

Examining The Effect of Relationship Marketing on The Small Farmers' Social, Economic, And Environmental Sustainability Performance

Nor Afifah Yusof, Dr. Sharifah Nurafizah Annuar, Prof. Madya Dr
Nabila Azwa Ambad

Faculty of Business Management, Universiti Teknologi MARA, Cawangan Kota Kinabalu,
88997 Kota Kinabalu, Sabah, MALAYSIA.

Email: afifahyusof89@gmail.com, shari339@uitm.edu.my, nabila1793@uitm.edu.my

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v13-i5/17065> DOI:10.6007/IJARBSS/v13-i5/17065

Published Date: 22 May 2023

Abstract

Agriculture sustainability has been highlighted as a solution to global issues of food security, poverty, unemployment, and other sustainability issues. Small farmers are been identified as an agent in achieving the sustainable agriculture needed to remain competitive in the market by addressing their relationship marketing strategy. The purpose of this paper is to investigate the effect of trust and commitment in relationship marketing on the small farmer's sustainability performance specifically in economic, social, and environmental performance. Trust and commitment have been used in some previous studies but were not widely recognized as determinants of small farmers' triple-bottom-line sustainable performance. The quantitative approach has been adopted, in which questionnaires have been used to collect data. 160 samples were collected from the Sabah food crops small farmers. The results show that small farmer trust in relationship marketing is significant to their economic, social, and environmental sustainability performance. Meanwhile, a commitment was found not significant to the small farmer's sustainability performance, however, commitment is significant to the small farmer's economic sustainability performance. The results of this study contribute by giving new insight into developing the relationship marketing strategy for small farmers to sustain in regulating the food crops farm.

Keywords: Small Farmer, Food Crops, Relationship Marketing, SUSTAINABILITY Performance, Trust and Commitment

Introduction

Food security and food chain issues have become major concerns globally. The United Nations have made sustainable agriculture one of the strategies for eradicating this issue and small farmers are the agent to achieve sustainable agriculture. A study reported that small farmers serve as important agents to achieve sustainable agriculture by protecting natural resources and tackling poverty and hunger (Santos et al., 2020). Nearly 500 million small-scale

farmers with less than two hectares of land have been deemed to be key in producing food and preserving adequate food supplies globally (Lowder et al., 2016). The Food and Agriculture Organization (FAO) (2017) defined small farmers as food producers to achieve the sustainable development goals (SDG) 2.3 agenda, which is to double agriculture productivity and the small farmer's income. Sustainable agriculture is defined as the execution of an operation that meets a specified multidimensional set of conditions over time, which include environmental stability, economic viability, and social equity (Santos et al., 2020). Many studies have long debated on these sustainable dimensions (Enjolres & Auvert, 2018) and employed the economic, social, and environmental dimensions to assess the sustainability performance of businesses (Dasgupta et al., 2017). However, most existing studies employed one sustainability dimension in measuring the short food supply chain and performance, primarily the environmental dimension (Enjolres & Aubert, 2018).

The landscape of agriculture in Malaysia is divided into two groups, which are food and industrial crops. The small farmers are mostly involved in producing food crops and become one of the largest contributors to Malaysia's agricultural economy. Agriculture continues to be a key economic sector in Malaysia that contributes to its rapid development, improves rural poverty, and ensures food security. There are many programs and policy designs to respond to the decreasing agriculture contribution issues and to develop the livelihood of rural farmers. Sabah is Malaysia's second-largest land after Sarawak and contributed 15.8% to Malaysia's agricultural GDP in 2017 (Sabah Agriculture Blueprint for 2021 to 2030, 2019). Sabah's agriculture industry is one of the most productive industries, offering employment opportunities, business opportunities, and natural resources to the industrial industry. To add, among the key industries that boost Sabah's economy is the food crop subsector, which mostly employs small farmers (SMJ Report, 2021). According to Sabah Agriculture Policy 3 (2005–2025), there are six agricultural emphasis areas in the state of Sabah, which are livestock, agro-tourism, fisheries, agro-industry, other industrial and economic crops, and food crops. The majority of small farmers are involved in the food crop sector. Small farmers have been targeted as game-changers in increasing the efficiency of the food supply as a response to the issue of sustainable agriculture. To achieve sustainable agriculture, Sabah has designed many policies such as Sabah's third Sabah Agricultural Policy (SAP3) 2017-2026, Sabah Agriculture Plan (2020), and the most recent policy release, Sabah Maju Jaya. The policies mentioned are to promote food security, boost farmer and manufacturer incomes, support agricultural production development and competitiveness, and maintain state agriculture.

Past studies show the importance of understanding and developing relationships in the community to enhance sustainability performance of small farmers. Thomas and Vink (2020) suggest that integrating a marketing relationship and connecting small farmers to marketplaces is one of the strategies that could be employed by small farmers (Hassan et al., 2020). Besides, Shen et al (2017) stated the relationships between the members of the supply chain are important for contract farming to succeed. The exchangeability and need fulfillment among both parties will develop the relationship (Shen et al., 2019). By exchanging demands with other supply chain participants, both sides may gain benefits (Shahzad et al., 2017). Hence, the relationship between the small farmers and intermediaries is vital for the sustainability of the supply chain members.

Problem Statement

As food security issues are increasing, sustainable agriculture has become a concern for governments, policymakers, and researchers alike. Past studies have highlighted that small farmers are the key to solving economic issues (Nwafor, 2020; Mariyono et al., 2019) involving unemployment, hunger, and poverty in rural areas (Mmbando et al., 2017). However, the measurement of the small farmers' sustainability is still at an early stage and not ultimately measured. Research reveals that previous studies mostly measure farmers' sustainability from economic and environmental sustainability. Meanwhile, there is less focus on social sustainability analysis (Jia et al., 2020).

