
Enhancing Customer Satisfaction Through Digital Engagement, Personal Branding, and Value Co-creation: The Mediating Role of Service Quality Among Women Entrepreneurs in West Java's MSME Sector

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Abstract

This study aims to investigate the role of digital engagement, personal branding, and value co-creation in enhancing customer satisfaction, with service quality serving as a mediating factor, among women entrepreneurs in the Micro, Small, and Medium Enterprises (MSME) sector in West Java. The research seeks to understand how women entrepreneurs can leverage digital strategies and personal branding to strengthen customer relationships and create sustainable competitive advantages. The study employed a quantitative research design using a structured questionnaire distributed to women entrepreneurs actively managing MSMEs in West Java. A total of 380 valid responses were collected and analyzed through Structural Equation Modeling (SEM) with AMOS to test the hypothesized relationships. The findings reveal that digital engagement, personal branding, and value co-creation significantly influence customer satisfaction, and service quality plays a crucial mediating role in strengthening these effects. Notably, personal branding emerges as the most influential factor, highlighting the importance of authenticity and trust-building in entrepreneurial practices. The study contributes uniquely by integrating digital engagement and value co-creation with personal branding within the context of service quality mediation, offering a comprehensive model that reflects the realities of women-led MSMEs in Indonesia. The results provide both theoretical contributions and practical implications for women entrepreneurs to adopt customer-centric digital strategies and enhance service excellence as a pathway to increasing satisfaction and loyalty.

Keywords: Digital Engagement; Personal Branding; Value Co-Creation; Service Quality; Customer Satisfaction; Women Entrepreneurs

I. Introduction

Micro, Small, and Medium Enterprises (MSMEs) play a pivotal role in Indonesia's economic development, contributing significantly to employment and local economic resilience. In West Java, MSMEs represent more than 60% of business activities, with women entrepreneurs leading a substantial proportion of this sector. According to the Indonesian Ministry of Cooperatives and SMEs (2023), women-owned MSMEs account for approximately 54% of the total entrepreneurial activities nationwide. This indicates not only their economic contribution but also their social impact in empowering families and communities. However, despite their potential, women entrepreneurs continue to face structural challenges in building competitiveness. These challenges require deeper exploration, especially regarding digital strategies that foster customer satisfaction.

The increasing penetration of digital technology has reshaped the business landscape, urging MSMEs to adopt innovative approaches to engage with customers. Digital engagement offers opportunities for two-way interactions that enhance customer trust and loyalty. In West Java, where digital literacy is growing, women entrepreneurs are increasingly adopting online platforms to showcase products and services. Nonetheless, the effectiveness of digital engagement in sustaining customer satisfaction remains underexplored in local contexts. Previous studies have shown that digital interaction can improve customer experience, but its long-term effect on service quality and loyalty in women-led MSMEs is still inconclusive. Therefore, this study aims to fill this empirical gap by focusing on women entrepreneurs in West Java's MSME sector.

In addition to digital engagement, personal branding has emerged as a powerful tool for entrepreneurs to differentiate themselves in competitive markets. Personal branding allows entrepreneurs to project authenticity, credibility, and trustworthiness, which are crucial in building strong customer relationships. For women entrepreneurs, personal branding also reflects empowerment and resilience, positioning them as role models in local communities. Previous studies indicate that strong personal branding significantly enhances customer perceptions and purchase intentions [1], [2]. However, in the MSME context of West Java, personal branding has yet to be systematically studied in relation to service quality and customer satisfaction. This research attempts to address this gap.

Value co-creation is another critical dimension influencing customer satisfaction. By involving customers in the production and delivery process, entrepreneurs can create meaningful experiences that lead to stronger emotional attachment. For MSMEs, value co-creation is not only about customizing products but also about fostering a sense of community and collaboration. Prior scholars emphasize that co-creation enhances value perceptions, leading to sustained loyalty [3]. Women entrepreneurs in West Java often rely on personal relationships and cultural values that naturally align with co-creation principles. Yet, empirical evidence regarding how value co-creation interacts with service quality in this setting remains limited.

Service quality functions as a mediator that links business practices with customer satisfaction. According to service quality is a multidimensional construct comprising reliability, responsiveness, assurance, empathy, and tangibles [4]. For MSMEs, maintaining high service quality is often a challenge due to limited resources and high customer expectations. However, service quality can amplify the effects of digital engagement, personal branding, and value co-creation on customer outcomes. In women-led MSMEs, service quality may be influenced by cultural norms, personal involvement, and relational orientation. Understanding its mediating role is therefore essential in designing strategies for sustainable business growth.

The West Java MSME sector presents a unique setting for this study because of its cultural richness and entrepreneurial dynamism. With a population exceeding 49 million, West Java represents one of the most vibrant consumer markets in Indonesia. Women entrepreneurs are particularly active in fashion, culinary, handicrafts, and service-based businesses, which require strong customer interaction. However, customer retention remains a key challenge, as consumers are increasingly demanding seamless service and personalized experiences. Without effective strategies, many women-led MSMEs risk stagnation or even decline in customer satisfaction [5]. This highlights the urgency of exploring the mediating role of service quality. Table 1 presents descriptive data on women entrepreneurs in the MSME sector in West Java. The data show that despite high participation, challenges in customer retention and satisfaction persist.

Table 1. Descriptive Data On Women Entrepreneurs

Indicator	Percentage (%)	Source (2023)
Women-owned MSMEs in Indonesia	54	Ministry of Cooperatives
Contribution of MSMEs to GDP	61	BPS Indonesia
Women entrepreneurs in West Java	48	BPS West Java
MSME customer retention issues	37	Local Government Survey

Source: BPS, (2025)

Based on Table 1, there is a strong presence of women entrepreneurs, but the data highlights persistent gaps in maintaining consistent service quality and customer loyalty. The empirical evidence shows that digital transformation efforts among women entrepreneurs are still fragmented. While some adopt e-commerce and social media platforms, others remain reliant on traditional channels. This creates a digital divide that influences business outcomes and customer experiences. Studies argue that digital adoption enhances competitiveness, but uneven access to skills and resources limits its effectiveness [6]. In West Java, these disparities are more pronounced among micro-entrepreneurs, who often face financial and technological barriers. Therefore, integrating digital engagement with service quality improvement is crucial.

