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Relationship Marketing among Coconut Sugar Traders, Main Suppliers, and Main Customers

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ABSTRACT

This study aims to analyze relationship marketing among coconut sugar traders in Tonjongsari Village, Cikalong District, Tasikmalaya Regency, West Java, and their main suppliers and customers. The analytical method used is the Wilcoxon Signed Ranks Test, which is suitable for paired ordinal data. Data were collected through questionnaires and analyzed using SPSS 26 software. The analysis results show significant differences in the dimensions of trust, satisfaction, and dependence between suppliers and customers, with significance values of 0.038, 0.018, and 0.031, respectively, while the commitment dimension did not show a significant difference (0.713). The categorization results indicate that all relationship marketing dimensions are in the high category, both for the traders' perceptions of the main suppliers and customers. This study concludes that traders have better relationships with customers than with suppliers in terms of trust, satisfaction, and dependence, although commitment did not show significant differences. These findings provide insights for improving relationship marketing strategies in the future.

Keywords: Relationship marketing, communication, trust, commitment, satisfaction

Introduction

Indonesia, as a country with an economy based on agriculture, shows that the agricultural sector still plays a significant role in the national economy. One important part of the agricultural sector is the plantation sub-sector (Asih, 2021). Indonesia is a world leader in coconut production. This is evidenced by the largest coconut population in the world, with production reaching 17.3 million metric tons per year (Butron, 2021). Coconuts (Cocos Nucifera) are used as raw materials for cosmetics, white copra, arts and crafts, shampoo, margarine, activated carbon, medicines, and more. Coconuts also produce sap, which is processed into coconut sugar. Coconut sugar has a long and important history in the lives of the Indonesian people. Since ancient times, coconut sugar has been an integral part of Indonesian culture and tradition. Its use is not only limited to cooking but also in traditional rituals, making sugar one of the offerings. The meaning of sugar is to pray for abundant blessings (Pramita et al., 2013). Its existence has become an inseparable part of the daily life of the Indonesian people. Coconut sugar is generally traded in solid form with various shapes, depending on the mold used.

Tasikmalaya Regency, a region in West Java Province, has a southern coastal area of Java Island with abundant coconut tree growth. In 2020, Tasikmalaya Regency ranked second in West Java Province after Ciamis Regency, with a coconut plantation area of 31,395 hectares, almost entirely owned by local farmers (BPS Jabar, 2020). Cikalong District, located in Tasikmalaya Regency, has a coastal area and is the district with the largest coconut plantation area in the

regency. Cikalong District has a coconut plantation area of 9,954 hectares (BPS Kab. Tasikmalaya, 2022). Coconut trees grow scattered across various villages, including Tonjongsari Village.

In Tonjongsari Village, some people rely on coconut sugar farming as their livelihood. They are involved in every aspect of production, from planting coconut trees to harvesting sap, the raw material for coconut sugar. These farmers are small-scale farmers, with their own land or leased land. They possess extensive knowledge and skills in managing coconut trees and harvesting sap. However, they face limitations in marketing coconut sugar further, which is why the presence of middlemen (trader) is necessary.

A trader is one of the key elements in the coconut sugar supply chain. Although often viewed controversially, the role of the trader actually has positive aspects. Traders have an extensive social network, which they use as a foundation for economic exchange. The trader plays an important role in the agricultural marketing system because they have networks that regular farmers lack, thus creating a dependency relationship between the two (Azizah, 2016). Despite acting as intermediaries, traders also face several challenges. One of the main challenges they face is the fluctuation of raw material prices and unstable market demand. In addition, they may struggle to obtain the capital and resources needed to expand their business. However, there are some recent challenges faced by traders in Tonjongsari Village. The constraints include fluctuations in production from suppliers/farmers influenced by natural conditions, uncertainty in market prices, fluctuating transactions without binding contracts, and the complexity of relationships with suppliers and customers.