Sabah has emphasized the strategies in the agriculture sector in designing many policies from year to year. In summary, all the policies were aimed to increase food security, increase the income of farmers and manufacturers, reinforcing agricultural productivity growth and competitiveness, and sustain state agriculture. Despite the effort of designing many policies, the sustainability and livelihoods of many small farmers remain uncertain (Hassan et al., 2020). Due to the risks and uncertainty in the agriculture sectors, it has impacted small farmers' ability and willingness to invest in their farms, and this has affected their earning income (Gneiting & Sonenshine, 2018). Additionally, the pandemic crises have affected the productivity of small farmers and resulted in a decrease in Sabah's agricultural exports in March 2020 compared to December 2020 (DOA, 2020). The decline of Malaysia and Sabah's GDP in the agriculture sector as shown in Figures 1 and 2 is indicating that the agriculture sector is at risk. Besides, small farmers' low productivity and contribution to the Sabah agriculture GDP are particularly indicative of their lack of competitiveness. Furthermore, the fact that small farmers' sustainability is at risk is demonstrated by their exclusion from the market channel (Thomas & Vinc, 2020; Braka et al., 2019).

The capacity to develop relationships has a big impact on small farmers' sustainability. According to FAO (2015), small farmers are very much interested in doing business with large enterprises, but it can be challenging for them to establish a successful relationship with its partner. Lack of market access and a lack of mutual trust have become major barriers to the growth of small farmers. Past studies identify that relationship development is a crucial performance for farmers in the market (Martins et al., 2019). Although the relationship is emphasized as a foundation for good performance and sustainability, research on developing countries in regards to sustainability from the viewpoints of suppliers and buyers is still limited (Jia et al., 2018). Another study by Mazibuko et al (2019) suggested studying relationship building from the perspective of the farmer. Relationship-building and its impact on sustainability are revealed by inconsistent findings from previous studies. Building relationships can put the buyer at risk and have an impact on the supplier's costs (Hammerschmidt et al., 2018).

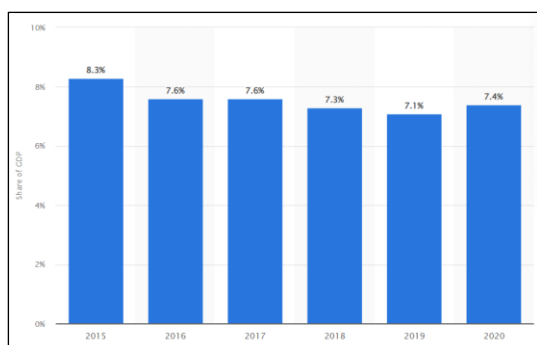


Figure 1: Malaysia's GDP Share of Agriculture based on Sector



Figure 2: Percentage of GDP in Sabah

Literature Review

Sustainability Performance

The ability to satisfy the current demand without jeopardizing the prospect satisfaction of future generations' requirements is known as sustainability defined by (The World Commission on Environment and Development, 1987). There are three pillars of sustainability which are economic, social, and environmental. These three dimensions have been long discussed in the literature. Besides, these dimensions of sustainability serve as a general framework for determining the sustainable performance of a business. However, the three pillars were still prematurely studied and most of the past studies did not employ all the dimensions in measuring the performance (Enjolres & Aubert, 2018). After all, the indicators put forth by Tans et al (2019); Mutyasira et al (2018) did not demonstrate an overall assessment of sustainability performance. In this sense, the three pillars are suggested to be evaluated to quantify sustainable performance holistically because the components are interrelated (Vian et al., 2020).

According to Arumugam (2018), from the perspective of agriculture, farm sustainability, environmental sustainability, and social sustainability all contribute to agriculture sustainability. The study concludes that if the three pillars were taken into account in measuring sustainability performance, sustainability can be attained. The findings of the study demonstrated a strong relationship between all three dimensions related to sustainable farming. By analogy, Mutyasira et al (2018) have developed an index through data envelope analysis (DEA) that enables the evaluation of smallholder farms' relative sustainability. The results of the study reveal that key factors influencing agricultural sustainability at the farm level include farm size, market access, access to off-farm income, agricultural loans, and access to agricultural extension and demonstration. There is still a dearth of studies utilizing all the components of sustainability, despite the expansion of the literature on sustainability performance. The majority of studies concentrate on achieving economic and environmental sustainability, and it was discovered that little research was done on social aspects pertaining to the welfare of small farmers. Additionally, the data shows that the state of Sabah in Malaysia, particularly, is still minimally studying the sustainability dimension.

Economic sustainability has been examined from a wider view and defined as the capacity to provide significant economic growth, particularly the capacity to produce income and employment for the needs of the population. According to the study, the major performance metric for assessing an economic factor is the total expenses (Bottani et al., 2019). Meanwhile, Santos et al (2020) viewed economic sustainability as the robustness of the farmer's monetary income through the land and productivity. Economic performance was

measured by production, product price, and cost in Hadi and Baskaran's (2021) study on the indicators of the petroleum industry. The report also emphasizes that the exploration and development stage, which demands significant expenditure, is the key to economic business performance. A previous study on economic sustainability was majority taking a big business scale to be studied while less on examining the small-scale business performance and a study by Vian et al (2020) suggested expanding the research from the perspective of the small-scale business or rural farmer. The indicator for economic sustainability from the previous research was slightly similar and it was tested in different unit analysis.

Social sustainability is one of the aspects that the earlier studies underemphasized. According to Hadi and Baskaran (2021), social sustainability performance is less adopted and evaluated by the majority of large enterprises, particularly in the oil and gas industry. But this study used social performance by looking at labor and corporate behaviors. Akbar and Ahsan (2020) point out that social sustainability is difficult to accomplish and put into practice in the apparel sector. A lack of commitment is one of the issues that this study identifies as being important to social sustainability. This issue deters financial support for social sustainability. Both studies (Hadi & Baskaran, 2021; Akbar & Ahsan, 2020) identified establishing social sustainability as a challenge for large businesses as it requires high cost and investment. From the perspective of small farmers context social sustainability have been pointed out as a important pillars to be studied. Social sustainability was employed to study the small farmers wellbeing and quality of life (Santos et al., 2020). Small farmers were found able to gain economic income however, their standard of living remain stagnant with not able to grow. Thus, this make them to remain in a poverty line.