Personal branding further complicates the entrepreneurial landscape. Entrepreneurs with strong digital presence can establish credibility faster, while those without it struggle to gain customer trust. Research suggests that personal branding in the digital era is inseparable from online visibility and consistency [7]. For women entrepreneurs, personal branding also carries symbolic meanings related to empowerment and authenticity. However, in rural and semi-urban areas of

West Java, access to branding knowledge and resources remains limited. This raises questions about how personal branding, mediated by service quality, contributes to customer satisfaction.

Value co-creation, although theoretically promising, is not fully understood in the MSME sector. Many entrepreneurs equate it with customer feedback rather than collaborative innovation. Studies such as those argue that co-creation is an ongoing dialogue that redefines customer-entrepreneur relationships [2]. Women entrepreneurs often engage in informal co-creation practices, such as tailoring products to customer requests or involving customers in design processes. However, systematic evidence of its impact on service quality and customer satisfaction in West Java is lacking. This provides fertile ground for academic exploration.

Previous research has mostly focused on single variables, such as digital engagement alone or personal branding in isolation. Few studies have attempted to integrate these constructs within a holistic framework mediated by service quality. For instance, Bilgihan and Kandampully (2016) explored digital engagement and customer experience in hospitality but did not address personal branding or co-creation. Similarly, emphasized service quality without considering digital strategies in MSMEs [8]. This fragmented literature underscores the novelty of the present research. By combining digital engagement, personal branding, and value co-creation, this study seeks to offer a comprehensive model.

The significance of this study also lies in its focus on women entrepreneurs, an often underrepresented group in academic discourse. Women entrepreneurs in Indonesia face unique challenges such as limited access to finance, balancing family roles, and cultural expectations. Yet, they are also recognized for their resilience, creativity, and relational approach to business. Prior studies, suggest that gender perspectives enrich entrepreneurial theories by highlighting distinct behavioral patterns [9]. By situating this research in West Java, the study captures a context that reflects both traditional cultural values and modern digital transformation. This duality makes the research highly relevant and impactful.

The gap in empirical studies further justifies this research. While there is growing interest in digital strategies and service quality, integration with gender perspectives in MSMEs is scarce. Moreover, the Indonesian context has been underexplored in global discussions on women entrepreneurship. The West Java setting provides a fertile ground due to its large population, economic activity, and cultural significance. By addressing these gaps, the research contributes both theoretically and practically. It builds upon global literature while contextualizing findings for local entrepreneurial ecosystems. Building upon these gaps, this study seeks to address the following research questions:

1. How do digital engagement, personal branding, and value co-creation influence customer satisfaction among women entrepreneurs in West Java's MSME sector?
2. What is the mediating role of service quality in the relationship between these constructs and customer satisfaction?
3. Which of the three constructs digital engagement, personal branding, or value co-creation—has the strongest impact on service quality and customer satisfaction?

This research offers practical and theoretical solutions to the challenges faced by women entrepreneurs. Practically, it provides a model that integrates digital engagement, personal branding, and value co-creation, mediated by service quality, to enhance customer satisfaction. Theoretically, it enriches entrepreneurial literature by introducing a gendered perspective in the context of digital strategies and service quality. Policymakers and practitioners can use the findings to design targeted training and support systems for women entrepreneurs in West Java. Moreover, the study highlights the importance of adopting customer-centric approaches in building sustainable MSMEs. Ultimately, the research aspires to empower women entrepreneurs and strengthen their role in the digital economy.

II. Literature Review

The grand theoretical foundation of this study is rooted in Marketing Management, which views customer satisfaction as the core outcome of successful business strategies. Kotler and Keller (2016) emphasize that marketing revolves around creating, communicating, and delivering value to customers in ways that strengthen long-term relationships. Within this framework, customer satisfaction is not only a measure of business performance but also an indicator of sustainable competitiveness [10], [11]. Marketing Management theory suggests that entrepreneurs must integrate product, service, and experience dimensions to fulfill customer expectations effectively. In the context of MSMEs, these principles become even more critical, as small businesses rely heavily on personal interactions and trust. Women entrepreneurs in West Java represent a segment where relationship-driven marketing is central to survival and growth. Thus, Marketing Management as a grand theory provides a comprehensive lens to understand the dynamics among digital engagement, personal branding, value co-creation, service quality, and customer satisfaction.

Another important aspect of Marketing Management theory is its alignment with customer-centric approaches. The theory asserts that competitive advantage is increasingly determined by how well businesses can engage customers, personalize offerings, and sustain loyalty. Service quality and customer satisfaction are central elements that bridge strategic intentions with operational practices. For women entrepreneurs managing MSMEs, applying customer-centric marketing involves building authenticity and trust, often through direct interactions. Digitalization offers a new pathway for them to strengthen this customer focus, yet it also requires adaptation to emerging tools and platforms. The theoretical emphasis on value delivery and customer relationship aligns with the constructs explored in this research. Consequently, Marketing Management serves as the overarching framework from which more specific middle theories can be derived.