In dealing with the complexity of relationships with suppliers/farmers and customers, traders strive to maintain good relationships. Building positive relationships with the business actors involved in coconut sugar production is crucial. Cooperation with suppliers and customers has a positive impact on the progress of the coconut sugar agroindustry. The issues faced by traders with suppliers include dishonest actors who mix foreign objects into the coconut sugar to increase weight. Detecting this issue can be difficult because the coconut sugar given to traders is already in sacks. This can cause losses to traders, as it can result in a loss of trust from customers if discovered. Traders also sometimes struggle to find loyal suppliers of sugar amidst intense competition. Traders can provide capital to suppliers/coconut sugar farmers in the hope of strengthening business relationships and ensuring a stable supply. However, some suppliers are not committed, as the partnerships are still based on verbal agreements. The challenges faced by customers include price fluctuations and competition. Customers also expect the coconut sugar to be of high quality and free from impurities, such as stones or other foreign objects. Traders engage in relational marketing with customers to identify, anticipate, and understand customer needs (Prasadana, 2022).

Relationship marketing refers to the business relationship formed through the transaction of buying and selling between sellers and buyers (Lestari, 2009). Several issues that arise indicate that there are varying qualities of relational marketing between coconut sugar middlemen and their suppliers and customers. Agreements and commitments that have been established are key because they form the foundation of good relationships based on mutual trust, satisfaction, and dependency (Setyawan, 2023). Unlike traditional marketing, which tends to focus on one-time transactions, relationship marketing emphasizes the importance of creating emotional ties and mutual trust to ensure the sustainability of business relationships. The key dimensions of relationship marketing include trust, commitment, satisfaction, and dependency. Trust reflects the belief that business partners will behave as expected and maintain integrity in the relationship, while commitment shows the level of dedication each party has to maintain cooperation. Satisfaction measures how well needs and expectations are met, and dependency assesses the extent to which one party relies on the other to fulfill its business needs. Satisfaction is the feeling of pleasure or disappointment that arises after comparing the performance (results) of a product with the expected performance (results). If performance falls below expectations, customers are dissatisfied. If performance meets expectations, customers are satisfied (Sasongko,

2021). In practice, relationship marketing aims to increase customer loyalty, reduce the cost of acquiring new customers, and create more stable and profitable relationships in the long term. A successful company is one that can build long-term relationships with its customers. Long-term relationships mean loyal customers whose needs and desires are fulfilled (Tjahyadi, 2006). By fostering strong and mutually beneficial relationships, companies can increase the value offered to customers while also creating sustainable competitive advantages. These dimensions include trust, commitment, satisfaction, and dependency.

Material and Methods

This study applies the non-parametric statistical analysis method, the Wilcoxon Signed Ranks Test, which is designed to handle paired ordinal data. The Wilcoxon Signed Ranks Test is a robust alternative to the paired t-test, especially when the data are not normally distributed or have an ordinal scale (Gibbons & Chakraborti, 2021). The Wilcoxon test is used when we have two intervals or ratio-level variables measured for a series of observations and wish to test whether the distributions of these two variables are different, but it turns out that the distributions cannot assume normality for either or both variables. It can also be used to compare ordered categorical variables. This is the non-parametric equivalent of the paired t-test, but unlike the t-test, it tests for median differences rather than means. The test does not assume any distribution for either variable. Running a single test in SPSS requires a dataset with two columns containing the variables to be compared (The British Academy, 2010).

Data for this study were collected through a questionnaire distributed to the traders (trader). The questionnaire was designed to measure various dimensions of relationship marketing, namely trust, satisfaction, commitment, and dependence, assessed from the traders' perspective. After collection, the data were analyzed using SPSS version 26. The Wilcoxon test was used to compare two sets of paired data: the traders' perceptions of suppliers and customers. With this test, the researcher can determine whether there are significant differences in the relationship marketing dimensions being tested. This test not only provides the ability to see overall differences but also helps explore significant differences between two directly related groups (Fields, 2013).

Results and Discussion

Based on the software output, the results are as follows:

Table 1. Wilcoxon signed ranks test results

Test Statistics[a]

	Trust	Commitment	Satisfaction	Dependency
Z	-2.070[b]	-.368[b]	-2.360[b]	-2.156[b]
Asymp. Sig. (2-tailed)	.038	.713	.018	.031

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks

Based on statistical testing, a significant difference is indicated if the significance value is less than 0.05. The analysis results show that the dimensions of communication, trust, and satisfaction between suppliers and customers differ significantly at the 5% level. Meanwhile, the commitment between suppliers and customers does not show a significant difference.

