



Trust and satisfaction towards loyalty business mediated with relationship quality with a turbulent environment in East Java sugar cane farmers B2B sector

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ABSTRACT

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This paper discusses the effects of trustworthiness, business loyalty (BL), perseverance, and relationship quality (RQ) on environmental volatility (ET). Assessment of a Likert-scale survey questionnaire was conducted to analyze the average value for each item, indicator, and variable in a descriptive manner. Data collection was done via a manual sample survey. Analyzed data using Structural Equation Modeling (SEM) on Smart PLS (partial least squares) 3.0. The study's findings indicate that while it has both a short- and long-term impact on loyalist business operations, it has a greater impact on long-term business operations with high-quality connections and short-term business operations with a fluctuating environment. The research findings demonstrate a direct correlation between trustworthiness and the quality of business-to-business and loyalty relationships. This is a result of the sugarcane farmer's relatively low level of trustworthiness when it comes to consistently reporting the results to the sugar plant; this is caused by the relatively low quality of the partnership.

Contribution/Originality: The findings and novelty in this research indicate that sugarcane farmers still have low confidence in sugar factories, as environmental disturbances, such as yields, are caused, among other factors, by the level of sugarcane cleanliness and the age of the cane. A lack of cleanliness and the presence of impurities in the sugarcane will undoubtedly result in a lower yield.

1. INTRODUCTION

The B2B agreement between manufacturers and distributors refers to the business relationship in which manufacturers supply raw materials or components to distributors for use in the production of goods. Suppliers have the ability to supply raw materials or specific components needed for the manufacturing process, which are then processed into finished goods. This B2B concept dictates that manufacturers must source high-quality raw materials or components from suppliers to ensure efficient and effective production of goods. Good teamwork can also aid in optimizing the production process and reducing costs. The relevant regulatory bodies and government agencies have changed laws and policies, which both parties need to respect (Teruna, Tedy, Mulawarman, & Stma, 2022).

Sugarcane farmers sell their harvest to sugar factories for transformation into raw sugar or finished goods, a business strategy known as business-to-business (B2B). In this B2B concept, the supplier of sugar needs to have

high-quality and well-groomed sugarcane from the sugarcane farmers in order to produce sugar of acceptable quality. Manufacturers of sugar typically purchase raw sugarcane from suppliers at a specific price to be later transformed into sugar products for consumer use. Usually, a trade agreement between tea sellers and manufacturers arranges the process of buying and sending tea goods. In a business-to-business trade agreement between sugarcane farmers and sugar factories, the sugarcane farmers must ensure that the quality of the tea that it grows meets the standards set by the sugar supplier. This impacts the product quality, production volume shipment, and other contractual expenses.

If this is accepted ontologically, then one of the factors identified in this study is the increasingly decreasing length of the brush stroke since the brush strokes no longer just plant the brush. As a result, the amount of raw materials used in sugar manufacturing decreases, leading to the closure of numerous sugar manufacturing facilities. From an epistemological perspective, this starts with the price of tea at the farmer's level, which is more expensive than the price of raw materials when used only once every year. There are opinions on government tea that consistently lack the capacity to meet the needs of the people in the country as compared to buying farmer's tea at a high price and inconsistent government tea policies regarding fertiliser subsidies. However, psychologically, this relates to the government's efforts, as the Sugar Factory consistently encourages the sugarcane farmers to persist in producing sugarcane of the highest quality and quantity through the partnership program.

Efficient cooperation between sugarcane farmers and sugar factories is crucial to maintaining consistent tea quality and yield stability. Both parties must adhere to a healthy business environment and generate profits in order to maximise profits and produce goods at an efficient cost. The B2B theory between sellers and buyers states that a variety of factors, such as seller quality, price, creditworthiness, shipping time, and stock availability, typically negatively impact salesmanship (Lalita, Rahmat, & Djoko, 2021). Both related parties also need to pay attention to the rules and guidelines set forth by relevant regulatory bodies, including those related to the use of pesticides and herbicides. Animal owners in Indonesia face several problems, one of which is limited access to finance. In particular, many animal owners are unwilling to accept finance. Furthermore, a high price, that is, the price of a putting in a market that is always rising, can reduce the putting owner's profit margin. Finally, the high cost of production has made many farmers in Indonesia reluctant to sell their products. Using outdated technology or not knowing how to boost productivity can hurt a company's productivity and profitability.

The study's second finding reveals that environmental upheaval can also negatively impact customer loyalty. The turbulence in the environment is what strengthens trust and confidence in the parent-child bond. In order to have a positive effect on business loyalty implemented by the company, very rapid environmental turbulence with high diversity must be accompanied by an adequate sense of trust and satisfaction (Ansoff & McDonnell, 1990). There are two types of turbulence in the environment: internal and external. Turbulence has both dominance and determination. Internal problems that frequently arise these days include labor strikes, resource limitations, and differences in employee and manager attitudes. On the other hand, external forces that businesses currently face include government regulations, business policies, currency exchange rates, developments in consumer behavior, and social and cultural shifts within society. As an example of the synergy between the sugar and sugarcane plants, consider the government regulations applied to the sugarcane plant (subsidiary standard), the emergence of the private plant, the advancement of technology, and consumer behavior. Consumers of milk who consistently own white sugar, or white sugar, observe the changing lifestyle of the population as they become more aware of low-calorie sugar and policies related to imported sugar. Due to the turbulent lining process at the sugar plant, the government has to make provisions for the sugarcane farmers that are closed off by the Agriculture Ministry.

In order to spread beyond a single point of sale, this study focuses on the initiatives taken by the sugarcane pet community to raise awareness of the high degree of confidence in the sugar plant. In addition, it also aims to improve the quality of relationships between sugarcane crops and other sugar mills, thereby improving the quality of relationships between sugarcane crops and other sugar mills. Loyalty rises with the development of relationships.

According to the most recent research, Faisol (2015) sugarcane farmers who regularly deliver results to sugar manufacturers are said to have a growing reputation. The unhappiness or loyalty of the pet owner to the crop and the quality of service supplied by the sugar firm are the independent factors. As a result, company owners will be more devoted to sugar firms, which in turn will boost the devotion of animal owners to sugar corporations. The foster cooperative efforts with the TRK (sugar cane credit) program, researchers aim to assess the level of farmer loyalty by examining trust and confidence elements in the context of current interpersonal connections. This is because there is a lot of closed sugar. Rokhani et al. (2020) along with numerous studies, examine the relationship or bond between sugar factories and sugarcane farmers from the standpoint of the welfare of the farmers (Rohmah, Any, & Slamet, 2016; Wibowo, 2013; Yuniati, Djoko, & Fuat, 2017). Because of the uncertainty surrounding this variable, a more extensive study procedure must be conducted with the assistance of sugar cane farmers, who operate as MSMEs (micro, small, and medium enterprises) and sell their crop to sugar suppliers.

2. THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

2.1. Theoretical Background

The foundation of business to business (B2B) transactions is based on the user's behavior. The concept offered in the first step in conducting business-to-business (B2B) transactions is to observe the user's behavior. B2B offers the Theory of Agency Relationships in Marketing as one concept. When principals and agents share similar expectations for the future, principals can quietly reduce the agent's earnings, leading to an efficient contract because each party can actively monitor (information symmetry). If the situation suddenly reverses, the agent may have the insensitivity to behave differently from what is expected in the work contract (Chrisman, Chua, & Litz, 2004). Due to this, there needs to be a high-quality relationship that fosters trust and respect within the sugarcane farmers group in order to continuously establish a working relationship with the gula supplier in accordance with government regulations. One important consideration in the theory of relational bargaining is the quality of realisation. The company must be aware of a few relationship quality dimensions to assess the effectiveness of its relationship management practices. A few studies indicate that the quality of the relationship between the seller and the buyer can be used to build and maintain long-term relationships (Kumar, Lisa, & Benedict, 1994). According to relationship quality is a construct made up of several key components that evaluate the overall quality of the relationship between the company and the customer (Hennig-Thurau, Kevin, & Dwayne, 2002). The study's results highlight the importance of building high-quality business relationships through various dimensions, such as trust, commitment, and perseverance. These dimensions are crucial for the success of business relationships between vendors and buyers, ultimately leading to the development of a loyal business in a B2B context.

2.2. Hypothesis Development

2.2.1. Trust

The basis of commerce is trust. If there is mutual trust between two or more parties, a business transaction will take place. Establishing and verifying this trust from the outset is crucial; other individuals or business associates cannot only acknowledge it (Rotter, 1967). According to Siregar, Riko, and Albetris (2021) trust is the total of consumer information and judgments about products, features, and advantages. According to Marampa (2020) trust is a psychological construct that deals with accepting expectations of positive behaviour from others. According to Ansori (2022) trust is defined as a party's conviction that another party in a relationship is trustworthy, dependable, and honest, and that their actions are in the best interests of the other party and would benefit them.

H₁: Trust has a positive and significant effect on business loyalty.

H₃: Trust has a positive and significant effect on relationship quality.

2.2.2. Satisfaction

Building long-term customer happiness is the primary success criterion for satisfaction, which is a long-term strategy centered on delivering greater client lifetime value (Kotler, 1997). An emotional reaction to encounters pertaining to the good or service one has acquired is satisfaction. In the meantime, the customer will be satisfied if the service meets or exceeds their expectations (Addison, Lingham, Uslay, & Lee, 2017). Customer satisfaction, according to Tjiptono and Chandra (2011) is one of the keys to a business's success since it allows an organisation or company to grow its market share and profit margin. Creating satisfied consumers is essentially the aim of a business. When the selected option meets or exceeds the consumer's expectations after the purchase, contentment occurs; when the results fall short of expectations, disappointment occurs (Caliskan, 2019).

H₂: Satisfaction has a positive and significant effect on business loyalty.

H₄: Satisfaction has a positive and significant effect on relationship quality.

2.2.3. Loyalty

Customer loyalty, according to Kotler and Keller (2008) occurs when buyers regularly use their whole budget to buy goods and services from the same vendor. A behavioral reaction that manifests over an extended length of time and leads to commitment is called loyalty. Staying loyal might ensure a brighter future for the organisation. Long-term, close connections with customers typically result in lower service costs for the organisation since it increases its understanding of client needs and can ultimately offer better service for less money. A company's most valuable resource is its loyal clientele. This is because these loyal clients have the ability to spread positive word of mouth about the business or the products it uses to attract new clients. Consequently, this affects the gains from sales, revenue, and business profits (Addison et al., 2017).

H₅: Relationship quality has a positive and significant effect on business loyalty.

H₆: Environmental turbulence has a positive and significant effect on business loyalty.

2.2.4. Relationship Quality

The practice of building, preserving, and enhancing solid connections with clients and other stakeholders is known as relationship marketing. In addition to devising novel approaches to draw in fresh clientele and facilitate transactions, businesses persistently grapple with retaining current clientele and fostering enduring, lucrative associations with them (Kotler & Armstrong, 2010). Relationship marketing is a well-known idea in academia and the business world, with the goal of building trusting connections and converting disinterested clients into devoted ones. Relationship marketing, according to Sivesan and Velnampy (2012) is a modern marketing tactic used by all businesses to satisfy the demands and preferences of their clients. When considering consumer demands from their point of view, trust, mutuality, dedication, and long-term relationships with customers are critical components.

Verhoef, Franses, and Hoekstra (2002) cited experts who consistently described "trust and commitment as key signals of relationship quality across studies of marketing relationships." " Meanwhile, "trust, commitment, and satisfaction on the part of the buyer are being indicated by conceptual relationship quality," as stated by Moorman, Deshpande, and Zaltman (1992). Moreover, "trust and satisfaction as key indicators of relationship quality" was stated by Crosby, Evans, and Cowles (1990). Hibbard et al.'s research, as reported in Verhoef et al. (2002) "Conceptualized relationship quality as a higher order construct with trust and commitment," strengthening the idea of relationship quality. Numerous findings from this research demonstrate how crucial it is for businesses to develop high-quality relationships along multiple axes, including trust, commitment, and satisfaction, which are essential to the long-term health of the relationships between sellers and buyers and, in the end, foster consumer loyalty.

H₇: Relationship quality has a positive and significant mediating effect on trust in business loyalty.

H₈: Relationship quality has a positive and significant mediating effect on business loyalty.

Simply said, business loyalty in a B2B context has to do with the mutual trust, respect, and quality of the resulting relationships. However, there are other factors, such as societal upheaval, that undermine the business's loyalty. Environmental instability, or simply environmental instability, is a factor that erodes trust and confidence in human relationships. For an organisation to have a positive impact on its business loyalty, a diverse and fast-growing environment must be cultivated with a sense of understanding and self-control (Gyedu, Heng, Albert, & Emmanuel, 2021; Utami, Mukhlis, & Rahayu, 2023).

As a result, the researcher offers this research hypothesis, which reinforces the elements of environmental unrest in an indirect manner and includes:

2.2.5. Environmental Turbulence

Customers' needs might be impacted by environmental instability; thus, businesses need to be nimble in their adaptation to stay in business. A successful marketing plan must be able to foresee shifting consumer wants and provide pertinent solutions. By altering government policies, industry standards, and business regulations, regulatory changes can impact B2B enterprises' competitiveness (Gyedu et al., 2021). Businesses that struggle to change fast may find it challenging to become more competitive. In order to achieve client pleasure and adhere to the terms of the collaboration contract, consistency is required. In a business-to-business (B2B) setting, relationship quality has a significant impact on business loyalty; however, environmental turbulence, which includes quick and unpredictable changes in external factors like technology, economics, regulation, and social factors, moderates this effect (Sun, Ding, & Price, 2020). The quality of strong relationships between organisation becomes increasingly vital to preserving loyalty in a highly dynamic and close-knit commercial environment.

H₉: Environmental turbulence moderates trust in business loyalty.

H₁₀: Environmental turbulence moderates' satisfaction with business loyalty.

H₁₁: Environmental turbulence moderates relationship quality on business loyalty.

3. METHOD

3.1. Sample and Data Collection

The population encompasses all projects and sub-projects with specific qualities and characteristics that researchers have selected for study and subsequent implementation. The population in this study consists of three clusters, each of which is a sugarcane farmer from the East Java region. The first batch of students included 20 PG (Sugar Factory) and are the third group of students. The People's Sugarcane Farmers' Cooperative's companions have confirmed this.