From the impact of business activities on the environment, Hadi and Baskaran (2021) observe the environmental sustainability performance of a significant industry. The commercial activity will demonstrate how well the sector complies with the authority's health, safety, and environmental (HSE) policy. The indicator is comparable to Bottani et al (2019) from the fashion perspective, who defined environmental sustainability as protecting the natural ecosystem by lowering harmful emissions and waste. By determining the farmer's viewpoint on soil protection and erosion issues on the farm, other study measurements on environmental sustainability performance were examined in the area of soil management. Examining fire and pesticide use will help determine trends in climate change and biodiversity conservation strategies (Santos et al., 2020). The ability to adhere with the standard of using the pesticides in their food crops will results to better production outcome and this will impact the farmers economic achievement and they can improve their standard of living (Vian et al, 2020).

Hence, this study has employed the three dimensions in measuring the sustainability performance of the small farmers in Sabah.

Trust and Commitment Affect on Small Farmer Sustainability Performance

According to Morgan and Hunt (1994), commitment to the relationship and trust, are the foundations of successful marketing relationships. Commitment and trust are crucial in relationship building because they encourage marketers to work by cooperating with exchange partners to preserve relationship investments and resist attractive short-term alternatives favoring the expected long-term benefits of staying with existing partners. Trust and commitment are vital for maintaining relationships and adding value to strengthen the relationship (Chen et al., 2017). In fact, Brown et al (2018) have also reexamined the relationship between commitment and trust by contrasting alternative models from a variety

of fields (a trust-to-commitment model, a commitment-to-trust model, and a nonrecursive, trust-to-commitment model). The findings show that commitment can undermine trust, yet commitment can also strengthen it. Trust and commitment theory have received much attention from past researchers in investigating the farmers' relationship with other parties and the sustainability in the market channel. Past research found trust and commitment are the factors for the farmers to be included in the market channel (Setyawan, 2016; Mazibuko et al., 2019).

According to Roberts-Lombard et al (2017), purchasers will be more devoted to reliable vendors. The ability of the business to continue and achieve economic sustainability through profit was discovered to be significantly influenced by commitment and trust. Without trust, neither party will feel compelled to act, which will have an impact on the individual and the organization's financial performance. In addition, Paluri et al (2020) found that having trust and commitment among supply chain partners may strengthen the relationship and as a result, enhance the company's overall performance. The supply chain participants will function more sustainably when there is trust in their relationships. Likewise, Nwafor (2020) points out that the relationship among the members in the market channel needs to be highlighted as it is a critical factor for a business.

Various contexts of relationship-building have been studied in past literature. A past study highlighted that the foundation for developing a relationship between buyers and suppliers is trust and commitment. Numerous studies have examined the relationship between trust and commitment and how it affects the performance of individuals and organizations (Odongo et al., 2016; Martins et al., 2019). It has been demonstrated that trust has better links to team performance compared to individual and organizational performance (Su et al., 2020). Trust in the supply chain can enhance supply chain integrations and have a favorable effect on economic and social performance. Trust and commitment were found as enablers of supply chain integration initiatives in the agri-food industry (Ramirez et al., 2021). According to Nunes et al (2020), in the context of food and farmers, trust between the food producer and other supply chain members may influence the sustainability of the economy and social performance. This study put out the idea that causing environmental harm was a price worth paying for achieving social performance. Throughout the supply chain, the level of trustworthiness varies. In a prior study, Matzembacher et al (2019) addressed sustainability by gaining consumers' trust by making the products produce safe, cultivated organically, and created in an environmentally responsible. The importance of trust in social sustainability is briefly discussed but not further addressed. Akhtar et al (2015) asserted that trust is significant in influencing the other member of the supply chain to make further investments in their relationship and this will impact their profitability. Buyers will show more commitment to trustworthy suppliers and indicate that trust and commitment are significant to economic sustainability through gaining profit and the ability of the business to continue (Lombard et al., 2017). Likewise, Yuen et al (2018) disclosed in their study related to the shipper's relationships; that shipping companies need to foster shippers' trust in their commitment to sustainability and strengthen their relationships with shippers. Following this, Akhbar and Ahsan (2020) have identified that a lack of commitment in a relationship will prevent for suppliers to invest in social sustainability.

Although there have been many studies related to the factor of relationship marketing there are limited discussions on trust and commitment towards Agri foods from the perspective of sustainable performance. More research is required to fill in the gaps in the findings that have already been made (Ramirez et al., 2020). Based on the discussion

extracted from the previous literature, a hypothesis constructed are as follows and the research framework is shown in Figure 3.

H1: Trust has a positive effect on the sustainability performance of small farmers.

H1a: Trust has a positive effect on the economic sustainability performance of small farmers.

H1b: Trust has a positive effect on the social sustainability performance of small farmers.

H1c: Trust has a positive effect on the environmental sustainability performance of small farmers.

H2: Commitment has a positive effect on the sustainability performance of small farmers.

H2a: Commitment has a positive effect on the economic sustainability performance of small farmers.

H2b: Commitment has a positive effect on the social sustainability performance of small farmers.

H2c: Commitment has a positive effect on the environmental sustainability performance of small farmers

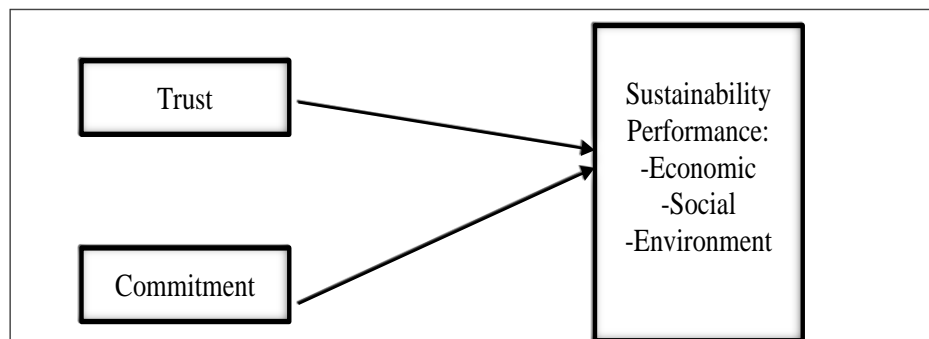


Figure 3: Research Framework

Methodology

The research construct and items are listed in Table 1. Research instruments for trust and commitment are adapted and adopted from (Tellefsen, 2002; Mazibuko et al., 2019) while the instrument for sustainability performance was adapted from (Santos et al., 2020; Hadi and Baskaran, 2021). The five-point Likert scale ranging from 1 “strongly disagree” to 5 “strongly agree” are used in measuring the item in this research. 25 items were analyzed in measuring the small farmer's sustainability performance.

