

The Influence of Service and Design Co-Creation on Sales Volume Enhancement: A Case Study of Alsa Lemon MSME in Sukabumi City

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Abstract. This research aims to analyze the influence of co-creation through the dimensions of design (Value Co-design) and service (Value Co-service) on increasing sales volume at UMKM Alsa Lemon in Sukabumi City. The research method employed is quantitative, utilizing linear regression analysis with primary data obtained through customer questionnaires. The results indicate that, simultaneously, collaborative product development variables contribute significantly, accounting for 53.4% of the variation in sales volume. Partially, Value Co-design is proven to have a positive and significant influence ($p < 0.05$), making it the dominant factor in attracting purchasing interest through consumer involvement in designing physical product attributes. Meanwhile, Value Co-service acts as a supporting factor in maintaining customer loyalty through service interaction. This study also identifies an external factor of 46.6%, which includes pricing policies and distribution reach as operational supporting infrastructure. The research concludes that the synergy between participatory product innovation and conventional marketing management is a key strategy in boosting the sales performance of agribusiness MSMEs sustainably in the local market.

Keywords: Co-design, Co-service, Product Development, MSMEs, Sales Volume

Introduction

The development of the Micro, Small, and Medium Enterprises (MSMEs) sector in Indonesia has shown a significant increase, particularly within the health beverage industry utilizing natural ingredients such as lemon (*Citrus limon*). Intensifying market competition demands that business actors shift their focus beyond mere product quality to encompass value creation that actively involves consumers. In this context, the concept of value co-creation emerges as a strategic approach enabling consumers to participate in the value-generation process, both through product design (*co-design*) and service interaction (*co-service*). UMKM Alsa Lemon in Sukabumi City represents one of the local businesses implementing this approach to enhance its product sales. Consequently, this study aims to determine the extent to which *value co-design* and *value co-service* influence the increase in sales volume for the aforementioned enterprise. In Islamic economics perspectives, providing excellent and gentle service to consumers is highly emphasized in the Qur'an and Hadith. It values the principles of speaking kindly (*qaulan karima*), gentleness (*rifqan*), doing good to others (*ihsan*), and delivering the best outcome (*anyu'tiyahu khayran*). This spiritual approach serves as a moral foundation that strengthens the emotional bond and trust within the co-service mechanism, transforming standard transactional marketing into a sustainable, relationship-driven ecosystem.

Methodology

This study utilized a descriptive quantitative research design. Primary data were gathered through structured questionnaires distributed to the customers and active resellers of UMKM Alsa Lemon in Sukabumi City ($N = 50$). The sampling technique utilized was purposeful non-probability sampling, ensuring that respondents were active consumers who had experienced both the physical product and purchasing services.

The structural model evaluated two core independent variables representing the co-creation dimensions: *Value Co-service* (X_1) and *Value Co-design* (X_2), while the dependent variable was Sales Volume (Y). The primary statistical analysis consisted of Ordinary Least Squares (OLS) linear regression analysis, partial t-tests, and the Coefficient of Determination (R^2) evaluated using statistical software:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$$

Results and Discussion

Coefficient of Determination (R^2)

To evaluate the capability of the independent variables in explaining the variations in sales volume, the statistical model summary was evaluated. The results of the model fitness and determination test are summarized in Table 1.

Table 1. Results of Coefficient of Determination (R^2)

Model	R	R Square	Adjusted R Square
1	0.731	0.534	0.528

Based on Table 1, the obtained R Square value is 0.534. This empirical evidence confirms that the collaborative value co-creation variables (*Value Co-design* and *Value Co-service*) simultaneously contribute an influential power of 53.4% toward explaining the variations in sales volume at UMKM Alsa Lemon. Meanwhile, the remaining 46.6% is explained by external variables outside the formulated model of this study.

Hypothesis Testing (Partial t-test)

The t-test was executed to observe the individual and partial significance of each independent dimension on the dependent marketing outcome. Table 2 compiles the regression parameters.