According to the management of the People's Sugarcane Farmers' Cooperative, there are around 973 sugarcane farmers in Cluster 1; there are 1,083 sugarcane farmers in Cluster 2 and 1,328 sugarcane farmers in Cluster 3. Thus, it can be seen that the number of sugarcane farmers in the four regional clusters is 3,384 people. The size of the sample, whether large or small, depends on the level of accuracy or significance the researcher desires. Based on the error rate scale, the maximum error rate in social studies subjects is 5% (0.05). The greater the error rate, the smaller the sample size. It is important to remember that as the sample size increases (in relation to the population), the chance of generalization will also increase. Conversely, when the sample size decreases (in relation to the population), the chance of generalization will increase. To calculate the sample size in this study, a net calculator was used. In this research, the sample size was determined at 346 samples of sugarcane farmers, which will be considered in the analysis. Therefore, the sample penetration test results can be as follows: Table 1 Present:

Table 1. Sample calculation.

No.	Information	Population	Number of calculations	Sample
1.	West	973	$973/3384 \times 346$	99
2.	Middle	1083	$1083/3384 \times 346$	111
3.	East	1328	$1328/3384 \times 346$	136
	Total		3384	346

Source: Dioalah researcher, 2023.

The skew is 271 for males and 75 for women since the study's respondents are sugarcane farmers, as seen by the presentation above, which shows that 88% of respondents are men and 88% are women. Therefore, it can be said that men make up the majority of respondents who are sugarcane farmers. Women between 25 and 30 and men between the ages of 35 and 40 make up the majority. Meanwhile, respondents with more than two years of business experience makeup the majority. Table 2 presents:

Table 2. Composite reliability.

Latent and indicator variables	Composite reliability	Cronbac'h alpha
Trust	0.886	0.838
Satisfaction	0.841	0.719
Relationship quality	0.848	0.730
Loyalty	0.873	0.782

Figure 1 illustrates how relationships mediate business loyalty, and environmental turbulence moderates the effect in business-to-business transactions.

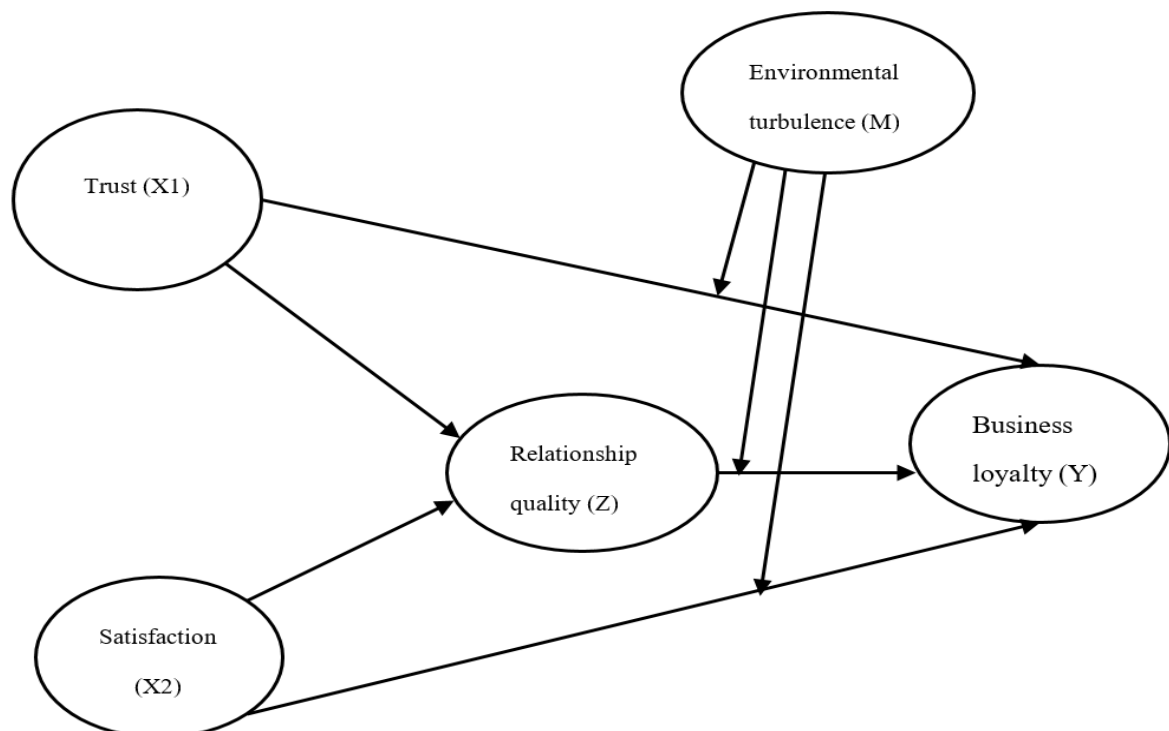


Figure 1. Relationship quality mediates the impact of trust and pleasure on business loyalty, while environmental turbulence moderates the effect in business-to-business transactions.

3.2. Research Instrument

This study employs the SEM-PLS analysis using the regression model, the outer model evaluation, and the inner model evaluation. This model of external validation evaluation looks at the results of external validation that will be determined by an indicator of the construct variable. An indicator is considered legitimate if its coefficient of

determination is between 0.6–0.7; nevertheless, for theoretical analysis that is not clear-cut, it is recommended to use an outer loading of at least 0.05 and to signify at a threshold of at least 0.05 or 1.96 for t-statistic (Ghozali & Hengky, 2018). In addition to looking at the outer loading, consistency validity may also be seen by looking at the Average Variance Extracted (AVE). The expected AVE value is more than 0.5% (Ghozali & Hengky, 2018). By comparing the loading on the completed construction to the loadings on the other construction, the validity score for construction serves as a cross- factor loading to determine whether a particular construct has adequate discriminants (Ghozali & Hengky, 2018).

When the indicator's optimal loading factor value exceeds 0.7, it is considered valid for measuring the construct. When assessing the inner model, the coefficient of determination (R-square/R²) is the primary factor to consider. The extent to which the independent variable affects the dependent variable is indicated by the magnitude of the R² coefficient. It is possible to determine that the model is strong, moderate, and weak if the R² values are 0.75, 0.50, and 0.25. Relevance Predictive (Q-square/Q²). Q² measures the quality of the observation value the research model generates. The model's strength and weakness are determined by the Q² value, which falls between 0 and the following values: 0.35 (strong model), 0.15 (moderate model), and 0.02 (weak model). Index of Goodness of Fit. The range of values for the coefficient is 0 to 1. The measurement—0.36 for large, 0.25 for medium, and 0.10 for tiny—is the basis for the model's strength and weakness criteria (Ghozali & Hengky, 2018).

A Likert scale ranging from 1 to 5 is employed as the study instrument for every variable, and its explanation is as follows: Trust: Liu, Huang, and Fan (2018) found that five indications from this variable have an outer loading value of Reliable, which is 0.847; High integrity, which is 0.821; and Trustworthy, which is 0.767. Keep your word, or 0.726; maintain a positive brand image, or 0.716.

Contentment: This variable has three indicators with values outside of loading that match (W. Kim, Kim, & Hwang, 2020). The customer is satisfied with the price (0.764), performance (0.877), and flexibility (0.727). Relationship Quality: This variable contains three indications, with an outer loading quality relationship value of 0.799, mutual relationship of 0.852, and consistency of 0.749, that correlate to Business Loyalty: according to Nguyen, André, and Gaston (2013) and Crisafulli, La, and Jaywant (2022) this variable has three indicators. The outer loading values of the indicators are Intention (0.829), Recommendation (0.873), and Stay Loyal (0.794). Environmental Turbulence: Keep in mind that this variable has indication 3, which has an outer loading value of dynamism (0.827), complexity (0.917), and predictability (0.796).