These results indicate a significant change in three of the four relationship marketing dimensions tested—trust, satisfaction, and dependence—while the commitment dimension did not show any meaningful change. This test was conducted to evaluate the differences before and after the intervention in the relationships between the parties being tested, such as the middlemen, suppliers, or main customers. Each dimension was analyzed in detail to understand the changes that occurred and the factors that may have influenced these outcomes.

Trust

Trust is a crucial foundation in relationship marketing. It encompasses the belief that the other party in a business relationship, whether it be a supplier or a customer, will act consistently, reliably, and honestly. The Wilcoxon test results indicate a significant decline in the trust dimension after the intervention. The obtained Z value is -2.070 with a p-value of 0.038, meaning that there was a significant change in the level of trust held by the parties involved after the intervention.

This decline may be caused by various factors, such as changes in policies within the supplier-customer relationship, market uncertainty, or other external influences affecting how the middlemen or other parties view their suppliers or customers. For example, new policies regulating prices or product distribution could cause parties in this relationship to feel less confident or less trusting of the sustainability and stability of their relationship. In this context, the decline in trust could negatively affect long-term relationships between suppliers and customers, as trust is one of the key components to ensuring the continuity and stability of business relationships.

This decrease in trust could also be due to negative experiences encountered by the parties involved during the intervention period, such as delayed deliveries, changes in product quality, or differing expectations regarding cooperation. The decline in trust can undermine effective collaboration and reduce operational efficiency, as the involved parties may become more cautious and reluctant to share information or further invest in their relationship.

Commitment

Unlike trust, the commitment dimension did not show a significant change after the intervention. The Z value for this dimension is -0.368 with a p-value of 0.713, which is statistically insignificant because the p-value is greater than 0.05. This means there is no significant difference between the level of commitment before and after the intervention.

Commitment is the strong desire of both parties to maintain their business relationship, even when facing challenges. In this result, the stability of commitment indicates that, despite changes in other dimensions such as trust and dependence, the parties involved are still committed to continuing their business relationship. A strong commitment is usually a reflection of long-term investments, such as long-established cooperation, mutual dependence in terms of supply or distribution, or contractual agreements that bind both parties to continue working together.

The lack of significant change in commitment may also indicate that the parties involved have strong incentives to maintain their relationships, such as mutually beneficial financial arrangements, long-term contracts, or a lack of alternative trustworthy suppliers or customers. Therefore, despite declines in other dimensions like satisfaction and dependence, commitment remains stable because the parties realize that ending the relationship would be more detrimental than maintaining it.

Satisfaction

The satisfaction dimension showed a significant change after the intervention, with a Z value of -2.360 and a p-value of 0.018. This indicates a significant decrease in the level of satisfaction felt by the parties involved. In relationship marketing, satisfaction reflects the extent to which the expectations of the parties involved align with the reality they experience in the relationship.

The decrease in satisfaction may be caused by various factors. One possibility is that the intervention did not yield the expected results or did not meet initial expectations. For example, changes in distribution structure or pricing could make the parties feel that they are receiving less satisfactory service or products compared to before the intervention. Additionally, the decrease in satisfaction may also be related to other factors, such as a lack of effective communication between the involved parties or the inability of suppliers or customers to meet expectations regarding product quality or delivery times. The decrease in satisfaction can also have a negative impact on long-term relationships. Dissatisfied parties may become less motivated to actively engage in

the collaboration and may even seek alternative, more satisfactory options. In the long run, this could lead to the end of the business relationship if satisfaction issues are not adequately addressed.

Dependence

The dependence dimension also showed a significant change after the intervention, with a Z value of -2.156 and a p-value of 0.031. In relationship marketing, dependence reflects the extent to which one party relies on the other for product supply, services, or market access

This significant decrease in dependence may indicate that, after the intervention, the involved parties were able to find better or more reliable alternatives. For instance, the intervention might have involved improving access to new suppliers or customers who offer better quality products or more competitive prices. The decrease in dependence can be interpreted as a shift toward a more flexible relationship dynamic, where one party is no longer overly reliant on the other, providing them more freedom to seek alternatives if necessary.

