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Farmers' Farm Performance is Correlated with the Dimensions of Relationship Marketing: A Study in Bangladesh

F. Iris[1], N.M. Nawi[1], N. Man[1], N.N. Ramli[1], U.M. Taj[2]

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ABSTRACT

Background: Nowadays, many individuals are moving toward business relationships, becoming closer and developing business ties with their business partners in the supply chain. Relationship marketing could underpin strategic marketing in minimizing economic problems and enhancing business performance. However, there is little emphasis on how relationship marketing constructs influence paddy farmer's business, specifically theory-based empirical research. Therefore, the objective of this study is to examine the relationship between relationship marketing components (trust, communication and satisfaction) and paddy farmer's farm performance in Bangladesh.

Methods: A validated survey instrument was used for data collection and 356 paddy farmers were interviewed applying systematic random sampling from the district of Mymensingh in Bangladesh. Partial Least Square Structural Equation Modeling (PLS-SEM) was used in data analysis.

Result: The findings revealed that trust, communication and satisfaction had direct relationships with farmers' farm performance. It was also revealed that satisfaction was a mediator in the indirect relationship between trust and performance. In enhancing farmer's farm performance, this study suggested that it would be beneficial to practice a long-term relationship marketing strategy instead of a traditional marketing approach in the agriculture context.

Key words: Communication, Farm Performance, Relationship Marketing, Satisfaction, Trust.

INTRODUCTION

Bangladesh has a population of 161 million people, where 77% of people depend on agriculture directly or indirectly for their livelihood (Islam *et al*., 2018). In Bangladesh, most paddy farms are small and poor in achieving an economic return. The paddy farmers faced numerous challenges that weaken their bargaining power in marketing channels (Rahman *et al*., 2005). Farmers also suffer severely from the lack of storage, transport facilities and access to credit that would otherwise benefit them in terms of profit (Ahmad, 2017; Sultana, 2012). It is often observed that middlemen and paddy traders have formed a syndicate to rob farmers of a fair price (Hoque, 2019).

In the paddy market, while many relationships marketing has been built over the years, their domain is largely based on transactional exchange rather than value creation and is significantly influenced by factors such as power and dependence (Mujeri, 2019). Paddy buyers sometimes exploit farmers (Ray 2018) and hide market information from the farmers (Quddus and Kropp, 2020). Thus, farmers cannot trust middlemen and become dissatisfied in the business transaction (Murshid, 2011). Due to the traditional marketing method (Miah and Moniruzzaman, 2020), oligopolistic market structures and the absence of a farmer's strong organization, individual marketing practice for farmers results in high transaction costs with low bargaining positions (Mujeri, 2019). Nonetheless, farmers can regard relationship marketing as a critical success component in business. The transformation from transaction to relationship marketing has disputably been one of the most powerful developments in a business environment (Egan, 2011).

Relationship marketing is the ongoing process of engaging in collaborative activities with immediate customers to enhance mutual economic, social and psychological values profitably (Sheth *et al*., 2015). This is because committed buyers and sellers would return to their trusted service provider, particularly when they feel that their service provider had satisfied their desires and services (Bojei *et al*., 2012). Growers anticipate higher economic outcomes because they expect equitable and fair treatment from their preferred buyers (Batt, 2003). In addition, better offers from buyers to farmers, *i.e*., a reasonable price, keep

[1]Department of Agribusiness and Bioresource Economics, Faculty of Agriculture, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.
[2]Department of Agricultural Economics, Bangladesh Agricultural University, Mymensingh, Bangladesh.

Corresponding Author: N.M. Nawi, Department of Agribusiness and Bioresource Economics, Faculty of Agriculture, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.
Email: nolila@upm.edu.my

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farmers tied to their buyers and developed a high level of trust in their buyers (Bich *et al*., 2016). This relationship could be either bidirectional or unidirectional (Horo, 2021). Farmers, too, have focused on the sustainable exchange relationship, which they consider an essential ingredient in businesses and have placed a high level of trust in their preferred buyers, especially in terms of trustworthiness, fairness and transparency in pricing (Boniface, 2011). Therefore, relationship marketing is essential in business, especially for the paddy farmers struggling to profit from selling their paddy in the market.