To examine the correlation among the variables, cross-sectional data and statistical techniques were applied. the population refers to small farmers in Sabah. The number of farmers in Sabah up to 2018 is estimated at 32565 (Department of Agriculture (DOA),2019). The data of the field study were collected through normal, accepted procedures, and valid instruments from small farmers who cultivate food crops in each of Sabah's regions and they serve as the analytical unit for this study. Based on the Sabah Agriculture Policy report, food crops agriculture areas include paddy, vegetables, fruits, coconut, maize, mushroom, herbs, and apiculture. The respondent information is gathered from the agriculture department in every district in Sabah. However, due to limited information received from the agriculture department in every district, the researcher was also working with other bodies of agriculture such as Koperasi Pembangunan Desa Sabah (KPD) and Lembaga Pertubuhan Peladang (LPP), Sabah. To increase the response rate the samples were also conducted among peers and families who are involved in food crops agriculture.

Since it is difficult to precisely characterize the small farmer population, purposive sampling was performed in this study. According to the discussions with the Lembaga Pertubuhan Peladang (LPP) and agriculture departments in a few Sabah districts, there is no information in detail for the small farmers, the data possess is only the number of farmers. To meet the objective of this study, it is important to differentiate between farmers and small farmers as they have different characteristics. This study employed purposive sampling based on judgment sampling according to the criteria of small farmers. A district provides a list of farmers, the researcher needs to screen the farmers based on the characteristics and availability of the small farmers. A total of 160 samples were collected through purposive sampling.

Data collection in this study involved a few processes. The first stage is a preliminary survey, to identify the respondents who are involved in food crops agriculture as most of the small farmers were involved in this agriculture sector. Next pretesting where a few experts from the public university which is UiTM Sabah and agriculture practitioners were invited to provide feedback regarding the questionnaire items. Besides, a cognitive interview and pilot study method were also conducted. Lastly, the final survey where online questionnaire distribution was conducted complemented with the face-to-face distribution of the questionnaire was conducted and complying with the Covid-19 pandemic measures. Telephone conversations and text messaging were effectively used to communicate with respondents. Besides, joining the event organized by the agriculture department in a few districts and reaching the respondents at the traditional market or "Tamu" were also conducted. The Partial Least Squares (PLS-SEM) approach was used to analyze the research model that was presented in this study (Ringle et al., 2015).

Data Analysis

The two-stage analytical methodology of Anderson and Gerbing (1988) was used to investigate the measurement model (validity and reliability of the measurements) and the structural model (testing the hypothesized relationships). The indicator is known as the item's reliability if its loading is at least 0.70 for each item in the construct and implies acceptable convergence or internal consistency between the items (Gefen & Rigdon, 2011). However, 0.4 to 0.7 are sufficient if another loading has a greater loading as the complementary weak indicators (Ramayah et al., 2018). Two components, Env1 and Env2, were eliminated. Due to the composite reliability and AVE already meeting the 0.50 requirement, the other components were remained (refer to Table 1).

Convergent validity describes how well one indicator represents the constructs when it comes to indicators measuring other dimensions (Urbach & Ahlemann, 2010). Convergent validity is evaluated using the Average Variance Extracted (AVE). Using an AVE value greater than 0.5 to account for at least 50% of the variance in the assigned indicators is advised by previous literature (Hair et al., 2017). The results show that the measurement model demonstrated adequate convergent validity with greater than 0.5. Next, the model's discriminant validity was evaluated based on the threshold value of 0.85 for HTMT.85, the results demonstrate that the discriminant validity has been developed and satisfies the threshold range of 0.85 (Hair et al., 2014; Henseler et al., 2016). Reliability and validity measures for the first-order constructs and the second-order construct are shown in Table 1 and Table 2, respectively. Discriminant validity assessments were used Heterotrait-Monotrait (HTMT) ratio. The assessment is to ensure that each variable in the model is different from one to another. The HTMT stringent criterion requires the HTMT value to be less than 0.85

(Kline, 2011). HTMT criteria are satisfied, and all HTMT values for the first order and second order are below 0.85 (Table 3 and Table 4). It is confirmed that discriminant validity is achieved.

After all the indicators of the variables are confirmed to be reliable and valid in the first step, the next step is to assess the structural model. Since the PLS-SEM algorithms use the iteration method for multiple regression series, the path coefficient in PLS-SEM represents the regression coefficients including coefficient of determination (R^2), variance inflation factor (VIF), effect size to R^2 (f^2), and predictive relevance (Q^2). Before conducting a latent variable analysis in the structural model, it is better to ensure there are no collinearity issues among the constructs. Hence, the VIF value is employed to determine collinearity. Hair, Ringle, and Sarstedt (2011) recommend a threshold value of 5, whereas Diamantopoulos and Siguaw recommend a threshold value of 3.3. (2006). As shown in Table 6, all VIF values are below 5, indicating that there is no collinearity problem interfering with the results.