However, the decrease in dependence could also pose challenges. If one party feels too independent and begins to reduce their commitment to the relationship, it could lead to instability in the long term. For example, if a supplier feels that customers no longer depend on them, they may become less motivated to provide good service or maintain product quality. Therefore, while the reduction in dependence offers flexibility, it must be balanced with efforts to maintain commitment and trust in the business relationship.

Overall, the Wilcoxon Signed Ranks Test results indicate that three out of the four relationship marketing dimensions showed significant changes after the intervention. The trust, satisfaction, and dependence dimensions all showed notable declines, while commitment remained stable. The decline in these dimensions could reflect external or internal factors affecting the relationship between the involved parties, such as policy changes, product quality, or access to better alternatives.

These findings have important implications. First, the decrease in trust and satisfaction suggests that the intervention may not have provided the expected benefits or that certain aspects of the supplier-customer relationship need improvement. If these issues are not addressed, long-term relationships could be disrupted, ultimately harming both parties. Second, the decrease in dependence could be a double-edged sword: on one hand, it provides flexibility, but on the other hand, it could lead to a loss of commitment if not well managed.

To maintain the stability and health of business relationships, it is important for the involved parties to continually monitor these dynamics and take necessary steps to improve trust, satisfaction, and dependence, while still preserving strong commitment. For example, improving communication, enhancing service quality, or updating business agreements could be strategic steps that help mitigate the negative impacts of the changes identified through this test.

Coconut sugar traders' perceptions in relationship marketing dimensions

In a relationship marketing analysis, the perceptions of traders toward key suppliers and customers play a crucial role in determining the quality and stability of business relationships. Factors such as trust, commitment, satisfaction, and dependence become key dimensions analyzed to measure the extent to which these relationships are formed and how middlemen perceive the parties involved. Through a descriptive quantitative approach, this study evaluates middlemen's perceptions of suppliers and customers to understand how each of these dimensions contributes to sustainable business relationships. The results of this analysis provide insights into which dimensions most influence middlemen's perceptions and compare their relationships with suppliers and customers.

The categorization of each dimension is generally high. Based on the descriptive analysis table below, it is shown that the highest dimension of middlemen's perception toward suppliers is the commitment dimension, while the lowest is satisfaction. Meanwhile, middlemen's perceptions

of customers are higher than those of suppliers, with dependence being the highest perceived dimension toward customers.

Table 2. Wilcoxon signed ranks test results

CATEGORY	N	MEAN	CATEGORY
Trust in suppliers	12	13.5000	High
Commitment to supplier	12	13.8333	High
Satisfaction with suppliers	12	13.1667	High
Dependence on suppliers	12	13.5833	High
Trust in customers	12	14.6667	High
Commitment to customers	12	14.0000	High
Satisfaction with customers	12	14.3333	High
Dependence on customers	12	14.7500	High

Based on the descriptive analysis results shown in the table, each dimension of relationship marketing between traders and their key suppliers and customers is categorized as High. The highest dimension of traders' perceptions toward suppliers is commitment, with an average score (mean) of 13.8333. This indicates that traders have a strong level of commitment to maintaining long-term relationships with their key suppliers. This commitment can be interpreted as the traders' intention to continue collaborating with suppliers despite potential challenges in other aspects. On the other hand, the satisfaction dimension toward suppliers shows the lowest average score (mean = 13.1667), although it still falls within the High category. This indicates that while traders are generally satisfied, there are certain aspects of their relationship with suppliers that could be improved, possibly in terms of the quality of service or products received.