3.3. Convergent Validity

Convergent validity is the property where each construct's criterion has an average variance extracted (AVE) value of at least 0.5. The findings of the analytical test between the variables are displayed in Table 3.

Table 3. Convergent validity test results.

Latent and indicator variables	AVE
Trust	0.609
Satisfaction	0.639
Relationship quality	0.650
Loyalty	0.696
Environmental turbulence	0.650

Table 3 indicates that if the Average Variance Extracted (AVE) value is more than 0.5 for each construct, then all of the constructs have satisfied the convergent validity conditions and are deemed valid.

4. RESULTS

4.1. Demographic

346 questionnaires in all were deemed eligible and returned. Every data set got additional analysis. According to the poll results, of the 346 respondents, 88% were men (304), while the remaining 12% were women (42). Therefore, the majority of sugarcane farmers are men between ages of 51 and 55. Sugar cane growers who have been in business for more than 20 (twenty) years make up 40% of the workforce, or 139 individuals. 93 persons, or 27% of the population, work as sugar cane growers and have been in the industry for 15 to 20 years. Seven, or 2% of the respondents, are farmers who own all of their land. Then, 31%, or 107 respondents, were farmers whose ownership status was greater than 50% of their own land. In the meantime, 232 respondents, or 67% of the total, had ownership statuses of more than 50% of rental land. Ten, or 3%, of respondents owned less than five hectares of land. Thirteen percent of respondents, or five to ten hectares, were landowners. The percentage was 18%, or 62 responders, for those whose land area was between 10 and 15 hectares. 27%, or 93 respondents, own land between 15 and 20 hectares. The remaining 43%, or 149 responders, were those whose land area was greater than 20 hectares.

4.2. Analysis

The analysis findings serve as the basis for this study's conclusions. A structural model testing step, comprising model quality path coefficient of determination (R^2), effect (f^2), and cross validated redundancy (Q^2) tests, is used to evaluate the inner model. It is vital to use the VIF value to determine whether multicollinearity exists between the indicators in the formative block before moving on to the inner model evaluation study. Table 4 displays the VIF values obtained from this study.

Table 4. Multicollinearity test.

Construct	Indicator	VIF
Trust	X1.1	1.455
	X1.2	1.517
	X1.3	1.574
	X1.4	1.546
	X1.5	1.427
Satisfaction	X2.1	1.406
	X2.2	1.772
	X2.3	1.353
Relationship quality	Z1	1.542
	Z2	1.361
	Z3	1.467
Loyalty	Y1	1.558
	Y2	1.704
	Y3	1.630
Environmental turbulence	M1	2.360
	M2	2.879
	M3	1.469

Based on the results in Table 4, showing that each indicator in each construct has a $VIF < 5$, it can be said that each indicator in each group has met the requirements for further analysis.

4.3. Coefficient of Determination (R^2)

It is anticipated that the coefficient of determination (R^2) value will be 0-1. The coefficient of determination, according to Hair Jr, Black, Babin, and Anderson (2014) can be category into three values: $R^2 = 0.75$ for high prediction accuracy (substantial), $R^2 = 0.5$ for moderate prediction accuracy (moderate), and $R^2 = 0.25$ for weak prediction accuracy (weak). According to Hair Jr et al. (2014) the R square values are 0.19 (weak), 0.67 (strong), and

0.33 (moderate). The Coefficient of Determination (R^2) analysis yielded the following findings, which are displayed as follows.

Table 5. Coefficient of determination (R^2).

Variable	R square	R square adjusted
Business loyalty (Y)	0.876	0.874
Relationship quality (Z)	0.500	0.497

Table 5 presents the analysis results. The R^2 value for business loyalty is 0.876, and the relationship quality (Z) is 0.500, indicating a moderate level of prediction accuracy. On the other hand, the R square value that has been adjusted in light of the standard error value is known as the adjusted R square. When evaluating an exogenous construct's capacity to explain an endogenous construct, the modified R square value offers a more compelling picture than R square. Table 4.23 reveals an adjusted R square value of 0.874, or 87.4%, for loyalty performance (Y), which indicates that variables X1 and X2 simultaneously influence business loyalty (Y). Meanwhile, an adjusted R square value of relationship quality (Z) of 0.500, or 50%, is found, suggesting that factors X1 and X2 have an impact on relationship quality (Z) at the same time.

The analysis conducted using Smart-PLS3 yielded the following results, which are displayed in **Figure 2**.

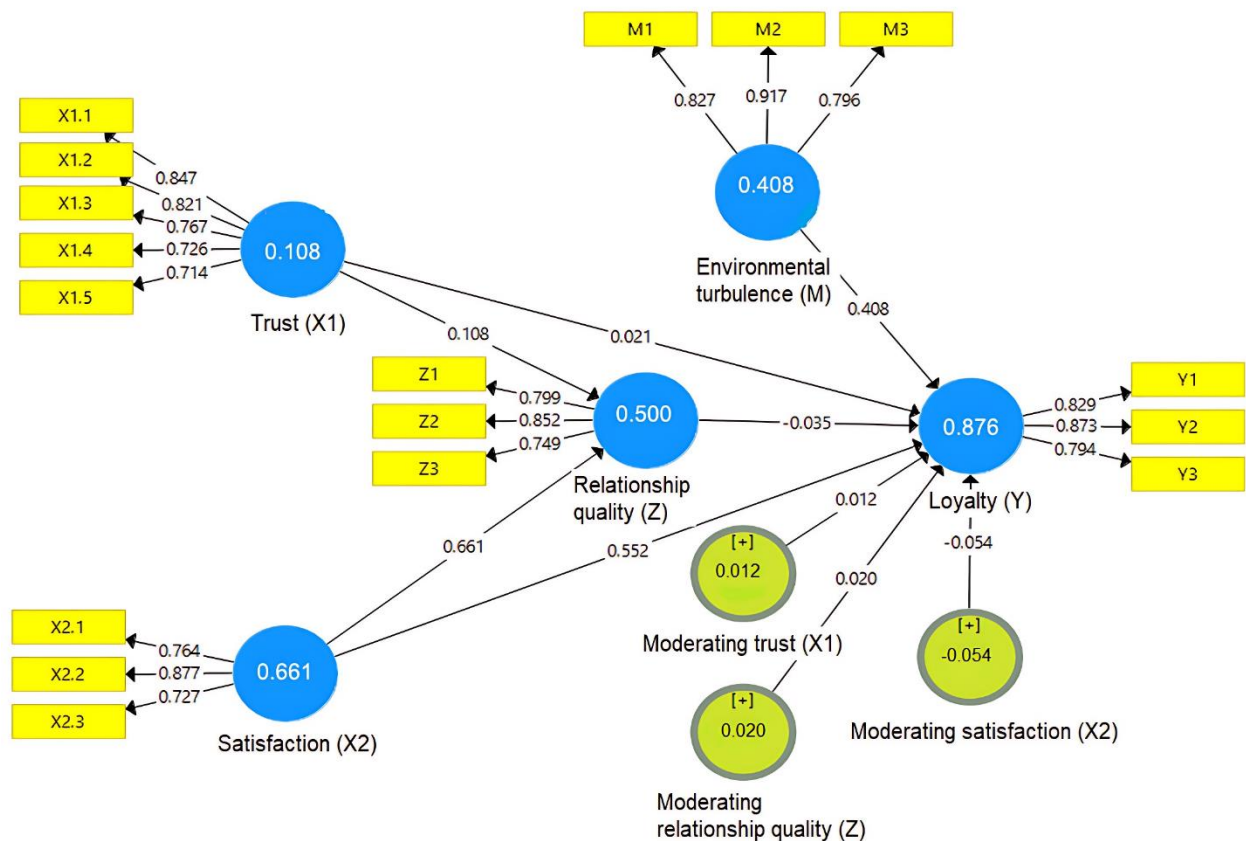


Figure 2. Smart-PLS analysis results.