The R^2 calculates the model's predictive capability, with a number ranging from 0 to 1 indicating a higher level of predicted accuracy (Hair, Hult, Ringle, & Sarstedt, 2017). Economic, social, and environmental sustainability performance account for 60.2%, 74.5%, and 54.9%, respectively (refer to table 6). This is explained by the combination of trust, and commitment. The second-order value for the R squared is 46% (table 7). Hence this indicates that the R square for endogenous construct is classified as moderate. The f^2 value of 0.35, 0.15, or 0.02 is suggested to be substantial, medium, or weak respectively (Cohen, 1988). The effect size value of each predictor variable in the model ranges from 0.001 to 0.047 (Table 6) for the first order and Table 7 shows the results in the range of 0.007 to 0.096 for the second order which are included in the category small to none effect. The Q^2 results showed (Table 6 and Table 7) that the model is relevant and sufficiently predictive as it is greater than 0 for the first and second order. Hence, this finding generally supports the relevant projection of the PLS route model used in this study (Hair et al., 2014; Henseler et al., 2009).

To evaluate the hypotheses, the bootstrapping technique is utilized to generate results for each route connection in the model. As a nonparametric test in PLS, bootstrapping creates a bootstrap sample and generates standard errors for hypothesis testing by repeating random sampling with replacement from the original sample (Hair et al., 2011). As shown in Table 6 and Table 7, all path coefficients provide significant value (at path coefficient, $P < 0.05$, One-tailed, $P > 1.645$). Hypotheses testing is done by using the one-tailed test since it is appropriate to test one direction relationship. The performance of economic, social and environmental sustainability was shown to be significantly impacted by the trust variable. A commitment, however, was positively significant with economic sustainability, but not with social or environmental sustainability (Table 6).

Table 1

Results Summary for Reflective Measurement Models

Item	Factor loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Tru1_rb	0.786	0.841	0.882	0.556
Tru2_rb	0.744			
Tru3_rb	0.683			
Tru4_rb	0.707			
Tru5_rb	0.739			
Tru6_rb	0.809			
Comm1_rb	0.87	0.935	0.95	0.794
Comm2_rb	0.831			
Comm3_rb	0.928			
Comm4_rb	0.924			
Comm5_rb	0.896			
Eco1	0.741	0.872	0.907	0.663
Eco2	0.749			
Eco3	0.85			
Eco4	0.873			
Eco5	0.85			
Soc1	0.826	0.878	0.91	0.67
Soc2	0.782			
Soc3	0.856			
Soc4	0.787			
Soc5	0.84			
Env3	0.723	0.776	0.869	0.689
Env4	0.865			
Env5	0.893			

Note: β : path coefficient, $P < 0.05$, (One-tailed, $P > 1.645$)

Table 2

Reliability and Validity Measures for The Second-Order Constructs.

	Cronbach's Alpha	Composite Reliability	Average (AVE)	Variance	Extracted
SUSPERFM	0.686	0.826	0.612		

Table 3

Discriminant Validity for first order

	Comm	Eco	Env	Soc	Trust
Comm					
Eco	0.452				
Env	0.298	0.455			
Soc	0.405	0.481	0.661		
Trust	0.545	0.505	0.429	0.439	

Table 4

Discriminant Validity for Second order

	Comm	SUSPERFM	Trust
Comm			
SUSPERFM	0.528		
Trust	0.588	0.708	

Table 5

Results of Collinearity Between Constructs

Exogenous Construct	Endogenous Construct	VIF
Commitment	Sustainable Performance	1.844
Trust		1.585

Table 6

Results of the Significance in Structural Model Relationships

Hypothesis	(β)	Std. Error	t-value	p value	Decision	R2	F2	Q2
Trust -> Economic SP	0.16	0.09	1.77	0.038	Supported	0.602	0.022	0.21
Trust -> Environmental SP	0.244	0.094	2.594	0.005	Supported	0.549	0.047	0.136
Trust -> Social SP	0.193	0.097	1.982	0.024	Supported	0.745	0.035	0.229
Commitment -> Economic SP	0.272	0.082	3.3	0.001	Supported	0.602	0.058	0.21
Commitment -> Environmental SP	-0.052	0.1	0.522	0.301	Not Supported	0.549	0.002	0.136
Commitment -> Social SP	0.037	0.115	0.322	0.374	Not Supported	0.745	0.001	0.229

Table 7
Results of the Significance in Structural Model Relationship

Hypothesis	(β)	Std. Error	T-value	P-value	Confidence interval		Decision	R2	F2	Q2
					LL	UL				
Commitment -> SUSPERFM	0.087	0.083	1.043	0.297	-	0.253	Not Supported	0.46	0.007	
Trust -> SUSPERFM	0.295	0.074	3.975	0	0.124	0.425	Supported		0.096	0.250

