital Economic Literacy	25	30	77	56.04	13.461
Y Digital Marketing Competency	25	33	78	58.96	13.810
Valid N (listwise)	25				

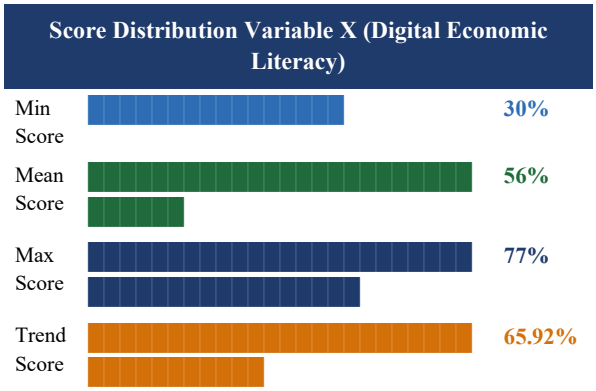

Figure 2. Score Distribution Variable X

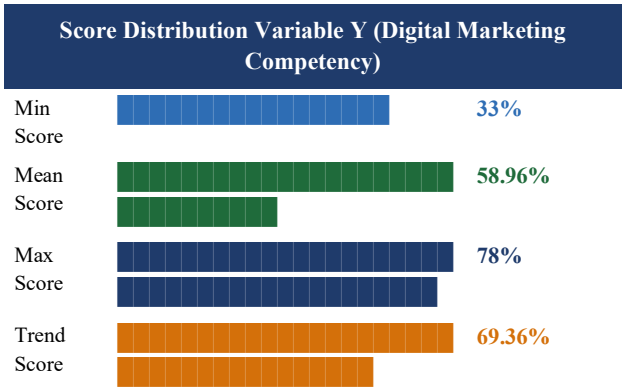

Figure 3. Score Distribution Variable Y

Normality Test

A normality test was conducted using the One-Sample Kolmogorov-Smirnov Test to determine whether both research variables followed a normal distribution as a prerequisite for linear regression analysis. The results showed that both variables met the normality assumption: Variable X obtained a significance value of 0.464 (> 0.05), and Variable Y obtained a significance value of 0.464 (> 0.05). Since both p-values exceeded the significance threshold of 0.05, the null hypothesis (H_0: data are normally distributed) was accepted for both variables. The detailed descriptive statistics underlying these normality results are presented in Table 2.

Table 2. Normality Test Results (One-Sample Kolmogorov-Smirnov)

Statistic	Variable X (Literacy)	Variable Y (Marketing)
Mean	56.04	58.96
Std. Deviation	13.461	13.810
Median	59.00	58.00

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Variance	181.207	190.707
Skewness	−0.298	−0.287
Kurtosis	−0.986	−1.039
Sig. (2-tailed)	0.464 (Normal)	0.464 (Normal)

Simple Linear Regression Analysis

A scatter diagram of Variable Y (Digital Marketing Competency) over Variable X (Digital Economic Literacy) was first examined to assess the linearity of the relationship. The scatter plot revealed a positive linear tendency, confirming that higher levels of digital economic literacy are associated with higher levels of digital marketing competency in the Local Hero community. Based on simple linear regression analysis, the regression equation Y = 10.354 + 0.867X was obtained. This equation states that every one-unit increase in digital economic literacy (X) is associated with an increase of 0.867 units in digital marketing competency (Y), with a constant of 10.354. This positive coefficient confirms the directional influence of digital economic literacy on digital marketing competency among rural women entrepreneurs.

ANOVA for Regression

An Analysis of Variance (ANOVA) for regression was conducted to test the significance of the regression model. Results showed that F-calculated = 57.648, which substantially exceeds F-table = 4.28 (dk numerator = 1, dk denominator = 24, p = 0.05). This confirms that the Digital Marketing Competency variable (Y) is significantly dependent on the Digital Economic Literacy variable (X). The ANOVA results are presented in Table 3.

Table 3. ANOVA Results Regression Significance Test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3271.652	1	3271.652	57.648	**.000***
Residual	1305.308	23	56.753		
Total	4576.960	24			

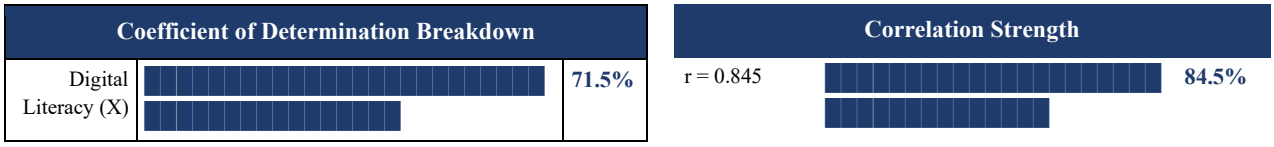
** Significant at p < 0.001*

Correlation and Coefficient of Determination

Correlation analysis using the Product Moment formula yielded a correlation coefficient r = 0.845, indicating a high correlation between digital economic literacy and digital marketing competency. This value falls within the 0.70–0.90 range on the Winarno Surakhmad (2000) interpretation scale, categorized as "high correlation." A t-test to verify the significance of this correlation yielded t-calculated = 7.953, which exceeds t-table = 1.714 (dk = 23, 95% confidence level), confirming the relationship is statistically significant.

The coefficient of determination was calculated as $R^2 = 0.715$, meaning that digital economic literacy explains 71.5% of the variance in digital marketing competency for the Local Hero women's community. The remaining 28.5% may be explained by other variables not investigated in this study, such as social support, technological access, or motivational factors (Prior et al., 2016; Duncombe, 2016; Yasmin et al., 2015).