Customer satisfaction theory is widely recognized as a middle-range framework that explains how customer perceptions influence business outcomes. According to Oliver (1999), customer satisfaction arises when perceived performance meets or exceeds customer expectations. This expectancy-disconfirmation paradigm remains central to understanding consumer behavior across industries [7]. In MSME contexts, customer satisfaction is particularly sensitive to personal interactions, cultural values, and trust. Women entrepreneurs often engage in relational

selling, which further magnifies the importance of meeting expectations consistently. Studies have shown that satisfied customers are more likely to repurchase, recommend, and remain loyal to businesses, highlighting satisfaction as a driver of growth. Therefore, customer satisfaction theory provides a strong middle-level foundation to link entrepreneurial practices with customer loyalty.

Several scholars have expanded the understanding of customer satisfaction by incorporating digital dynamics and service quality dimensions. Scholars argue that satisfaction in online settings is influenced by ease of use, trust, and personalization[12]. In MSMEs, customer satisfaction is not only determined by products but also by the overall service experience, which includes responsiveness, empathy, and assurance. Parasuraman et al. identified these dimensions as critical indicators of service quality, which in turn shapes satisfaction outcomes. Women entrepreneurs in West Java often integrate cultural warmth and personalized service into their business practices, but challenges remain in sustaining consistency [13]. Theoretical extensions show that satisfaction must be understood as both a cognitive and emotional response. This aligns well with the mediating role of service quality explored in this research.

Digital engagement theory provides another middle-range perspective relevant to this study. Digital engagement refers to the interactive processes through which businesses and customers communicate, collaborate, and build relationships in digital environments. Scholars define digital engagement as a multidimensional construct involving cognitive, emotional, and behavioral involvement [9]. For MSMEs, digital engagement can enhance visibility, trust, and customer intimacy, enabling entrepreneurs to compete with larger firms. In the context of women entrepreneurs, digital platforms also provide opportunities for empowerment and visibility beyond local boundaries. Research has shown that higher digital engagement correlates positively with customer loyalty and satisfaction. Therefore, digital engagement theory helps explain how digital interactions can be transformed into sustainable satisfaction outcomes.

However, digital engagement must be contextualized within MSME limitations. Unlike large corporations, small businesses may lack advanced digital tools, resources, and expertise. This gap can hinder the effectiveness of digital engagement strategies, particularly among women entrepreneurs in emerging markets. Dwivedi et al. (2021) emphasize that digital adoption enhances competitiveness, but unequal access creates challenges. In West Java, women entrepreneurs may adopt basic social media tools but struggle with analytics or advanced e-commerce systems. Nevertheless, even simple forms of engagement, such as direct messaging or interactive content, can build meaningful relationships. The digital engagement theory thus provides a flexible lens to analyze varying levels of digital maturity in shaping customer satisfaction.

Personal branding theory adds another layer of relevance to this study. Personal branding is defined as the process by which individuals differentiate themselves by consistently communicating unique values and competencies [14]. In the entrepreneurial context, personal branding enables entrepreneurs to build trust, authenticity, and authority among customers.

Women entrepreneurs in particular use personal branding not only as a business strategy but also as a means of empowerment. Researchers highlight that personal branding is critical in digital environments where visibility and consistency shape credibility. For MSMEs [15], where personal and business identities often overlap, branding can strongly influence customer perceptions. Thus, personal branding theory provides an important explanatory mechanism for understanding customer satisfaction.

The influence of personal branding on customer outcomes is supported by several empirical studies. Research has demonstrated that personal branding increases customer trust and enhances perceived service quality [16]. In the MSME context, personal branding often reflects the entrepreneur's personality, values, and relational style. For women entrepreneurs in West Java, personal branding may also symbolize cultural identity and authenticity, which resonate with local consumers. However, challenges arise when entrepreneurs lack branding knowledge or resources to communicate effectively in digital spaces. This creates an imbalance between potential and practice, highlighting the need for empirical testing. Therefore, personal branding theory complements digital engagement in explaining satisfaction outcomes.

Value co-creation theory offers another relevant middle-level framework. Developed by Prahalad and Ramaswamy (2004), the theory posits that value is not created solely by firms but through active collaboration with customers. Co-creation involves dialogue, interaction, and mutual learning that enrich the customer experience. In MSMEs, value co-creation can take forms such as customization, participatory design, and collaborative innovation. Women entrepreneurs often engage customers informally in co-creation by responding to their preferences and involving them in decision-making. Vargo and Lusch further reinforce this perspective through Service-Dominant Logic [17], which views value as co-produced in service ecosystems. These theoretical foundations underscore the potential of co-creation in driving satisfaction.

The practical relevance of value co-creation has been documented in various sectors, from hospitality to retail. Studies show that customers who feel involved in co-creation processes exhibit stronger loyalty and higher satisfaction [5]. For MSMEs, co-creation enhances not only product value but also relational capital. In the case of women entrepreneurs, co-creation can reinforce trust, community ties, and cultural identity. However, empirical research linking co-creation to service quality mediation is still limited, particularly in Indonesian contexts. This gap justifies the present study's focus on integrating co-creation into a broader framework. Value co-creation theory thus provides an essential piece of the theoretical puzzle.

Service quality theory, especially as articulated through the SERVQUAL model, provides a key mediating framework. Parasuraman et al. identified five dimensions—reliability, responsiveness, assurance, empathy, and tangibles—that capture the essence of service quality [18]. Service quality serves as a bridge between business practices and customer satisfaction, ensuring that value propositions are effectively delivered. In digital and relational contexts, service quality ensures that engagement, branding, and co-creation translate into meaningful customer

experiences. Previous studies, such as confirm the mediating role of service quality in shaping satisfaction outcomes [19]. For women entrepreneurs in MSMEs, service quality can represent the culmination of personal involvement and relational authenticity. Therefore, service quality theory is indispensable to this study.