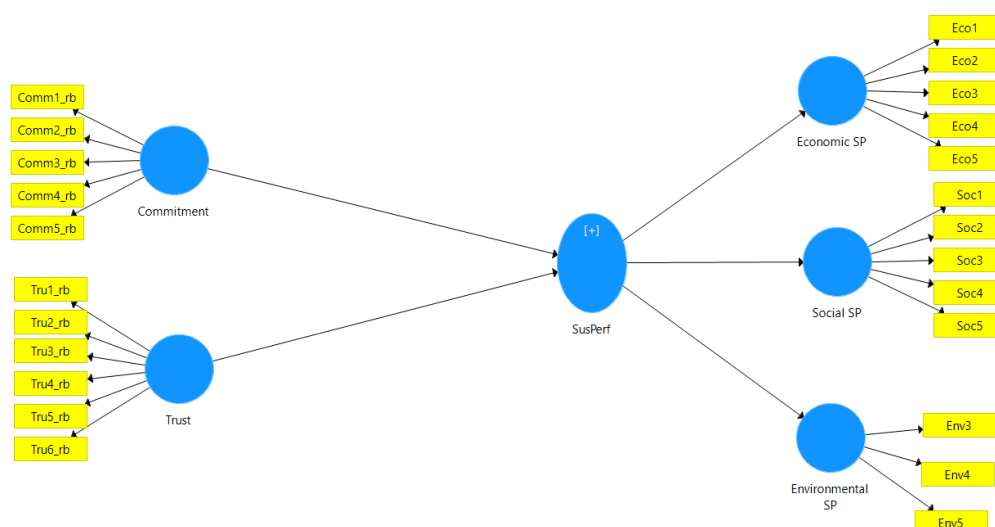


Figure 4: Structural Model Results

Discussion and Finding

Previous literature has extensively proven the significant effect between trust and economic, social, and environmentally sustainable performance (Ramirez et al., 2021; Nunes et al., 2020). The current finding revealed that H1 (H1 a, b, and c) is in line with the previous study whereby trust in relationship marketing is affecting the small farmer's sustainability performance. In this finding, small farmers are found to have stronger trust in their buyers. The study finding also fills the gaps of a previous study by Ramirez et al (2020) who suggested further discussion of trust concerning sustainable performance from the perspective of agribusiness. To be specific, the current study revealed that the trust relationship toward economic, social, and environmental sustainability was supported. Due to the insufficiency possessed by the small farmers, small farmers have to trust and must rely on intermediaries to supply their products to the market. The small farmers have to rely on information sharing and the facilities provided by the middleman to sustain their earning income. The finding is in line with Mazibuko et al (2019) study that a farmer's decision to sell their crops to the informal market or traditional market is intended to sell the food crops and earn income from it. Trust was found significant in farmers' social sustainability. In this study, most of the respondents were referring to their situations during the pandemic. They indicated that most of their crops were sold to the traditional collectors, consisting of their own family and people they know or are nearby. This is because, during the pandemic, small farmer aims to ensure their crops can be sold. Thus, they have no choice but to sell their crops to the nearest intermediaries.

Continuously selling their crops at any price received will affect their survival to live especially during uncertain situations. The ability to continue selling their crops to the buyers has affected the farmer's motivations in practicing environmental sustainability in their farming. Besides, offering quality food crops by practicing organic farming will give a competitive advantage to the small farmers and earn a premium price on their food crops. Trust could be a main determinant for the small farmers to be ecological sustainability as the small farmers want to offer the best crops to their buyers as most of their buyers are among the family members.

The study findings indicate that the H2b and H2c hypotheses are not supported by this study. Meanwhile, the H2a hypothesis is accepted where commitment positively affects the small farmer's economic sustainability performance. The finding of this study contradicts the previous study which have been conducted on several sectors (Gualandaris & Kalchschmidt, 2015; Yuen et al., 2018; Morgan et al., 2018). The small farmer's decision to continue the relationship may provide the farmers with economic sustainability. Farmers that remained committed to the present relationship may sell their harvests constantly and make a profit. In this study, most respondents used direct distribution channels to sell to their customers. As a result, small farmers could always provide and pay for the expenses related to their farming operations. Additionally, according to a previous study, commitment in a relationship may lessen uncertainty (Holdford & White, 1997; Paluri & Mishal, 2020), for example during the pandemic. Most respondents deal with regular contact and direct marketing methods. The close social ties have shown that trust is not a major concern for small farmers. This clarified why the relationships between small farmers and their customers do not demand higher commitment. According to a prior study by Akhbar and Ahsan (2020), achieving social sustainability would be hampered by a lack of interpersonal commitment. Aiming to sell their food crops at any price, especially during the pandemic, will not give the small farmers satisfaction and improve their well-being. It is because the earning is insufficient to cover the cost and give the farmers quality of life in the long term. The farmers believed that their close relationships with the purchasers would be advantageous for them to continue selling their products, therefore they did not feel the need to improve their relationship or give much thought to their wellbeing. The performance of environmental sustainability was unaffected by a partner's commitment to them. Prior research on commitment and environmental sustainability was mostly conducted in the setting of the industrial business (Sendawulu et al., 2021; Morgan et al., 2018). Less research has been done on the development of relationships between small farmers and customers, especially on the importance of commitment. This study demonstrates that a small farmer's commitment to relationships with customers has no relationship with the small farmer's environmental sustainability performance.

Research Implication

Most of the previous research focused on the economic viability of small farmers and industrial agriculture. The sustainability performance of small farmers has been underlined as a key problem and impacted other sustainability concerns, including food security, a low degree of self-sufficiency, poverty, and others. Therefore, through understanding small farmers' sustainability, this research assists to determine the extent of small farmers' performance overall. To the best of the researcher's knowledge, most studies on farmers' sustainability performance are based in western nations, and few studies are in Malaysia.

Additionally, research on small farmers' sustainability performance in Sabah is still lacking, and Sabah is one of the nation's lowest contributors to GDP and has a high rate of poverty.

This study emphasized the value of small farmers developing relationships with their supply chain partners. Trust in the relationships throughout the supply chain is essential for regulating transaction costs since it may have an impact on small farmers' capacity to sustain their economies. Therefore, Federal Agricultural Marketing Authority (FAMA) and other agriculture organizations should expand the marketing program that would link small farmers with a buyer who will not exploit them. Besides, small farmers could also employ the strategy of building trust and commitment when doing a transaction with profitable intermediaries. As trust was found as fundamental for the small farmers to sustain their performance in economic, social, and environment. Additionally, the loan policy for small-scale farmers has to be reviewed. Most small farmers with more than ten years of experience in agriculture still made less than RM 4000 per year and their earnings remain unchanged. The ability to obtain loans from a financial institution may drive small farmers to pursue larger goals for their production of food crops.

Limitation and Recommendations

One of the limitations of this study is the small farmers are only selected from one area of agriculture. Data was formally gathered from those working in the cultivation of food crops in the state of Sabah. Based on Sabah Agriculture Policy 3, Sabah has several emphases on agricultural regions. Agrotourism, food crops, industrial and other economic emphases, agro-industry, livestock, and fisheries are some of the fields of agriculture. Small-scale farmers could also be engaged in other important facets of agriculture, such as livestock and industrial farming.