Key Statistical Findings Visualization



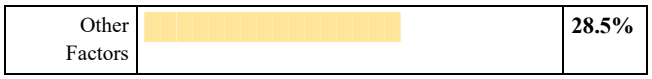


Figure 4. Contribution of Variable X to Y ($R^2 = 0.715$)

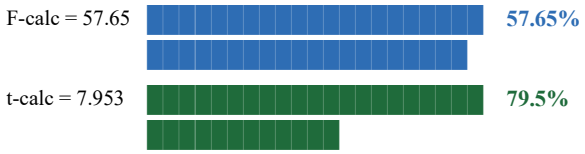


Figure 5. Statistical Test Values

Hypothesis Testing

Based on the statistical tests conducted, the alternative hypothesis (H_1) is accepted: there is a significant positive relationship between digital economic literacy and digital marketing competency in the Local Hero women's community in rural areas. With t-calculated (7.953) exceeding t-table (1.714) at a 95% confidence level, and a significance value of 0.000 ($p < 0.05$), the evidence strongly supports that digital economic literacy is a meaningful predictor of digital marketing competency.

Table 4. Summary of Qualitative Indicators Local Hero Community Profile

Indicator	Baseline (pre-training)	Post-Training Observation
Social Media Use	Personal use only	Business promotion active
Marketplace Awareness	None / Minimal	Engaged with WanojaMart
Digital Transactions	Cash only	Digital payment adoption
Marketing Range	Local neighborhood	District-wide and online
Content Creation	None	Product photos & captions
Financial Literacy	Informal records	Basic digital bookkeeping

These findings affirm that digital economic literacy is a critical enabler of digital marketing competency for rural women entrepreneurs. The regression coefficient b = 0.867 demonstrates that each unit increase in digital economic literacy yields a substantial gain in digital marketing competency, supporting the theoretical framework connecting digital literacy with business performance (Umboh & Aryanto, 2023; Saputri et al., 2022). Understanding digital transactions, online security, and e-commerce platforms is foundational for expanding business reach. These competencies are inseparable from digital economic literacy, which covers not only technical skills but also digital decision-making and economic reasoning (Prasetyo & Anggraeni, 2020; Reddy et al., 2020; Meyers et al., 2013; Ng, 2012). The Local Hero community's engagement with WanojaMart a locally embedded digital marketplace represents a uniquely contextual enabler that goes beyond training: it provides a real transactional environment in which women can practice newly acquired competencies, reinforcing learning through experience (Rahmadani et al., 2023; Santoso et al., 2023).

This study's findings align with Anzak & Sultana (2020) and Abima et al. (2021), both of which found that digital economic literacy increases women's participation in digital economic activities. These findings also resonate with Hufad et al. (2019), who emphasized the role of digital literacy in enabling women as community empowerment cadres in rural settings. Similarly, Raheem et al. (2024) demonstrated that contextually appropriate digital financial tools enhance low-income women's economic inclusion in developing countries a parallel that strongly resonates with the WanojaMart ecosystem in this study. The importance of structured, community-based training programs for digital economic literacy is reinforced by the findings of Santoso et al. (2024), who documented significant improvements in MSME digital marketing competence following targeted digital literacy training. The present study extends this evidence base to rural women's communities, demonstrating that gender-sensitive and contextually-grounded programs are especially effective when they incorporate a supportive local digital ecosystem (Sutarni et al., 2021; Purnomo et al., 2024). The integration of self-regulated learning approaches within digital environments, as documented

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by Sutarni et al. (2021), further supports the notion that structured learning ecosystems improve both digital competence and broader academic outcomes.

Furthermore, the alignment of these findings with SDG 5 (Gender Equality) and SDG 8 (Decent Work and Economic Growth) underscores the broader developmental significance of investing in rural women's digital economic literacy. Noor et al. (2021) specifically linked ICT-based women's empowerment initiatives with progress toward these goals in developing countries a connection clearly demonstrated by the Local Hero community's trajectory. Furthermore, Hufad et al. (2017) documented the significance of women's leadership models in organizational settings, underscoring that empowerment initiatives must consider leadership development alongside technical skill acquisition. The broader literature on digital transformation and business strategy (Verhoef et al., 2021; Bharadwaj et al., 2013) also supports the premise that locally embedded digital ecosystems can drive economic participation among underserved populations.

CONCLUSION

This study concludes that digital economic literacy has a positive and statistically significant influence on digital marketing competency in the Local Hero women's community in Lampegan Village, Bandung Regency. Based on simple linear regression analysis of all 25 community members (census study), a coefficient of determination of $R^2 = 0.715$ was obtained, indicating that 71.5% of the variance in digital marketing competency is explained by digital economic literacy. A significant value of 0.000 ($p < 0.05$) and t-calculated = 7.953 (exceeding t-table = 1.714) confirm the statistical robustness of this relationship. These findings underscore the importance of strengthening digital economic literacy in empowering rural women engaged in home industries particularly in leveraging social media, e-commerce platforms, digital transactions, and digital financial management for more effective marketing. The WanojaMart local marketplace emerges not only as a digital transactional medium, but as an economic learning environment that supports women's path toward financial independence, community resilience, and sustainable empowerment aligned with SDG 5 and SDG 8. Future research should incorporate additional variables (e.g., financial literacy, digital self-efficacy, social support), expand sample sizes across multiple rural communities, and explore longitudinal effects to better contextualize these findings within the broader landscape of women's digital empowerment in Indonesia (Ainin et al., 2015; Chew et al., 2015; Van Dijk, 2006). Research could also examine how marketplace-based learning environments, such as those described by Purnomo et al. (2024) and Sutarni et al. (2016), can be scaled across different rural community settings.

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