This study emphasizes farmer's farm performance, which can be described in terms of economic or financial benefits, that uses identical measurements, such as sale growth, profit growth and cash flow, relative to the competitors (Lobo *et al*., 2013; Kavak *et al*., 2016). This study focuses on three components of relationship marketing that can influence farmers' farm performance. Notably, trust (Villena *et al*., 2019), communication (Bich *et al*., 2016) and satisfaction (Tarigan and Hatane, 2019). Therefore, the objectives of the present study are to (i) determine the direct relationship between relationship marketing components (trust, communication and satisfaction) and farm performance and (ii) examine the indirect relationship between relationship marketing components (trust and communication) and farm performance mediated by satisfaction.

Trust

In relationship marketing studies, trust is perhaps the most extensively cited dimension (Villena *et al*., 2019). Counter-productive outcomes rise and outweigh the constructive outcomes in the relationship between trust and performance (Villena *et al*., 2019). By highlighting the importance of trust in the agricultural context, Mao *et al*. (2021) identified that trust establishes cooperation and reduces transaction costs for the farmers. Trust promotes cooperation, leads to improved performance and facilitates the exchange of information and independencies (Ghazinejad *et al*., 2018). Lobo *et al*. (2013) examined the farmers' business relationships with buyers and found that trust had a positive relationship with farmers' financial performance. Therefore, the following hypothesis was established.

Hypothesis 1 (H1)

Trust is positively related to farmers' farm performance.

Communication

Communication is acknowledged as one of the central dimensions of the business relationship (Bojei *et al*., 2012). Communication in the marketing context can be seen as formal and informal exchange and sharing meaningful and timely information between buyers and sellers (Etuk, 2018). Specifically, communication enhances innovation capabilities and opens up the exploration of market opportunities which ultimately results in a positive outcome on the farm's performance (Zaefarian *et al*., 2017). Indeed, Bich *et al*. (2016), in their discovery of flower farmers' reliance on the wholesale price information, emphasized the importance of communication in helping them increase sales volume. Proper and good quality information sharing is critical to helping farmers achieve desirable farm performance (Hilary *et al*., 2017). Hence, the following hypothesis was established.

Hypothesis 2 (H2)

Communication is positively related to farm performance.

Satisfaction

Satisfaction is an emotional state of mind involved in evaluating goods or services, consumed or offered, by the buyer or seller (Nauroozi and Mogadam, 2015). Improved satisfaction is most likely to result in sales growth both short and long term (Tarigan and Hatane, 2019). According to Palmatier *et al*. (2006), satisfaction influences directly or indirectly the performance of the seller. Therefore, the following hypothesis is established.

Hypothesis 3 (H3)

Satisfaction is positively related to farm performance.

Satisfaction as a mediator

In the literature of relationship marketing, Benouakrim and Kandoussi (2013) consider satisfaction as a mediating variable. Findings by Nauroozi and Moghadam (2015) demonstrated that trust and communication have a direct positive relationship with customer satisfaction. Batt (2003) also found that farmer's satisfaction increased when trust is built between farmers and buyers. Accordingly, Boniface *et al*. (2010) found that the price satisfaction of milk producers is associated with their trust. Mbango (2017) and Nauroozi and Moghadam (2015) found that satisfaction was significantly influenced by communication, indicating that timely, reliable and relevant information sharing encourages keeping in touch with preferred buyer/seller to make the exchange decision. Relationship satisfaction directly contributes to the seller's economic performance (Palmatier *et al*., 2006). Therefore, based on the above discussion on the relationship among the variables, the following hypothesis was established.

Hypothesis 4a (H4a)

There is an indirect relationship between trust and farm performance mediated by satisfaction.

Hypothesis 4b (H4b)

There is an indirect relationship between communication and farm performance mediated by satisfaction.

MATERIALS AND METHODS

Data were collected from the Mymensingh district of Bangladesh from February to April 2020. The district was purposively selected based on ample paddy production and a large number of farmers. The population size of farmers in the selected areas was 3200. Following Yamane's (1967)

formula, the actual size of the farmers' population was calculated with 95% confidence level.

$$n = \frac{N}{1 + N\,(e)^2}$$

Where;
n= The sample size.
N= The population.
e= The level of precision.

The calculation resulted in 356 farmers selected through systematic random sampling. The sampling method was employed considering the homogeneity of the socio-economic conditions among the farmers. Data was collected by block supervisors of the Agriculture Extension Department as enumerators who are familiar with farmers' activities. The survey instrument contains 15 items adopted from previous studies (Table 2), measured by a seven-point Likert-type scale anchored at 1 (strongly disagree) and 7 (strongly agree). Partial Least Square Structural Equation Modeling (PLS-SEM) was employed in this study to test the hypothesis. In general, PLS-SEM has two models – measurement and structural model.