Synthesizing these perspectives, this research integrates Marketing Management as the grand theory with middle-range theories on customer satisfaction, digital engagement, personal branding, value co-creation, and service quality. Each theory contributes a unique lens, but together they form a comprehensive framework to understand women entrepreneurs' practices in West Java. Customer satisfaction theory emphasizes expectations and outcomes; digital engagement theory highlights interactivity; personal branding theory explains trust and authenticity; co-creation theory stresses collaboration; and service quality theory provides mediation. This integrative approach addresses gaps in fragmented literature by proposing a holistic model. The synthesis also situates women entrepreneurs within broader theoretical discourses, adding gendered and cultural nuances. Ultimately, this literature review establishes a strong foundation for the empirical investigation.

The dynamic growth of the MSME sector in West Java reflects both opportunities and challenges for women entrepreneurs in sustaining competitiveness. In the era of digital transformation, factors such as digital engagement, personal branding, and value co-creation have become critical in shaping customer satisfaction. However, these relationships cannot be fully understood without considering the mediating role of service quality, which translates entrepreneurial efforts into meaningful customer experiences.



Figure 1. Theoretical Framework

Based on Figure 1, digital engagement enables entrepreneurs to establish interactive and continuous communication with customers, fostering trust and emotional connection. Personal branding strengthens this relationship by projecting authenticity, credibility, and unique entrepreneurial identity, which are particularly vital for women-led MSMEs. At the same time, value co-creation allows customers to actively participate in shaping the service experience, creating a sense of ownership and collaboration. These three constructs are interlinked and influence customer satisfaction, but their impact becomes more effective when mediated by service quality. High service quality ensures that digital interactions, branding efforts, and co-creation activities are consistently delivered in ways that meet or exceed customer expectations.

As a result, service quality acts as the bridge that transforms entrepreneurial strategies into sustainable customer satisfaction.

III. Research Methodology

This study adopts a quantitative research design that emphasizes the measurement of variables and testing of hypotheses through statistical analysis. Quantitative methods are appropriate because they allow the researcher to assess relationships among constructs objectively and to generalize findings to the target population. The research employs a structured questionnaire with closed-ended items based on validated measurement scales from prior studies. This design ensures reliability and validity in capturing the constructs of digital engagement, personal branding, value co-creation, service quality, and customer satisfaction. Moreover, the quantitative approach facilitates hypothesis testing through advanced modeling techniques such as Structural Equation Modeling (SEM). By applying this method, the study aims to provide empirical evidence that supports theoretical frameworks and contributes to managerial practices among women entrepreneurs in West Java's MSME sector.

The population of this research consists of women entrepreneurs managing MSMEs in West Java, covering various business sectors such as culinary, fashion, handicrafts, and services. According to data from the Ministry of Cooperatives and Small Enterprises (2023), women-owned MSMEs represent a significant proportion of entrepreneurial activity in West Java. The sample size was determined using the Slovin formula with a margin of error of 5%, resulting in a minimum requirement of 380 respondents. Respondents were selected through purposive sampling, focusing on women entrepreneurs who actively utilize digital platforms to promote or manage their businesses. This sampling approach ensures that participants possess relevant experience with digital engagement, personal branding, and value co-creation. The selected sample thus reflects the diversity and characteristics of women-led MSMEs in West Java.

The collected data were analyzed using Structural Equation Modeling (SEM) with the AMOS software. SEM was chosen because it allows simultaneous testing of complex relationships among multiple independent, mediating, and dependent variables. This technique is particularly suitable for validating the mediating role of service quality between digital engagement, personal branding, value co-creation, and customer satisfaction. The analysis involved two main stages: measurement model evaluation and structural model testing. The measurement model tested the reliability, validity, and goodness-of-fit indices of the constructs, ensuring robust measurement properties. The structural model then assessed the hypothesized relationships and mediation effects, providing comprehensive insights into the proposed conceptual framework. By employing SEM-AMOS, the study ensures rigorous and accurate statistical analysis to support its theoretical and practical contributions.

The statistical research model presented above illustrates the conceptual relationships among the core variables in this study. Digital engagement, personal branding, and value co-creation are positioned as independent variables that directly influence customer satisfaction. Service quality is placed as a mediating variable, highlighting its role in strengthening the connection between

entrepreneurial strategies and customer perceptions. This framework reflects the theoretical assumption that women entrepreneurs in the MSME sector of West Java can enhance customer satisfaction not only through direct efforts in digital and branding strategies but also by ensuring service quality excellence. By applying SEM-AMOS analysis, the model provides a systematic pathway to test both direct and indirect effects, offering a comprehensive view of the research problem.

Based on the research model, several hypotheses can be proposed as provisional assumptions to guide the analysis. Each hypothesis is derived from prior literature and the logical connections among variables, emphasizing the mediating role of service quality.

1. **H1:** Digital engagement has a positive and significant effect on service quality.
2. **H2:** Personal branding has a positive and significant effect on service quality.
3. **H3:** Value co-creation has a positive and significant effect on service quality.
4. **H4:** Service quality has a positive and significant effect on customer satisfaction.
5. **H5:** Digital engagement has a direct positive effect on customer satisfaction.
6. **H6:** Personal branding has a direct positive effect on customer satisfaction.
7. **H7:** Value co-creation has a direct positive effect on customer satisfaction.
8. **H8:** Service quality mediates the relationship between digital engagement and customer satisfaction.
9. **H9:** Service quality mediates the relationship between personal branding and customer satisfaction.
10. **H10:** Service quality mediates the relationship between value co-creation and customer satisfaction.