Based on **Figure 2**, it shows that there is a path analysis between variables, namely trust/belief (X1), satisfaction/satisfaction (X2), relationship quality/relationship quality (Z), customer loyalty (Y), and environmental turbulence/environmental turbulence (M). Smart-PLS 3.0 presents the data analysis in the following format:

Table 6. Hypothesis testing between variables.

Path	Coefficient	T statistics (O/STDEV)	P values	Hypothesis
Direct effect				
Trust (X1) -> Customer loyalty (Y)	0.021	1.094	0.274	Rejected
Satisfaction (X2) -> Customer loyalty (Y)	0.552	6.301	0.000	Accepted
Trust (X1) -> Relationship quality (Z)	0.108	2.460	0.014	Accepted
Satisfaction (X2) -> Relationship quality (Z)	0.661	16.822	0.000	Accepted
Relationship quality (Z) -> Customer loyalty (Y)	-0.035	0.816	0.415	Rejected
Environment turbulence (M) -> Customer loyalty (Y)	0.408	5.489	0.000	Accepted
Mediation effect				
Trust (X1) -> Relationship quality (Z) -> Customer loyalty (Y)	-0.004	0.698	0.485	Rejected
Satisfaction (X2) -> Relationship quality (Z) -> Customer loyalty (Y)	0.491	8.854	0.000	Accepted
Interaction effect				
Environment turbulence (M) -> Trust (X1) -> Customer loyalty (Y)	0.012	0.651	0.515	Rejected
Environment turbulence (M) -> Satisfaction (X2) -> Customer loyalty (Y)	0.020	2.132	0.034	Accepted
Environment turbulence (M) -> Relationship quality (Z) -> Customer loyalty (Y)	-0.054	0.749	0.454	Rejected

Based on Table 6, the results of the path analysis above explain that there are 11 hypotheses that are reviewed explicitly as follows: Hypothesis 1, The parameter coefficient for the *trust* variable (x_1) on *customer loyalty* (Y) is 0.274, which means that there is a positive effect of *trust* (x_1) on *customer loyalty* (Y), which means that it can be interpreted that the higher the value of variable Y will also increase. An increase in the *trust* variable (x_1) will increase the *customer loyalty* variable (Y) by 27.4%. Based on calculations using *bootstrap* or *resampling*, where the test results of the variable estimation coefficient (x_1) on (Y) are 0.274 with a t value of 1.094 and a standard deviation of 0.019. Then the *p-value* of $0.274 > 0.05$, so that H_a is rejected and H_0 is accepted. This means that there is no significant direct influence between *trust* (x_1) and *customer loyalty* (Y). Therefore, it can be interpreted that it is not statistically meaningful or statistically insignificant. So it can be said that there is no effect of *trust* on B2B *customer loyalty*.

Hypothesis 2: An increase in the *satisfaction* variable (x_2) will increase *customer loyalty* (Y) by 55.2%. Based on calculations using *bootstrap* or *resampling*, where the test results of the variable estimation coefficient (x_2) on (Y) are 0.552 with a t value of 6.301 and a standard deviation of 0.088. Then the *p-value* is $0.000 > 0.05$, so that H_a is accepted and H_0 is rejected. This means that there is a significant direct influence between the *satisfaction* variable (x_2) and *customer loyalty* (Y). Therefore, it can be interpreted that it is statistically meaningful or statistically significant. So it can be said that there is an influence of *satisfaction* on B2B *customer loyalty*.

Hypothesis 3: The increase in *trust* (x_1) is 10.8%. Based on calculations using *bootstrap* or *resampling*, where the test results of the estimated coefficient of *trust* (x_1) on *relationship quality* (Z) are 0.108 with a t value of 2.460 and a standard deviation of 0.044. Then the *p-value* is $0.014 < 0.05$, so H_a is accepted and H_0 is rejected. This means that there is a direct effect of *trust* (x_1) on *relationship quality* (Z). Therefore, it can be interpreted that it is statistically meaningful or statistically significant. So, it can be said that there is a positive and significant effect of *trust* on B2B *relationship quality*.

Hypothesis 4: The increase in *satisfaction* (x_2) amounted to 66.1%. Based on calculations using *bootstrap* or *resampling*, where the test results of the estimated coefficient of *satisfaction* (x_2) on *relationship quality* (Z) are 0.661 with a calculated t value of 16.822 and a standard deviation of 0.039. Then the *p-value* is $0.000 < 0.05$, so that H_a is accepted and H_0 is rejected, which means that there is a direct effect of *satisfaction* (x_2) and *relationship quality* (Z). Therefore, it can be interpreted that it is statistically meaningful or statistically significant. So it can be said that there is a positive and significant effect of *satisfaction* on B2B *relationship quality*.

Hypothesis 5: The test result of the estimated coefficient of the *relationship quality* variable (Z) on *customer loyalty* (Y) is -0.335 with a t value of 0.816 and a standard deviation of 0.043. Then the *p-value* is $0.415 > 0.05$, so H_a is

rejected and H_0 is accepted. This means that there is no significant direct influence between *relationship quality* (Z) and *customer loyalty* (Y). Therefore, it can be interpreted that it is not statistically meaningful or statistically insignificant. So it can be said that there is no effect of *relationship quality* on B2B *customer loyalty*.

Hypothesis 6: The estimated coefficient of the variable *environment turbulence* (M) on *customer loyalty* (Y) is 0.408 with a t value of 5.489 and a standard deviation of 0.074. Then the *p-value* of $0.000 > 0.05$, so that H_a is accepted and H_0 is rejected, or there is a significant direct influence between *environmental turbulence* (M) and *customer loyalty* (Y). Therefore, it can be interpreted that it is statistically meaningful or statistically significant. So it can be said that there is an influence of *environmental turbulence* on B2B *customer loyalty*.

Hypothesis 7: The test results of the estimated coefficient of *trust* (X_1) on *customer loyalty* (Y) through *relationship quality* (Z) of 0.004 with a calculated t value of 0.698 and a standard deviation of 0.005, the *p-value* of $0.485 > 0.05$, so that H_a is rejected and H_0 is accepted, which means that there is no effect of *trust* (X_1) on *customer loyalty* (Y) through *relationship quality* (Z). This implies that the relationship is neither meaningful nor statistically significant. So it can be said that there is no effect of *trust* on *customer loyalty* through *relationship quality*.