This study provide an insightful information in relating to small farmer relationship marketing strategy with its impact on their sustainability performance. However, in order to get a wider view of the small farmers sustianbaility performanceit is recommended that longitudinal research be carried out, particularly by looking at a few of the factors in this study. Expanding the data collection to other states in Malaysia or Malaysia as a whole will give a better vision of the agriculture industry in the Malaysian context. Additionally, agriculture will be represented by extending the study of food crops to other sectors of agriculture. As a result, it will have a substantial effect and provide insight into Sabah's agriculture industry. The results will further explain the issues of the gross domestic product declining in agriculture sector. Numerous indicators to studies the relationship marketing strategy that have been put out by earlier research and it effect on performance of economic, social, and environmental sustainability are not frequently studied in the context of small farmers. This paper would recommend to add another variable in examining the relationship marketing strategy of the small farmers. To address the satisfaction variable would further examine the small farmers stratregy in building the relationship with the other members in the market channel. Past study have employed the satisfaction in examining the relationship marketing however it was limitedly studied from the small farmers perspective.

References

Akbar, S., & Ahsan, K. (2020). Investigation of the challenges of implementing social sustainability initiatives: a case study of the apparel industry. *Social Responsibility Journal*, February. <https://doi.org/10.1108/SRJ-09-2019-0291>

- Akbar, Y., H., & Tracogna, A. (2018). The sharing economy and the future of the hotel industry: Transaction cost theory and platform economics. *International Journal of Hospitality Management*, 71(October 2017), 91–101. <https://doi.org/10.1016/j.ijhm.2017.12.004>
- Arumugam, N., & Karim, Z. M. (2018). Uncovering the Determinants of Sustainability Practices: Perceptive of Small Scale Dairy Farmers. *Informing Science: International Journal of Community Development & Management Studies*, 2, 37–47. <http://ijcdms.org/Volume02/v2p037-047Arumugam4369.pdf>
- Baraka, B., Mburu, J., & Muriithi, B. (2019). Transaction costs magnitudes, market participation, and smallholder profitability in rural-urban vegetable supply chain. *International Journal of Vegetable Science*, 00(00), 1–11. <https://doi.org/10.1080/19315260.2019.1700204>
- Bottani, E., Tebaldi, L., Lazzari, I., & Casella, G. (2019). A model for assessing economic and environmental sustainability dimensions of a fashion supply chain and a case study. *IFAC-PapersOnLine*, 52(13), 361–366. <https://doi.org/10.1016/j.ifacol.2019.11.147>
- Brown, J. R., Crosno, J. L., & Tong, P. Y. (2018). Is the theory of trust and commitment in marketing relationships incomplete? *Industrial Marketing Management*, 77(October), 155–169. <https://doi.org/10.1016/j.indmarman.2018.10.005>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*, Second ed. Lawrence Erlbaum Associates, New York.
- Dlamini-Mazibuko, B. P., Ferrer, S., & Ortmann, G. (2019). Examining the farmer-buyer relationships in vegetable marketing channels in Eswatini. *Agrekon*, 58(3), 369–386. <https://doi.org/10.1080/03031853.2019.1596824>
- Dos Santos, L. P., Schmidt, C. M., & Mithofer, D. (2020). Impact of Collective Action Membership on the Economic, Social and Environmental Performance of Fruit and Vegetable Farmers in Toledo, Brazil. *Journal of Co-operative Organization and Management*, 8(1), 100107. <https://doi.org/10.1016/j.jcom.2020.100107>
- E-Book Sabah Agriculture Blueprint*. Mafi.sabah.gov.my. (2019). Retrieved 25 May 2020, from <https://mafi.sabah.gov.my/ebook.html>.
- Enjolras, G., & Aubert, M. (2018). Short food supply chains and the issue of sustainability: a case study of French fruit producers. *International Journal of Retail and Distribution Management*, 46(2), 194–209. <https://doi.org/10.1108/IJRDM-08-2016-0132>
- Gneiting, U., & Sonenshine, J. (2018). A Living Income For Small-Scale Farmers Tackling unequal risks and market power A Living Income for Small-Scale Farmers: Tackling unequal risks and market power (Issue November). Oxfam GB. www.oxfam.org
- Hadi, S., & Baskaran, S. (2021). Examining sustainable business performance determinants in Malaysia's upstream petroleum industry. *Journal of Cleaner Production*, 294, 126231. doi: 10.1016/j.jclepro.2021.126231
- Hair, Joseph F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Thousand Oaks: Sage. <https://doi.org/10.1016/j.lrp.2013.01.002>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hammerschmidt, M., Wetzel, H. A., & Arnold, T. J. (2018). The burden of rank: The impact of preferred supplier status on excessive buyer requests. *Industrial Marketing Management*, 71(September 2019), 19–26. <https://doi.org/10.1016/j.indmarman.2017.10.005>