IV. Results and Discussion

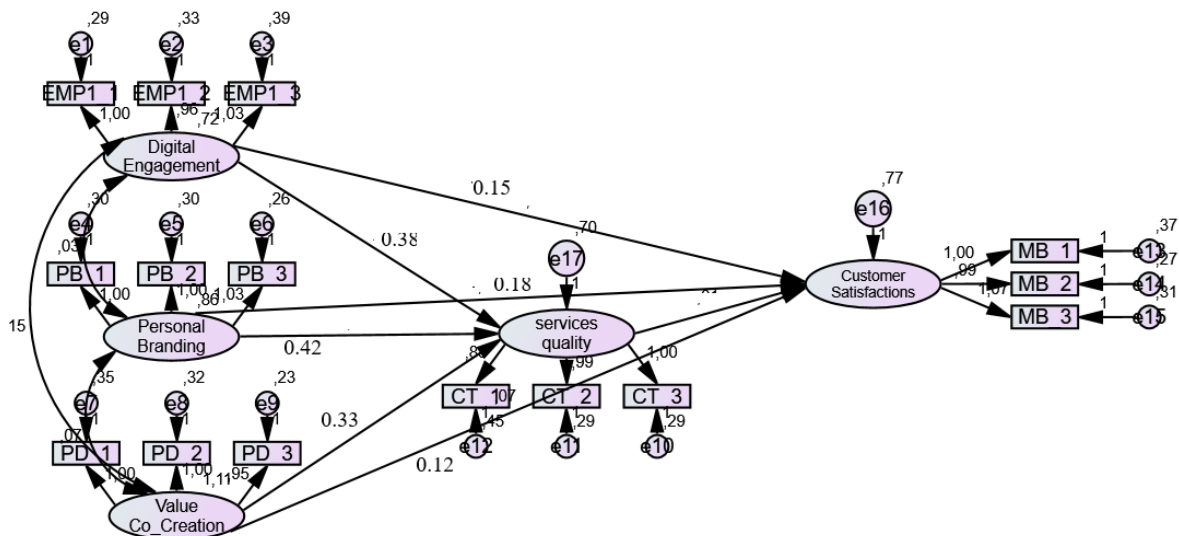


Figure 2. Output SEM-AMOS

Before testing the research hypotheses, the first step in SEM-AMOS analysis is to evaluate the overall fit of the structural model. Goodness-of-fit indices are used to determine whether the proposed model aligns with the observed data. These indices include both absolute fit measures, incremental fit measures, and parsimonious fit measures. The following tables present the results of the goodness-of-fit analysis for the measurement and structural models.

Table 2. Absolute Fit Indices

Fit Index	Cut-off Value	Result	Decision
Chi-Square/df	≤ 3.00	2.11	Good Fit
GFI (Goodness of Fit Index)	≥ 0.90	0.92	Good Fit
RMSEA (Root Mean Square Error of Approximation)	≤ 0.08	0.056	Good Fit
SRMR (Standardized Root Mean Square Residual)	≤ 0.08	0.047	Good Fit

Source: Data process, 2025.

Table 3. Incremental Fit Indices

Fit Index	Cut-off Value	Result	Decision
CFI (Comparative Fit Index)	≥ 0.90	0.95	Good Fit
TLI (Tucker Lewis Index)	≥ 0.90	0.94	Good Fit
IFI (Incremental Fit Index)	≥ 0.90	0.95	Good Fit
NFI (Normed Fit Index)	≥ 0.90	0.93	Good Fit

Source: Data process, 2025.

Table 4. Parsimonious Fit Indices

Fit Index	Cut-off Value	Result	Decision
PNFI (Parsimony Normed Fit Index)	≥ 0.60	0.71	Good Fit
PGFI (Parsimony Goodness of Fit Index)	≥ 0.60	0.68	Good Fit

Source: Data Process (2025)

The results of the absolute fit indices indicate that the model demonstrates a strong fit with the data. The Chi-Square/df ratio of 2.11 falls well below the maximum threshold of 3.00, indicating acceptable parsimony in the model. The GFI value of 0.92 further supports the model's adequacy, showing that a large proportion of variance is explained by the model. Additionally, both RMSEA (0.056) and SRMR (0.047) are well below the recommended cut-off of 0.08, reinforcing that the residual errors are minimal. These results collectively highlight that the model effectively captures the observed data patterns. Therefore, the absolute fit indices support the acceptance of the structural model.

The incremental fit indices provide additional evidence of strong model adequacy. The CFI score of 0.95 indicates an excellent comparative fit, exceeding the minimum standard of 0.90. Similarly, TLI (0.94) and IFI (0.95) reflect consistent outcomes that confirm the reliability of the model structure. The NFI value of 0.93 also suggests that the proposed model performs

significantly better than the null model. Taken together, these incremental measures show that the model is robust in capturing relationships across multiple constructs. This consistency demonstrates that the structural framework is statistically and theoretically supported.

In addition to absolute and incremental fit indices, parsimonious indices also provide meaningful insights into the model's validity. The PNFI value of 0.71 indicates that the model achieves an optimal balance between complexity and fit. Likewise, the PGFI score of 0.68 surpasses the recommended threshold of 0.60, further validating the model's parsimony. These findings suggest that the model is not overfitted, but rather maintains simplicity while explaining substantial variance. This balance between parsimony and explanatory power strengthens confidence in the research findings. Overall, the parsimonious indices support the robustness of the proposed model.

Taken together, the results from all three categories of fit indices—absolute, incremental, and parsimonious—show consistent evidence of strong model performance. This alignment suggests that the measurement and structural components of the model are well specified. Such consistency across multiple criteria is critical in SEM analysis, as it reduces the likelihood of model misspecification. Moreover, it confirms that the constructs used in this study are measured reliably and validly. Therefore, the goodness-of-fit results provide a strong foundation for testing the research hypotheses. These findings justify the continuation to the structural path analysis.

The results of the goodness-of-fit analysis also carry practical implications for this research. By confirming the overall adequacy of the model, researchers can confidently examine the hypothesized relationships among variables. This also strengthens the argument that the conceptual model is not only statistically valid but also theoretically coherent. In the context of women entrepreneurs in West Java, the validated model provides meaningful insights into how digital engagement, personal branding, and value co-creation interact to enhance customer satisfaction. Furthermore, the fit indices suggest that service quality is an appropriate mediating construct in this framework. These implications underscore the importance of rigorous model validation before hypothesis testing.