RESULTS AND DISCUSSION

Measurement model assessment

In PLS-SEM, internal consistency is applied to measure the consistent effect across the items of the same variables (Hair *et al*., 2013). Cronbach alpha (α) measures the reliability of indicators of a variable and 0.7 is regarded as the acceptable value. In this study, the α value was above 0.7 (Table 1). Similarly, the Composite Reliability (CR) value should exceed 0.708, which is recognized as internal consistency (Table 1). Convergent validity is measured by calculating the average variance extracted (AVE) and indicator reliability. The acceptance value of AVE is more than 0.5 and it exceeded the acceptance level in this study (Table 1). Factor loading is used for the assessment of indicator reliability. Higher factor loadings of a variable indicate the presence of a commonly associated measurement measured by the variable (Hair *et al*., 2013). The factor loading achieved in this study exceeded 0.7, which should be taken into the analysis (Table 2). Fornell and Larcker scores were used to assess the discriminant validity. Table 3 shows that the square roots of AVE of all latent variables exceeded the inter construct correlations in Fornell and Larcker criteria.

Structural model assessment

The coefficient of determination (R^2) and path coefficient (β) were assessed in the structural model (Fig 1). R^2 values of satisfaction and farm performance were 63.3 % and 54.9%, respectively, thereby establishing the relevance of the study. Table 4 and Table 5 present the β of the model that indicates the outcomes of the hypothesis test. Trust (β=0.189), communication (β=0.366) and satisfaction (β=0.255) established a strong positive relationship with performance and thus, supported H1, H2 and H3 (Table 4). The H1 outcome may be attributed to farmers' believing that

Table 1: Cronbach alpha (α), composite reliability (CR) and average variance extracted (AVE).

Latent variable	α	CR	AVE
Communication	0.845	0.896	0.684
Farm performance	0.760	0.862	0.676
Satisfaction	0.858	0.899	0.641
Trust	0.760	0.861	0.674

Table 2: Factor loadings of the items.

	Items	Factor loading
Trust (Batt, 2003)		
1	I have confidence in my most preferred buyer	0.854
2	I trust my most preferred buyer as he keeps his promise	0.780
3	I believe the market information provided by my preferred buyer	0.827
Communication (Alrubaiee and Al-Nazer, 2010; Ndubisi *et al*., 2009)		
1	My preferred buyer communicates frequently	0.762
2	Information helps to provide better service	0.849
3	My preferred buyer provides timely and trustworthy information	0.862
4	Information provided by my preferred buyer is always accurate	0.832
Satisfaction (Batt, 2003; Ndubisi *et al*., 2009)		
1	My preferred buyer treats me fairly and equitably	0.887
2	My preferred buyer often meets my expectations	0.834
3	I feel I am adequately rewarded by my preferred buyer	0.826
4	My preferred buyer is quick to handle complaints	0.715
5	I am satisfied with the interactions that I have had with my preferred buyer	0.728
Farm Performance (Kavak *et al*., 2016; Lobo *et al*., 2013)		
1	The relationship with my preferred buyer helped to increase my sales	0.781
2	The relationship with my preferred buyer helped to increase my profit	0.828
3	My farm performance is much better than the competitor in cash flow	0.856

Table 3: Fornell and Larcker criterion.

	Communication	Farm performance	Satisfaction	Trust
Communication	0.827			
Farm performance	0.665	0.822		
Satisfaction	0.626	0.644	0.801	
Trust	0.562	0.601	0.701	0.821

Table 4: Path coefficient (β) and direct effect for structural model.

Hypothesis	Path	β	t-stat	Std Error	P Value	Decision
H1	Trust → Farm performance	0.189	2.897	0.065	0.002*	Supported
H2	Communication → Farm performance	0.366	4.958	0.074	0.000*	Supported
H3	Satisfaction → Farm performance	0.255	3.541	0.072	0.000*	Supported

(*Significance p<.05).

Table 5: Path coefficients (β) and indirect effects for mediation models.

Hypothesis	Path	β	t-stat	StdError	P Value	Decision
H4a	Trust → Satisfaction→ Farm performance	0.084	2.600	0.032	0.010*	Supported
H4b	Communication→ Satisfaction→ Farm Performance	0.034	1.884	0.018	0.060	Not Supported

(* Significance p<.05).