Hypothesis 8: The test results of the estimated coefficient of *satisfaction* (X_2) on *customer loyalty* (Y) through *relationship quality* (Z) of 0.491 with a calculated t value of 8.854 and a standard deviation of 0.055, then the *p-value* of $0.000 > 0.05$ so that H_a is accepted and H_0 is rejected, which means that there is an effect of *satisfaction* (X_2) on *customer loyalty* (Y) through *relationship quality* (Z) that is meaningful or statistically significant. So it can be said that there is an influence of *satisfaction* on *customer loyalty* through *relationship quality*.

Hypothesis 9: The test coefficient estimate of *trust* (X_1) on *customer loyalty* (Y) moderated by *environmental turbulence* (M) is 0.012 with a calculated t value of 0.651 and a standard deviation of 0.019, then the *p-value* of $0.515 > 0.05$ so that H_a is rejected and H_0 is accepted, which means that there is no effect of *trust* (X_1) on *customer loyalty* (Y) moderated by *environmental turbulence* (M), which means it is not meaningful or statistically significant. So it can be said that there is no effect of *trust* on *customer loyalty* moderated by *environmental turbulence*.

Hypothesis 10: The coefficient estimate of *satisfaction* (X_2) on *customer loyalty* (Y) moderated by *environmental turbulence* (M) is 0.020 with a calculated t value of 2.132 and a standard deviation of 0.025, then the *p-value* is $0.034 > 0.05$ so that H_a is accepted and H_0 is rejected, which means that there is an effect of *satisfaction* (X_2) on *customer loyalty* (Y) moderated by *environmental turbulence* (M). This means that it is meaningful or statistically significant. So it can be said that there is an effect of *satisfaction* on *customer loyalty* moderated by *environmental turbulence*.

Hypothesis 11: The test coefficient estimate of *relationship quality* (Z) on *customer loyalty* (Y) moderated by *environmental turbulence* (M) is -0.054 with a calculated t value of 0.749 and a standard deviation of 0.027, then the *p-value* of $0.454 > 0.05$ so that H_a is rejected and H_0 is accepted, which means that there is no effect of *relationship quality* (Z) on *customer loyalty* (Y) moderated by *environmental turbulence* (M). This indicates that the results are neither meaningful nor statistically significant. So it can be said that there is no effect of *relationship quality* on *customer loyalty* moderated by *environmental turbulence*.

5. DISCUSSION

This research aims to investigate the impact of trust and confidence in the quality of interactions with surrounding environment on company operations. The six hypotheses can be accepted, according to the findings of the statistical test.

5.1. The Relationship between Customer Loyalty (Y) and the Variable Trust (X_1) in B2B

The research results from the data analysis show no support for the first hypothesis. The study's findings also demonstrate that the indication that offers comfort during transactions has the lowest average value. The majority of respondents stated that the process for determining sugarcane yield was opaque in the industry. Farmers have not been satisfied with yield determination thus far. The agency theory of Jensen and Meckling (1976) which

emphasises the possibility of conflicts of interest between principals and agents, is not supported by this research. Principals aim to maximise output and profits, but agents prioritise their own well-being and financial security. Agent loyalty may be compromised if they believe the principal's decisions don't reflect their interests. This can lead to distrust. Sugarcane producers feel constrained in how much sugarcane they can plant when minimum yields are enforced. The research's conclusions are related to the characteristics of sugarcane plants, which require less upkeep than other crops and are frequently grown by farmers as a means of cutting expenses. Farmers think that the factory will still accept their sugarcane for grinding, no matter how good their yield is. This is not incorrect, as sugar facilities have a minimum yield guarantee in place. The sugar plant responded to the sugar cane growers' actions.

5.2. The Relationship between B2B Customer Loyalty and Customer Loyalty (Y) and Satisfaction/Satisfaction (X2)

The research findings from the data analysis show support for the second hypothesis. Examine This lends credence to the agency theory of [Jensen and Meckling \(1976\)](#) which highlights the significance of principals and agents' incentives being aligned in order to guarantee that both sides strive toward the same objectives. Effective TRK initiatives typically entail effective communication between farmers and sugar businesses. Regular meetings, open reporting on sugarcane pricing, and helpful criticism help farmers feel more appreciated and involved. Connection marketing theory, which asserts that establishing, preserving, and continuously enhancing client relationships is a crucial component of business, corroborates the findings of this study. The study's findings clarify that B2B loyalty has a favorable effect on follow-up connections in the future. Customer relationship marketing (CRM) will be sent automatically to groups of sugar cane producers who are thought to be devoted to this cooperation. If a customer deposits their harvest more than three times, they are deemed loyal. Previous research by [Kim and Kumar \(2018\)](#); [Luu, Ngo, and Cadeaux \(2018\)](#) and [Siregar et al. \(2021\)](#) also supports this study, stating that loyal customers are an attitude that arises within consumers and customers to continue using products or services from partner companies.

5.3. The Influence of Trust (X1) on B2B Relationship Quality (Z)

The research findings from the data analysis show support for the third hypothesis. The study's findings also clarify that all indications point to respondents' participation in all TRK programs offered by sugar cane growers as a sign of good faith in order to build a positive rapport with the sugar plant. The members' response is considered strong because of the program's enticing features, which include easy fund movements and a comparatively low loan interest rate. The study's findings are consistent with the Relationship Marketing Theory, which holds that the presence of a long-term marketing relationship influences consumer satisfaction and fosters the development of strong bonds between partners. Previous research by [Sharma, Saha, and Balaji \(2022\)](#) and [Brown, Crosno, Liu, and Dev \(2020\)](#) indicates satisfaction has an impact on B2B relationship quality, and satisfaction also supports the findings of this study.

Based on variable description data, which indicates a major influence that the services promised in the TRK program are accurate and dependable, the impact of trust on relationship quality is examined. The results of the analytical computations employed have a major impact. Promised offers are used by B2B companies to enhance the quality of their relationships. In this study, the majority of sugarcane farmers participating in the TRK program are between the ages of 35 and 40, with men making up the majority of the respondents. Sugar cane growers who consistently deposit their harvests into sugar mills are the living proof of the promises given by sugar companies under the TRK program. Previous studies by [Ansori \(2022\)](#) also corroborate the findings of this study. These studies show that a variety of factors, including adaptability, shared values, communication, opportunistic behavior, satisfaction, and cooperation, contribute to the formation of trust.

5.4. *The Influence of Satisfaction/Satisfaction (X2) on B2B Relationship Quality (Z)*

The research results from data analysis confirm the acceptance of the fourth hypothesis. The findings of this study support the Relationship Marketing Theory, which states that B2B loyalty has a favorable effect on subsequent follow-up partnerships. Consequently, using B2B customer relationship marketing (CRM) will be sent automatically to group sugarcane producers who are thought to be devoted to this cooperation. A customer is considered loyal if they deposit their harvest more than three times. Previous research by [Kim and Kumar \(2018\)](#); [Luu et al. \(2018\)](#) and [Siregar et al. \(2021\)](#) supports this study as well, stating that loyal customers are an attitude that forms inside consumers and customers to continue utilizing products or services from partner companies. The study's findings corroborate the assertion of [Auh and Shih \(2005\)](#) and [Leonidou, Bilge, Thomas, and Paul \(2017\)](#) which suggest that a company's capacity to maintain a positive customer relationship is crucial to its sustainability in the business world. This assertion implies that relationships play a vital part in every organization. Relationship marketing is crucial in business-to-business (B2B) transactions due to its intangible qualities, which make it challenging for clients to assess the procedure graphically ([Brown et al., 2020](#)). Successful relationship marketing initiatives can foster strong relationships between partners. Consequently, in this instance, relationship quality can be utilized as a variable or benchmark to assess the partnership program's success.