Meanwhile, traders' perceptions of their key customers are higher compared to those of suppliers. Each relationship marketing dimension in the relationship with customers, such as trust, commitment, satisfaction, and dependence, has a higher average score. The highest dimension is dependence, with an average score of 14.7500, reflecting that traders are highly dependent on their customers. This high dependence indicates that the sustainability of traders' businesses is significantly influenced by their customers, who may serve as their primary source of income. The dimensions of trust (mean = 14.6667) and satisfaction (mean = 14.3333) toward customers also show that traders are very satisfied with the established relationships and have a high level of trust in their customers. Overall, although the relationships with suppliers are already good, traders' perceptions of customers are more positive, especially in terms of dependence. This indicates that customers play a more significant role in traders' business relationships compared to suppliers. The scores are categorized into three levels: Low, Medium, and High, following the categorization formula (Azwar, 2022).

Table 3. Categorization of traders' perceptions

Low	$X < M - 1SD$
Medium	$M - 1SD \leq X < M + 1SD$
High	$M + 1SD \leq X$

Note:
M = Mean = (Xmaks + Xmin)/2
SD = Standard Deviation = (Xmaks - Xmin)/6

The categorization values are obtained as follows:
Mean =(Xmaks + Xmin)/2   = (15 + 5) / 2 = 10
SD   = (Xmaks - Xmin)/6   = (15 - 5) / 6 = 1,67

Table 4. Categorization values of traders' perceptions

Category	Value
Low	X < M - 1SD
	X < 10 - 1,67
	X < 8, 33
Medium	M - 1SD ≤ X < M + 1SD
	10 – 1,67 ≤ X < 10 + 1,67
	8,33 ≤ X < 11,67
High	M + 1SD ≤ X
	11,67 ≤ X

The categorization of scores into three categories: Low, Medium, and High, is carried out based on the formula proposed by Azwar (2012). This process uses two main parameters: Mean (M) and Standard Deviation (SD) to determine the boundaries of each category. The first step is to calculate the Mean (M), which is the average of the maximum value (Xmaks) and the minimum value (Xmin). In this case, the maximum value is 15 and the minimum value is 5, so the formula used is:

$$M = \frac{Xmaks + Xmin}{2} = \frac{15 + 5}{2} = 10$$

So, the Mean or average value obtained is 10.

The next step is to calculate the Standard Deviation (SD), which indicates the spread or variation of the data from the mean. The standard deviation is calculated using the formula:

$$SD = \frac{Xmaks - Xmin}{6} = \frac{15 - 5}{6} = \frac{10}{6} = 1,67$$

Thus, the standard deviation value for this data is 1.67. After calculating the Mean and Standard Deviation, the next step is to determine the boundaries for the three categories: Low, Medium, and High. The Low category includes scores that are smaller than the Mean minus 1 standard deviation, or mathematically:

$$X < M - 1SD = 10 - 1,67 = 8,33$$

In other words, scores below 8.33 are categorized as Low. The Medium category includes scores that fall between the Mean minus 1 standard deviation and the Mean plus 1 standard deviation, which is:

$$M - 1SD \leq X < M + 1SD = 8,33 \leq X < 11,67$$

This means that values between 8.33 and 11.67 are categorized as Medium. Meanwhile, the High category includes scores that are greater than or equal to the Mean plus 1 standard deviation:

$$X \geq M + 1SD = 10 + 1,67 = 11,67$$

This means that scores equal to or greater than 11.67 are included in the High category. Overall, the Low category includes scores below 8.33, the Medium category includes scores between 8.33 and 11.67, and the High category includes scores above 11.67. Using this method, each score from respondents or other variables can be interpreted and categorized into one of the three categories. This process provides a clear guide to understanding the data distribution, allowing the researcher to assess the level of perception or other variables based on the categories that have been systematically determined.

The analysis of coconut sugar traders' perceptions toward key suppliers and customers shows that all dimensions of relationship marketing are categorized as high, reflecting strong business relationships. Traders perceive a higher level of commitment and satisfaction toward their customers, especially in terms of dependence, which plays a significant role in the sustainability of their businesses. On the other hand, while relationships with suppliers are also strong, there is room for improvement in satisfaction. These insights highlight the importance of trust, commitment, satisfaction, and dependence in fostering sustainable business relationships.

Conclusion

This study concludes that traders have a better relationship with customers compared to suppliers in terms of communication, trust, and satisfaction, although no significant difference was found in commitment. These findings provide insights for improving future relationship marketing strategies.

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