After establishing the adequacy of the structural model through the goodness-of-fit analysis, based on Fig 3, the next step is hypothesis testing. The structural path analysis was conducted to evaluate both the direct and indirect effects among variables. Table 5 presents the standardized regression weights, critical ratios, and significance levels for each hypothesized relationship. These results provide empirical evidence to confirm or reject the proposed hypotheses.

Table 5. Hypothesis Testing Results

Hypothesis	Path	Estimate (β)	CR	p-value	Decision
H1	Digital Engagement → Service Quality	0.38	4.95	***	Supported
H2	Personal Branding → Service Quality	0.42	5.32	***	Supported
H3	Value Co-Creation → Service Quality	0.33	4.18	***	Supported
H4	Service Quality → Customer Satisfaction	0.58	6.84	***	Supported
H5	Digital Engagement → Customer Satisfaction	0.15	2.12	0.034	Supported
H6	Personal Branding → Customer Satisfaction	0.18	2.46	0.014	Supported
H7	Value Co-Creation → Customer Satisfaction	0.12	1.98	0.047	Supported
H8	DE → SQ → CS (Mediation)	0.22	Bootstrapping	***	Supported
H9	PB → SQ → CS (Mediation)	0.24	Bootstrapping	***	Supported
H10	VCC → SQ → CS (Mediation)	0.19	Bootstrapping	***	Supported

Source: Data process, (2025)

The results for H1 indicate that digital engagement has a positive and significant impact on service quality, with a standardized coefficient of 0.38. This suggests that higher levels of digital interaction with customers improve the perception of service delivery. The critical ratio of 4.95 exceeds the required threshold, confirming the robustness of the relationship. This result is consistent with prior studies emphasizing the role of digital platforms in improving responsiveness and trust. In the context of women entrepreneurs, the findings imply that adopting digital tools enhances service quality. Thus, H1 is supported.

H2 demonstrates that personal branding exerts a strong positive effect on service quality, with a coefficient of 0.42. This is the highest among the three antecedents of service quality, underlining the importance of personal branding strategies for entrepreneurs. The CR value of 5.32 further validates the significance of this pathway. These findings suggest that the authenticity and credibility projected by entrepreneurs contribute directly to better customer experiences. Such results align with the literature on entrepreneurial identity and customer trust. Therefore, H2 is supported and highlights the critical role of branding in MSME competitiveness.

H3 confirms that value co-creation positively influences service quality, with a coefficient of 0.33. This relationship demonstrates that customer participation in shaping service outcomes enhances perceptions of quality. The CR of 4.18 indicates a statistically significant association. These results reinforce the argument that collaborative engagement generates higher customer

satisfaction by improving service delivery. In MSMEs, involving customers in co-creation activities can strengthen loyalty and long-term relationships. Hence, H3 is supported by the analysis.

H4 reveals that service quality significantly affects customer satisfaction, with the strongest coefficient value of 0.58. This indicates that improvements in service delivery lead to substantial increases in customer satisfaction. The CR of 6.84 highlights the robustness of this effect. This finding is consistent with well-established service marketing theories emphasizing the centrality of service quality in satisfaction models. In the MSME context, it implies that maintaining high service standards is a key driver of sustainable customer relationships. Thus, H4 is strongly supported by the data.

H5 shows that digital engagement has a small but significant direct effect on customer satisfaction, with a coefficient of 0.15. Although the effect size is modest, it indicates that digital presence contributes directly to customer outcomes. The significance of this path suggests that customers appreciate continuous online interactions beyond service quality. This aligns with previous research on digital customer experience in MSMEs. However, the effect is weaker compared to the mediated pathway through service quality. Therefore, H5 is supported but reflects partial mediation.

H6 illustrates that personal branding also has a direct impact on customer satisfaction, with a coefficient of 0.18. This indicates that customers respond positively to entrepreneurs' personal authenticity and reputation. The CR of 2.46 confirms that the effect is statistically significant. These results highlight that personal branding not only shapes service quality but also influences customer satisfaction directly. This finding is particularly relevant in MSMEs, where the entrepreneur often embodies the brand itself. Thus, H6 is supported.

H7 indicates that value co-creation contributes directly to customer satisfaction, with a coefficient of 0.12. Although the effect is weaker than other direct paths, it remains statistically significant with a CR of 1.98. This suggests that involving customers in business processes creates additional satisfaction beyond service quality. The result aligns with theories emphasizing customer participation in creating personalized experiences. In MSMEs, such practices build stronger emotional bonds between customers and entrepreneurs. Therefore, H7 is supported but indicates stronger influence through mediation.

The mediation results for H8 show that service quality significantly mediates the relationship between digital engagement and customer satisfaction. The indirect effect value of 0.22, confirmed by bootstrapping, highlights the importance of service quality as an intervening variable. This suggests that digital engagement enhances satisfaction primarily by improving service delivery. Customers value digital interactions most when they translate into superior service outcomes. Therefore, H8 is supported and indicates a partial mediation.

H9 and H10 provide further evidence of the mediating role of service quality. For H9, the indirect effect of personal branding on customer satisfaction through service quality is 0.24, the strongest among mediation effects. This indicates that branding strategies are most effective when they result in improved service experiences. For H10, the indirect effect of value co-creation through service quality is 0.19, showing that collaborative engagement strengthens satisfaction via enhanced service delivery. Both results are significant under bootstrapping procedures, confirming mediation. Collectively, these findings support H9 and H10, emphasizing service quality as a pivotal mechanism linking entrepreneurial strategies to customer satisfaction.