5.5. *The Influence of Relationship Quality (Z) on B2B Loyalty (Y)*

The research findings from the data analysis led to the rejection of the fifth hypothesis. The study's findings are consistent with the agency theory, which examines how partners' divergent perspectives and sets of rules lead to the poor caliber of relationships that are formed within the organization. It is consistent with research findings that relationship quality and customer loyalty have no correlation, as seen by situations observed in the field. The purpose of the poor relationship quality, according to this research, is to preserve and strengthen long-term client relationships. The study's findings reveal the frequent application of two methods to define and assess loyalty. The first approach is based on behavior, while the other technique is based on different attitudes. Behavioral loyalty is the result of customers making repeat purchases, which over time shows that they value the quality of the products from a specific brand. There are two aspects to loyalty: partnerships that need to decide if they will continue to receive a portion of the customer's spending and questions that need to be asked while the client is still actively using the services. The study aims to shift partner companies' attention from acquiring new business to keeping existing clients by making them realize that B2B loyalty is a reliable indicator of how well a sugar factory is performing in comparison to its rivals.

5.6. *The Influence of Environmental Turbulence (M) on Customer Loyalty (Y) B2B*

The sixth hypothesis was approved in light of the data analysis research findings. The study's findings are consistent with the agency theory, which describes how variations in governmental rules can cause internal and external environmental turbulence that might affect the loyalty of B2B businesses. Field conditions show that because sugar cane is only harvested once a year, farmers find it difficult to collect the highest-quality cane because of environmental turbulence. The sugarcane harvesting process, which occurs during the dry season around May, creates environmental turbulence. Sugarcane plants are at their best and have excellent production levels during the dry season. A manual loading and transport procedure comes right after the harvesting (cutting) operation. Aside from the unrest in the field, this can spur sugar cane growers to strengthen their resilience to environmental unpredictability and maintain their competitiveness, particularly in the harvest season. If there is a delay in depositing the harvest because of environmental disturbances, sugar plants provide a remedy by relocating the sugarcane or possibly grinding it to another factory. If they discover that a sugarcane farmer is exporting sugarcane to another mill against the terms of the agreement, they will face repercussions, including questions, reprimands, and reminders that they are required to repay the full loan. It claims that the sugar factory corporation

strongly requested and required good service from the sugar cane farmers prior to engaging in a transactional contract.

5.7. The influence of Relationship Quality (Z) Mediates Trust (X1) on Customer Loyalty (Y) B2B

The sixth hypothesis in this study was found to be consistent with agency theory, which describes how variations in government regulations can cause internal and external environmental turmoil that may influence B2B business loyalty. As field conditions show, sugar cane farmers can only produce a harvest once a year, so farmers have difficulty collecting the best quality sugar cane due to environmental turmoil. The process of harvesting sugar cane only occurs in the dry season around May and also causes environmental turbulence. Even though in the dry season there is environmental turbulence, sugar cane plants are in their best condition and have very good production levels in the dry season. Manual loading and transport procedures are carried out after harvesting (cutting) operations. Apart from turmoil in the field, this can also encourage sugar cane farmers to strengthen their resilience to environmental uncertainty and maintain their competitiveness, especially during the harvest season. If there is a delay in depositing the harvest due to environmental disturbances, the sugar factory provides a solution by relocating the sugar cane or perhaps grinding it to another factory. Therefore, with uncertain environmental conditions, if it is discovered that a sugarcane farmer is exporting to another factory, this will have an impact on the terms of the agreement, and there will also be a warning for the sugarcane farmer, and he will have to pay back the entire loan. The sugar factory only wants good service from the sugar cane farmers before entering into a transaction contract.

5.8. Relationship Quality (Z) has an Impact on B2B Customer Loyalty (Y) through mediating Satisfaction / Satisfaction (X2)

The eighth hypothesis received approval based on the study's findings. The study's findings suggest that a key mediating factor in B2B loyalty is connection quality. This favorable influence suggests that sugarcane growers are more satisfied when there is a greater quality interaction between the factory and the farmers. These findings corroborate studies by [Chung and Chen \(2015\)](#) who found that higher-quality relationships will increase consumer satisfaction. This study bolsters the claims made by agency theory, which states that strong relationships can serve as a link between consumer loyalty and satisfaction. Being a major player in the sugar processing services industry, the sugar plant will undoubtedly rely heavily on the nature of these relationships, particularly with its suppliers. Positive customer-provider relationships are a direct result of relationship marketing initiatives that are successful. Therefore, the business can use relationship quality as a gauge or standard to evaluate its effectiveness in enhancing client loyalty.

5.9. The Influence of Environmental Turbulence (M) Moderates Trust (X1) on B2B Customer Loyalty (Y)

The ninth hypothesis was disproved based on the findings of the data analysis research. The study's findings are consistent with agency theory, which states that principals have two ways to lessen agency issues, and both of them can lessen the agent's opportunistic behavior ([Eliashberg, LaTour, Rangaswamy, & Stern, 1986](#)). First, provide a governance framework capable of tracking and evaluating real-world agent activity. Second, establish a governance framework that addresses every issue, particularly in situations where contracts are dependent on the actions of agents and there is turbulence both inside and outside the organization. The study's findings demonstrate that sugarcane farmers' belief that they will be dependable partners in the government sugar factory is undermined by the effects of environmental instability. Farmers who grow sugarcane run the danger of suffering a loss when there is environmental volatility.

5.10. *The Influence of Environmental Turbulence (M) Moderates Satisfaction/Satisfaction (X2) on B2B Loyalty/Loyalty (Y)*

The analysis of the obtained hypothesis data yielded significant findings. This study is in line with the Relationship Quality Theory, which states that a good quality relationship will result in customer loyalty, understanding, and respect, but not in the case of environmental degradation that is not in line with regulations. The results of this study indicate that the previous research's findings, which stated that if there was any effect of quality-quality and loyalty-satisfying relationships, the environment's turbulent conditions would moderate it [Auh and Shih \(2005\)](#). Sugarcane farmers realize that environmental turbulence has an impact on their harvests, such as the quality of the sugarcane produced, such as the selection of seeds, with the presence of superior brands, which are necessary to get the highest value in determining prices. However, the stated condition indicates that many people are hesitant to achieve high-quality cane due to weak muscles, particularly in the eyes, which frequently undergo non-seminal changes.

5.11. *The Influence of Environmental Turbulence (M) Moderates Relationship Quality (Z) on Customer Loyalty (Y) B2B*

The result of the data analysis investigation revealed no support for the eleventh hypothesis. This study contradicts the Relationship Marketing Theory, which holds that despite the existence of a marketing chain that encourages cooperation between partners, business pressure still creates barriers that lead to the poor quality of the relationship between sugar factories and sugar cane farmers. The study's findings elucidate the mediation of relationship quality and loyalty in the absence of environmental instability. These findings are corroborated by earlier studies, which claim that environmental turbulence is a state of affairs that businesses must deal with due to intense pressure, dominance, harshness, and high risk [\(Kim & Kumar, 2018\)](#). Turbulence in the environment has the potential to drastically alter business conditions. Businesses cannot stop environmental changes in the economic, health, or other domains; neither can they be certain nor controlled. Whether they like it or not, companies must be able to take action to survive and navigate environmental turbulence [\(Sun et al., 2020\)](#).