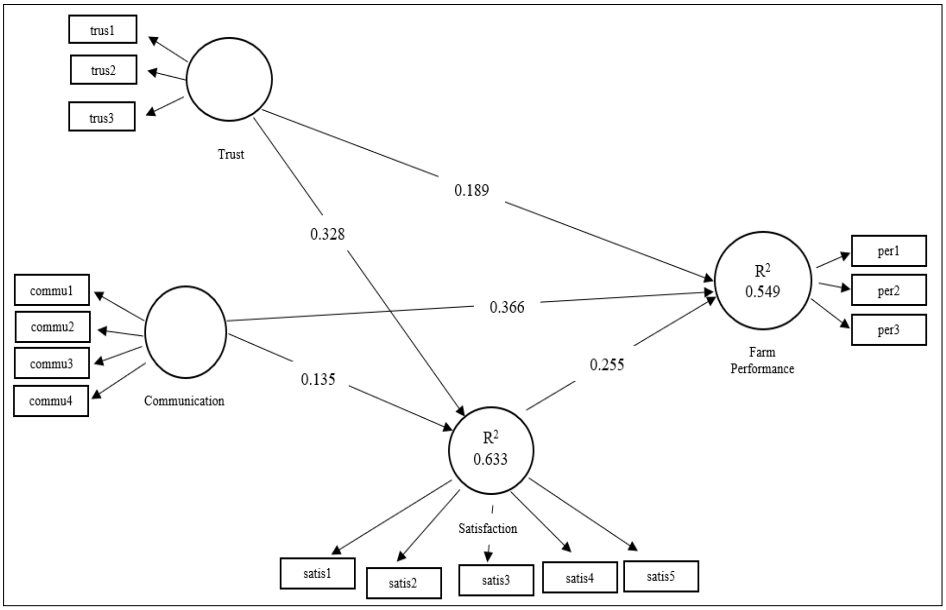

Fig 1: PLS Algorithm Analysis with Path Coefficient and R2 Values.
Note: trus= Trust, commu= Communication, satis= Satisfaction and per= Farm performance.

their preferred buyer meets their expectations, such as fair price. According to Lobo *et al*. (2013), using the benefit of trust vegetables farmers can ensure their financial performance through product development and collaborative working in their business.

The finding of H2 suggests that Bangladeshi farmers have a general feeling and attitude of receiving trustworthy information from buyers, which leads to greater paddy selling profit. This result is consistent with the study of Sin *et al*. (2006), where communication fosters trust by assisting the resolution of disputes, aligning perceptions and expectations, influencing financial performance positively. The finding of H3 suggests that Bangladeshi farmers believed they were adequately rewarded by their preferred buyers and were happy to maintain the existing business relationship. Previous research (Palmatier *et al*., 2006;

Mbango, 2017) indicates that satisfaction reduces risk and increases repeated sales with the relationship with buyers fosters financial performance.

The present study also tests the mediating role of satisfaction (Table 5). In the presence of satisfaction, trust (β=0.084) had indirect and significant effects on performance (Table 5). Thus, H4a was supported. These results suggest that farmers utilize the benefit of business strategy using the components of relationship marketing, notably trust and satisfaction. Since farmers are satisfied with their preferred buyers to solve the business problem, it ultimately enhances their farm performance. This result is similar to Palmatier *et al*. (2006). They found that trust and satisfaction have direct or indirect relationships with performance. Contrary, communication (β=0.034) had no indirect effect on performance in the presence of satisfaction and thus did not support H4b (Table 5). This contradicted Bich *et al*. (2016), where communication is indirectly related to firm financial performance. This result suggests that Bangladeshi farmers are satisfied in maintaining direct communication to enhance farm performance rather than relying on indirect sharing of information.

CONCLUSION

Paddy farmers in Bangladesh may utilize trust, communication and satisfaction in efforts to reduce transaction costs, enhance efficiencies, share better information and increase repeat sales which ultimately leads to farm performance. Based on the findings of this study, practitioners such as farmers should be aware of the importance of relationship marketing as a marketing strategy in place of the traditional marketing approach in selling paddy to paddy buyers. Farmers may seek to adopt relationship marketing to maximize social and psychological values and establish a long-term strong business relationship with their paddy buyer, rather than traditional marketing that is less effective in achieving business output. By testing this model on other stakeholders in the paddy supply chain, other researchers could determine whether relationship marketing influences performance and if the model is generalizable across other traders.

Conflict of interest: None.

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