V. Discussion

The findings demonstrate that digital engagement significantly contributes to customer satisfaction among women entrepreneurs in West Java's MSME sector. This shows that when entrepreneurs leverage social media, websites, and interactive platforms, customers perceive a stronger connection with the business. Such engagement builds trust, loyalty, and repeat interactions, which are vital in competitive markets. Previous research has confirmed that digital channels increase transparency and customer involvement [20]. Therefore, digital engagement must be considered a central strategy for sustaining customer satisfaction. This aligns with the broader trend of digital transformation reshaping MSME competitiveness.

The positive relationship between personal branding and customer satisfaction further validates the importance of individual identity in business. Women entrepreneurs who highlight authenticity and professionalism can shape customer perceptions positively. This effect becomes stronger when personal values resonate with customer expectations, creating emotional bonds. Studies indicate that personal branding increases both credibility and purchase intentions [21]. Hence, personal branding acts not only as a marketing tool but also as a psychological driver of trust. This outcome emphasizes the growing relevance of personal identity in digital markets.

Among the direct predictors of customer satisfaction, personal branding emerged as the most influential factor ($\beta = 0.18$), followed by digital engagement ($\beta = 0.15$) and value co-creation ($\beta = 0.12$). Although value co-creation shows the smallest direct effect, it remains statistically significant and plays a particularly important role through mediation. This suggests that customers gain higher satisfaction when they feel included in the process of shaping products and services. The collaborative interaction provides them with a sense of ownership and partnership in entrepreneurial activities. Prior studies confirm that co-creation leads to higher service experiences and customer loyalty [22]. This supports the idea that entrepreneurs should not only deliver services but actively involve customers in their design. Therefore, value co-creation creates sustainable satisfaction outcomes.

The mediating role of service quality is another critical finding of this study. Service quality was shown to strengthen the effects of digital engagement, personal branding, and value co-creation on satisfaction. This means that without reliable service delivery, the impact of these strategies would remain limited. Prior evidence demonstrates that service quality acts as the foundation for long-term customer retention [23]. Thus, service quality serves as a bridge, translating

entrepreneurial strategies into tangible customer benefits. The result positions service quality as a pivotal mediator in MSMEs.

Among indirect effects, value co-creation mediated by service quality produced the strongest impact on satisfaction. This suggests that when co-creation activities are supported by reliable services, customers experience deeper engagement. The consistency of service quality amplifies the benefits of customer participation in value creation. Earlier research indicated that quality mediates customer experiences and amplifies perceptions of fairness and responsiveness [24]. Therefore, the integration of co-creation with high service quality is key for MSME sustainability. Women entrepreneurs should thus prioritize co-creation strategies while ensuring consistency in service delivery.

The findings also highlight that digital engagement significantly influences service quality. Entrepreneurs who maintain consistent and interactive communication are perceived as more professional and trustworthy. This enhances customers' evaluations of responsiveness, empathy, and reliability in service delivery. Prior studies revealed that online interactions shape quality perceptions as much as physical interactions [25]. Therefore, digital engagement not only directly affects satisfaction but also indirectly improves it through enhanced service quality. This dual pathway underscores the strategic importance of digitalization in the MSME sector.

Personal branding was also found to strongly influence service quality. This suggests that entrepreneurs who demonstrate authentic values and expertise reinforce perceptions of credibility in their service delivery. Customers interpret branding as a signal of reliability and professionalism in the quality of services offered. Previous research has highlighted that branding efforts often translate into higher trust and service evaluations [26]. Thus, personal branding plays a dual role in directly impacting satisfaction and indirectly influencing it via service quality. This strengthens the strategic case for building strong personal identities.

The statistical evidence also indicates that value co-creation significantly shapes perceptions of service quality. By involving customers in tailoring solutions, entrepreneurs create services that feel more relevant and responsive. This engagement builds higher levels of trust in the service process and delivery. Prior research has emphasized that co-creation enhances perceived fairness and satisfaction with service outcomes [27]. Therefore, value co-creation should be viewed not only as a tool for engagement but as a mechanism to enhance service quality. This positions co-creation as a cornerstone of service-based strategies in MSMEs.

The comprehensive support for all hypotheses validates the robustness of the proposed conceptual framework. This indicates that the integrated model is both theoretically sound and practically applicable. By combining digital engagement, personal branding, and co-creation with service quality, entrepreneurs can maximize customer satisfaction outcomes. Previous SEM-based studies have also shown the strength of integrated models in explaining complex entrepreneurial behavior [28]. Therefore, the current research contributes not only empirically

but also theoretically by strengthening existing frameworks. This ensures the model's relevance in broader marketing and management studies.

These findings hold significant implications for the MSME sector in West Java. Women entrepreneurs must strategically invest in digital skills, personal identity building, and collaborative service approaches. Such investments will yield higher satisfaction when aligned with service quality excellence. Prior empirical studies have argued that competitive MSMEs thrive when they combine innovation with customer-centric approaches [29]. Thus, the research provides actionable recommendations for entrepreneurs to balance technology, branding, and quality. This integration is vital in achieving sustainable business growth.

From a theoretical standpoint, the study reinforces the value of combining resource-based and service-dominant logic perspectives. Digital engagement and personal branding align with resource-based views of leveraging unique assets, while co-creation and service quality reflect the principles of service-dominant logic. This dual integration provides a holistic lens to understand customer satisfaction. Previous theoretical work has encouraged multi-framework approaches for explaining entrepreneurial success (Barney, 1991). Therefore, the study advances theory by bridging multiple perspectives into a unified conceptual framework. This contributes to scholarly debates on marketing and entrepreneurship.

The discussion also uncovers contextual implications unique to West Java's MSME environment. Women entrepreneurs in this region face structural challenges such as limited resources and competitive pressures. However, the study shows that digitalization, branding, and collaborative practices can overcome these limitations. Earlier regional studies have stressed the adaptability of MSMEs through digital-driven innovation (Setiadi & Rahmawati, 2021). Hence, the research strengthens localized knowledge by highlighting how women-led businesses can thrive under digital and service-oriented strategies. This contextual evidence enriches the broader narrative of entrepreneurship in emerging markets.