- Hassan, S. Z., Jajja, M. S. S., Asif, M., & Foster, G. (2020). Bringing more value to small farmers: a study of potato farmers in Pakistan. *Management Decision*, 1165265. <https://doi.org/10.1108/MD-12-2018-1392>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Ishaq, M. N., Abdullah, M., Ghazanfar, S., & Technology, I. (2015). Exploring the Socioeconomic Determinants for the Dominance of Traditional Milk Marketing System among Dairy Farmers and Consumers, an Evidence from Punjab Province of Pakistan Lodh, <https://doi.org/10.5829/idosi.aejaes.2015.15.12.12844>
- Karungani, P. W. (2019). Factors Influencing Buyer Supplier Relationships on Supply Chain Performance of Foreign Based Development Agencies in Kenya.
- Kowalska, M. (2020). SME Managers' Perceptions of Sustainable Marketing Mix in Different Socioeconomic Conditions — A Comparative Analysis of Sri Lanka and Poland.
- Lowder, S., Skoet, J. and T. Raney. 2016. The number, size, and distribution of farms, smallholder farms, and family farms worldwide. *World Development* 87, 16-29.
- Magesa, M. M., Michael, K., & Ko, J. (2020). Access and use of agricultural market information by smallholder farmers: Measuring informational capabilities. *Electronic Journal of Information Systems in Developing Countries*, 86(6). <https://doi.org/10.1002/isd2.12134>
- Matzembacher, D. E., & Meira, F. B. (2019). Sustainability as business strategy in community supported agriculture: Social, environmental and economic benefits for producers and consumers. *British Food Journal*, 121(2), 616–632. <https://doi.org/10.1108/BFJ-03-2018-0207>
- Mbitsemunda, J. P. K., & Karangwa, A. (2017). Analysis of Factors Influencing Market Participation of Smallholder Bean Farmers in Nyanza District of Southern Province, Rwanda. *Journal of Agricultural Science*, 9(11), 99. <https://doi.org/10.5539/jas.v9n11p99>
- Morgan, R. M., & Hunt, S. D. (1994). The Commitment-Trust Theory of. *Journal of Marketing*, 58(July), 20–38. <https://doi.org/10.1177/002224299405800302>
- Mutyasira, V., Hoag, D., Pendell, D., Manning, D. T., & Berhe, M. (2018). Assessing the relative sustainability of smallholder farming systems in Ethiopian highlands. *Agricultural Systems*, 167(November 2017), 83–91. <https://doi.org/10.1016/j.agsy.2018.08.006>
- Nwafor, C. (2020). The Market Channel Preference Among Smallholder Cocoyam Farmers in South Africa: A Food Security Perspective. *March*, 1–23. <https://doi.org/10.20944/PREPRINTS202003.0062.V1>
- Purnomo, M., Otten, F., & Faust, H. (2018). Indonesian traditional market flexibility amidst state promoted market competition. *Social Sciences*, 7(11). <https://doi.org/10.3390/socsci7110238>
- Ramayah, T., Jacky, C., Chuah, F., Ting, H., & Memon, M. A. (2018). Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 3.0. Handbook of Market Research (2th Editio). Pearson Malaysia Sdn Bhd. https://doi.org/10.1007/978-3-319-05542-8_15-1
- Ramirez, M. J., Roman, I. E., Ramos, E., & Patrucco, A. S. (2021). The value of supply chain integration in the Latin American agri-food industry: trust, commitment and performance outcomes. *International Journal of Logistics Management*, 32(1), 281–301. <https://doi.org/10.1108/IJLM-02-2020-0097>

- Roberts-Lombard, M., Mpiganjira, M., & Svensson, G. (2017). Antecedents and outcomes of satisfaction in buyer-supplier relationships in South Africa: A replication study. *South African Journal of Economic and Management Sciences*, 20(1), 1–14. <https://doi.org/10.4102/sajems.v20i1.1497>
- Sarstedt, M., Ringle, C. M., Henseler, J., & Hair, J. F. (2014). On the emancipation of PLS-SEM: A commentary on Rigdon (2012). *Long range planning*, 47(3), 154–160. <https://doi.org/10.1016/j.lrp.2014.02.007>
- Sendawula, K., Bagire, V., Mbidde, C. I., Turyakira, P. (2021), "Environmental commitment and environmental sustainability practices of manufacturing small and medium enterprises in Uganda", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 15 No. 4, pp. 588-607. <https://doi.org/10.1108/JEC-07-2020-0132>
- Shahzad, K., Ali, T., Takala, J., Helo, P., & Zaefarian, G. (2017). The varying roles of governance mechanisms on ex-post transaction costs and relationship commitment in buyer-supplier relationships. *Industrial Marketing Management*, 71(December), 135–146. <https://doi.org/10.1016/j.indmarman.2017.12.012>
- Shen, L., Su, C., Zheng, X. (Vivian), & Zhuang, G. (2019). Between contracts and trust: Disentangling the safeguarding and coordinating effects over the relationship life cycle. *Industrial Marketing Management*, 84(March 2018), 183–193. <https://doi.org/10.1016/j.indmarman.2019.06.00>
- Shen, L., Wang, Y., & Teng, W. (2017). The moderating effect of interdependence on contracts in achieving equity versus efficiency in interfirm relationships. *Journal of Business Research*, 78, 277–284. <https://doi.org/10.1016/j.jbusres.2016.12.023>
- Tellefsen, T. (2002). Commitment in business-to-business relationships. The role of organizational and personal needs. *Industrial Marketing Management*, 31(8), 645–652. [https://doi.org/10.1016/S0019-8501\(01\)00172-9](https://doi.org/10.1016/S0019-8501(01)00172-9)
- Tey, Y. S., Arsil, P., Brindal, M., Teoh, C. T., & Lim, H. W. (2017). Motivations underlying consumers' preference for farmers' markets in Klang Valley: A means-end chain approach. *Sustainability (Switzerland)*, 9(11). <https://doi.org/10.3390/su9111958>
- Setyawan, A. A., Purwanto, B. M., Dharmmesta, B. S., & Nugroho, S. S. (2016). Business relationship framework in Indonesia: relationship marketing vs transaction cost. *Journal of Asia Business Studies*, 10(1), 61–77. <https://doi.org/10.1108/JABS-06-2014-0043>
- Thomas, B., & Vink, N. (2020). The development of vegetable enterprises in the presence of transaction costs among farmers in Omusati Region of Namibia: An assessment. *Journal of Agriculture and Food Research*, 2(October 2019), 100028. <https://doi.org/10.1016/j.jafr.2020.100028>
- United Nations General Assembly. (1987). Report of the world commission on environment and development: Our common future. Oslo, Norway: United Nations General Assembly, Development and International Co-operation: Environment.
- Urbach, N., & Ahlemann, F. (2010). Structural equation modeling in information systems research using partial least squares. *Journal of Information Technology Theory & Application* 11, 5–40
- Vian, A. Z., Setti, D., and De lima, E. P. (2020). Indicator for assessing sustainability performance of small rural properties. *International Business, Trade and Institutional Sustainability, World Sustainability Series*, https://doi.org/10.1007/978-3-030-26759-9_22
- Yuen, K. F., Wang, X., Wong, Y. D., & Zhou, Q. (2018). The effect of sustainable shipping practices on shippers' loyalty: The mediating role of perceived value, trust and

transaction cost. *Transportation Research Part E: Logistics and Transportation Review*, 116(April), 123–135. <https://doi.org/10.1016/j.tre.2018.06.002>