6. CONCLUSION

The findings of this research support the notion that the sustainability or welfare of sugar factories and sugarcane farmers is significantly influenced by company loyalty. The reason is that sugarcane farmers do not know the distribution of their harvest without a partnership scheme. Furthermore, the TRK cooperation program carried out by the government can help sugarcane farmers receive subsidies in accordance with established laws and regulations. These partnership initiatives, also known as business-to-business (B2B) ideas, place more emphasis on the quality of the relationship rather than revenue to build trust and satisfaction among sugarcane farmers. The researchers show that the trust factor between sugarcane farmers and sugar producers is negligible; this is due to the poor quality of relations caused by unilateral cuts and poor socialization regarding fertilizer subsidies. Reports indicate that the TRK program in East Java has not effectively incorporated the trust aspect. However, to show positive and significant results in terms of business loyalty, it is necessary to strengthen greater bonds of trust and provide satisfaction factors among sugar cane farmers. This can be strengthened by the current environmental turmoil, which can result in an unyielding attitude among sugarcane farmers. Participating in the TRK program remains highly effective in fostering enduring relationships.

7. IMPLICATIONS

Surrender to Loyalty: This research shows that trust is an important factor that can influence the loyalty of sugarcane farmers among business actors. Trust is believing that another party will act in his best interests and according to his expectations. Positive interactions, open communication, and commitments can build trust between suppliers and manufacturers in a business-to-business context. This is related to agency theory, which states that if the principal and agent have identical information (information symmetry), an agency-to-agent management

structure will emerge, where the agent's performance assessment is based on the team's performance. This is a compensation payment for low productivity. Risks are communicated to agents to develop motivation so that agent operations are aligned with fundamental requirements. This trust can increase the enthusiasm and loyalty of sugarcane farmers towards sugar suppliers. In a business-to-business context, sugarcane farmers can work with sugar suppliers to obtain transparent prices, high-quality service, and guarantees. Trust has the potential to increase the impact sugar cane farmers have on sugar companies. As sugarcane farmers continue to undermine sugar companies, they will become increasingly reluctant to merge with other companies.

Concerns over loyalty: A person's experience of a product or service is important. Satisfaction refers to positive feelings. A variety of factors, including the product price, the quality of care, and the protection offered to the supplier, can influence the relationship between pet suppliers and manufacturers in a B2B context. High pressure can increase the loyalty of sugarcane farmers towards sugar suppliers. All of this supports agency theory, which argues that it is based on the human economic model. This model suggests that every organization should maximize its utility (satisfaction). Satisfaction is a crucial factor. Sugarcane farmers will continue to cooperate and increase loyalty greatly when their odds are high.

Relationship quality mediates the relationship between trust and satisfaction. This study demonstrates that the relationship between trust and pleasure with loyalty is mediated in part by the quality of the relationships. According to agency theory, agents will act in a self-interested way that can be at odds with the principal's interests. In order to prevent opportunistic behavior and ensure that the agent complies with the principal's wishes, the principal establishes a partnership relationship mechanism that oversees the agent. The term "relationship quality" describes how one feels about the quality of their relationship with the other person. In a business-to-business setting, factors such as trust, communication, commitment, and conflict can evaluate the relationship quality between sugarcane farmers and sugar mills. The happiness and loyalty of sugarcane farmers toward partner companies can be raised by high-quality relationships. According to these results, sugar mills should concentrate on developing strong bonds with sugarcane growers in order to win their allegiance.

Turbulence in the environment moderates satisfaction and trust. This study demonstrates how environmental volatility moderates the relationship between trust, enjoyment, and loyalty. According to contingency theory, the efficacy of a practice or strategy depends on a number of circumstances. Satisfaction and trust may not be enough to maintain customer loyalty in unstable economic conditions. This is because consumers may be more inclined to switch to competitors when they are uncertain about the future. Complex systems can behave in unpredictable ways, as described by complexity theory. One aspect that may contribute to business system complexity is environmental volatility. When there is a significant environmental disruption, businesses may struggle to effectively manage their client relationships. This can reduce the importance of satisfaction and trust in determining customer loyalty. Environmental turbulence refers to the degree of uncertainty and change in the business environment. Turmoil in the business-to-business environment can be caused by a number of things, including changes in government, stringent competition policies, and changes in commodity prices. Sugarcane producers may face greater risks and uncertainties in an environment experiencing significant volatility. This conclusion implies that, under stable environmental conditions compared to tumultuous ones, the influence of trust and satisfaction on loyalty may be greater. These results apply to a variety of business-to-business (B2B) settings in the agricultural sector.

Sugar must create transparent and open communication with sugar cane farmers. This can be done by maintaining regular procedures and providing accurate and timely information regarding share prices, company policies, and market conditions. Sugar factories need to provide information about the welfare of sugar cane farmers. This can be achieved by offering programs that benefit pet owners, such as training, maintenance, and insurance programs. Tea producers must provide fair and competitive tea prices to tea farmers. Reducing production costs and market prices can achieve this. The business world must always provide support to its employees. This can be

achieved by providing instruction, guidance, and access to modern technology. The business world must establish effective communication with its neighbors. This can be done by using various communication tools, such as face-to-face meetings to explain work programs related to various government regulations, conducting a more thorough evaluation of each teacher's database, and providing a TRK system that can increase teacher morale and decide on sugarcane farmers. Business people who handle sugar must be aware of the striking differences between the sugar business and sugarcane farmers. This can be achieved by creating a strong, transparent, and durable network. The business world must prioritize commitment and teamwork with neighboring countries, especially in situations where the level of environmental degradation is very high. Developing highly beneficial programs, like business and treasury development programs, can help trees grow and prosper in conditions that are gradually deteriorating. Businesses can use digital platforms to improve communication, transparency, and safety for employees, especially in environments with high levels of volatility. This can be achieved by developing mobile applications, online platforms, and social media to provide easily accessible information, training, and services for tutors. Businesses can use appropriate technology to help their employees increase productivity and efficiency. Businesses can achieve this by providing training on new technologies, including pressure sensing technology, efficient irrigation systems, and contemporary pressure sensing devices.

8. RECOMMENDATION

There is a lot of room for advancement in the study of the business-to-business (B2B) interactions between sugarcane growers and sugar manufacturers. It is recommended that future studies investigate the variables that affect sugarcane production's quantity and quality as well as how they affect sugar mills' operational efficiency. The investigation of cultivation methods, the application of agricultural technology, and the choice of superior sugarcane varieties are all possible components of this study. To develop a more successful and long-lasting collaboration model between the two sides, academics can also look at how the function of economic incentives and governmental regulations affects this B2B connection. Socioeconomic characteristics include farmers' educational attainment, access to market knowledge, and capacity to finance the adoption of new technologies, which are additional elements that could impact the business-to-business (B2B) connection between sugarcane farmers and sugar manufacturers. Environmental factors like soil quality, water availability, and climate change all have a significant impact. Researchers should consider a multidisciplinary approach that combines agricultural economics, environmental science, and agricultural technology to present a comprehensive picture and practical solutions for the growth of the sugar sector.

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