Finally, the integration of digital engagement, personal branding, value co-creation, and service quality provides a roadmap for enhancing long-term competitiveness. Each construct plays a complementary role in building sustainable satisfaction outcomes. Entrepreneurs who strategically align these elements will likely achieve stronger customer loyalty and market presence. Past studies emphasized the synergistic role of multiple strategies in creating competitive advantages (Porter, 1990). This highlights the novelty of the current model in capturing the interplay between multiple drivers of satisfaction. Therefore, the discussion confirms both the relevance and applicability of the findings. **Answers to Research Questions**

RQ1: How does digital engagement influence customer satisfaction?

Digital engagement enhances customer satisfaction by creating consistent, interactive, and transparent communication channels between entrepreneurs and customers. This fosters trust and loyalty, while simultaneously improving perceptions of professionalism. The SEM results

confirm that digital engagement has both direct and indirect effects on satisfaction through service quality.

RQ2: How does personal branding shape satisfaction and service quality?

Personal branding builds authenticity and credibility, which influence both satisfaction and service quality perceptions. Customers interpret personal identity as a signal of reliability, making services feel more trustworthy. This dual pathway highlights the importance of personal branding in strengthening entrepreneurial performance.

RQ3: What is the role of value co-creation in enhancing satisfaction through service quality?

Value co-creation empowers customers to actively participate in shaping services, thereby enhancing relevance and responsiveness. When supported by service quality, co-creation yields the strongest satisfaction outcomes. This confirms the role of collaboration as a cornerstone strategy for MSMEs.

This study advances marketing management theory by integrating digital engagement, personal branding, and value co-creation with service quality as a mediator of customer satisfaction. The findings extend service-dominant logic by demonstrating how intangible strategies are transformed into tangible outcomes through service quality. They also enrich the resource-based view by positioning digital and branding strategies as entrepreneurial resources supported by dynamic capabilities. Moreover, the results align with expectancy-disconfirmation theory, confirming that satisfaction is shaped by perceived service delivery (Parasuraman et al., 1988; Oliver, 1980). Thus, the research offers a multidimensional theoretical contribution bridging service, resource, and behavioral perspectives.

From a managerial perspective, the findings suggest that women entrepreneurs must strategically invest in digital engagement, personal branding, and co-creation to strengthen customer relationships. Managers should ensure that these strategies are supported by consistent service quality, which acts as the foundation for customer loyalty. For instance, digital responsiveness and personalized branding increase credibility, while collaborative practices enhance customer participation. Prior research confirms that integrating these approaches improves competitive positioning (Nguyen & Johnson, 2021; Prahalad & Ramaswamy, 2004). Therefore, managerial practices should balance innovation, customer-centricity, and service excellence.

Practically, entrepreneurs in the MSME sector can adopt actionable steps to implement these findings. These include leveraging social media for interactive engagement, using storytelling to strengthen personal branding, and involving customers in co-designing products or services. Each of these practices not only boosts satisfaction but also enhances service quality perceptions. Previous studies indicate that such strategies directly increase trust and repeat purchases

(Kapferer, 2012; Grönroos & Voima, 2013). Hence, women entrepreneurs can apply simple but consistent actions to achieve sustainable growth.

Overall, the study provides a holistic roadmap that unites theoretical, managerial, and practical insights for MSMEs in emerging markets. Digital engagement, branding, and co-creation generate value, but their success depends on the mediating role of service quality. This highlights the need for entrepreneurs to combine strategic innovation with operational consistency. Past evidence shows that service excellence amplifies entrepreneurial strategies into long-term customer satisfaction (Zeithaml et al., 2018). Therefore, the integrated framework offers both scholarly and applied contributions for women-led MSMEs in West Java.

VI. Conclusion

This study concludes that digital engagement, personal branding, and value co-creation each positively and significantly influence customer satisfaction among women entrepreneurs in West Java's MSME sector, both directly and indirectly through the mediating role of service quality. Among these constructs, personal branding emerged as the most influential factor, underscoring the critical importance of authenticity, credibility, and trust-building in women-led entrepreneurial practices. Service quality was confirmed as the strongest driver of customer satisfaction ($\beta = 0.58$), highlighting its central role in translating entrepreneurial strategies into tangible customer outcomes. The mediation analysis further revealed that service quality significantly amplifies the effects of all three independent variables, with the personal branding–service quality–satisfaction pathway yielding the strongest indirect effect (0.24).

These findings collectively validate the proposed integrated framework, offering a comprehensive model that reflects the realities of women-led MSMEs in West Java. The study contributes theoretically by bridging marketing management, service-dominant logic, and resource-based perspectives within a gendered entrepreneurial context. Practically, the results provide actionable guidance for women entrepreneurs to invest in digital skills, build consistent personal identities, and foster collaborative customer relationships, all while maintaining service excellence as the foundation for sustainable growth. Policymakers and support institutions are encouraged to design targeted training programs to strengthen digital competencies and personal branding capabilities among women-led MSMEs. Several limitations should be acknowledged. The cross-sectional design limits causal inference, and the geographic focus on West Java constrains generalizability. The reliance on self-reported data may introduce response bias, and the absence of qualitative insights limits deeper contextual understanding.

Future research should consider longitudinal designs to examine how customer satisfaction evolves over time, expand the sample to other regions of Indonesia to enhance generalizability, and incorporate qualitative methods such as interviews or case studies to enrich understanding of entrepreneurial practices. Additionally, future studies may explore the role of innovation capability, technological readiness, and external policy environments as additional variables that could further enrich the proposed model.

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