Table 2. Results of Hypothesis Testing (Partial t-test)

Variable Dimension	Unstandardized Beta	t-value	Sig.	Empirical Conclusion
Value Co-design (X_1)	0.591	4.699	0.000	Hypothesis Accepted

Variable Dimension	Unstandardized Beta	t-value	Sig.	Empirical Conclusion
Value Co-service (X_2)	0.181	1.441	0.156	Hypothesis Rejected

The statistical breakdown of the partial test shows distinct results:

1. *Value Co-design (H_1)*: The significance level is $0.000 < 0.05$. Therefore, H_1 is accepted, meaning that *Value Co-design* exerts a highly positive and statistically significant impact on sales volume expansion.
2. *Value Co-service (H_2)*: The significance level is $0.156 > 0.05$. Therefore, H_2 is rejected, indicating that *Value Co-service* partially does not hold a direct significant effect on boosting sales volumes when evaluated separately.

These empirical outcomes indicate a clear structural disparity in how consumers evaluate collaborative value. Consumers of UMKM Alsa Lemon place a significantly higher premium on tangible visual and physical product adaptations over service interactions alone. While excellent service remains an indispensable baseline for customer comfort, concrete customization in product design serves as the primary direct trigger that sways final purchasing decisions and boosts sales volume.

Discussion of the Framework and the Supporting Factor (46.6%)

The dominant coefficient of *Value Co-design* ($\beta = 0.591$) emphasizes that accommodating customer aspirations regarding physical attributes—such as packaging design, flavor adjustments, and clean visual labeling—directly triggers purchasing decisions among local consumers. On the contrary, *Value Co-service* statistically acts as an implicit loyalty stabilizer rather than an independent transactional driver.

Adhering to the operational reality of agribusiness, the remaining value of **46.6%** represents the statistical error (epsilon) or external supporting factors that are fundamentally required within this research framework. These external components are identified as competitive pricing mechanisms (*Price*), strategic retail placements (*Place*), and post-pandemic healthy lifestyle shifts within Sukabumi City. In an integrated ecosystem, while the co-creation framework (53.4%) operates as the "**Core Differentiation Engine**", the omitted external variables (46.6%) serve as the mandatory "**Operational Infrastructure**". Without stable pricing and seamless distribution channels, the monetization of innovative participatory designs cannot reach maximum market potential.

This dynamic synergy highlights that while product co-creation serves as the primary catalyst for initial consumer attraction and brand distinctiveness, operational efficiency ultimately dictates customer retention and long-term business viability. Agribusiness MSMEs like Alsa Lemon face the structural reality that relying solely on creative packaging and custom flavor profiles—without a well-anchored supply chain and price-accessibility model—risks creating an

unsustainable value proposition. Embedding participatory design strategies within a robust operational backbone enables the enterprise to not only capture immediate market demand in Sukabumi, but also build a scalable model capable of navigating broader market fluctuations and shifting consumer behaviors.

Conclusion

Product development through *Value Co-design* and *Value Co-service* simultaneously exerts a positive and significant influence on expanding sales volume at UMKMalsa Lemon, providing a total contribution of 53.4%. This indicates that strategic co-creation involving customers serves as a major driver for market differentiation, while the remaining 46.6% acts as a necessary operational foundation consisting of price competitiveness and local distribution reaches.

Value Co-design holds a dominant, positive, and significant partial effect, whereas *Value Co-service* functions as a baseline service requirement (*hygiene factor*) that stabilizes customer comfort rather than driving direct sales volume increases independently. Practically, UMKMalsa Lemon should maintain structured customer-feedback channels to capture ongoing design trends. Regional institutions should facilitate technical distribution networks to support external operational infrastructures for local agribusiness MSMEs.

Based on these findings, UMKMalsa Lemon is strategically advised to continuously maintain interactive feedback channels for flavor and packaging innovations while upholding high ethical service standards. Complementing these internal efforts, regional government bodies and relevant institutions should actively support local agribusiness MSMEs by enhancing distribution infrastructure, increasing local marketing exposure, and providing structured business scale-up assistance. Furthermore, to build upon the scope of this study, future academic research is encouraged to expand the analytical variables by incorporating digital marketing strategies and competitive pricing frameworks across a broader spectrum of agribusiness sectors.

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