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Sustainable marketing strategy and the growth of organic agriculture enterprises

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ABSTRACT

The Philippines' economy is strongly reliant on agriculture. Organic agriculture production is usually recognized as the main driver of sustainable economic development especially in rural areas since it adheres to the principles of sustainability and sustainable marketing. The benefits of agricultural organic products, their appearance, taste and processing, sustainable marketing techniques, the development of organic agricultural businesses, the lack of genetically modified organisms and consumer purchasing decisions such as the cost of sustainable products are all the primary focus of this study. Moreover, it helps Asian farmers, producers and consumers understand how effective marketing can be for agricultural businesses. Researchers, entrepreneurs, students and consumers benefit as well. The data gathered through the use of an appropriate sampling strategy resulted in 279 responses. The programme known as SmartPLS 4 was used to carry out the analysis of this data. Upon further investigation, it was discovered that each of the eight assumptions about the total impact dimensions was supported. It was determined that only two of the hypotheses were not significant: "The growth of organic agricultural businesses may be affected by sustainable marketing strategies" and "Sustainable marketing strategy mediates purchasing decisions towards organic agricultural business development." The development of organic agricultural businesses is influenced by the views and decisions of consumers on their purchases based on the findings. A similar study using a longitudinal research approach may be conducted by future researchers to verify the findings revealed.

Contribution/ Originality: There is limited research on sustainable marketing methods for the growth of agricultural businesses and the factors influencing consumers' choices when buying agricultural goods. This study provides a more comprehensive discussion of the perceptions of consumers regarding agricultural organic products, sustainable marketing strategies, organic agricultural business development and the purchasing decisions of consumers.

1. INTRODUCTION

The emergence of successful urban farmers has aroused curiosity worldwide. The majority of less developed countries generally recognize that using agriculture for the improvement of a nation's economy is a viable strategy [1]. Organic agriculture production is usually recognized as the main driver of sustainable economic development especially in rural areas since it adheres to the principles of sustainability and sustainable marketing. In 2018, the

organic food industry generated a total of 97 billion euros in retail sales. Most countries in the world experienced an increase in the market with several seeing double-digit growth rates [2]. However, it represents a very small portion of the total revenues in the food business.

Consumers often see organic agriculture as environmentally friendly resulting in a greater emphasis on this agricultural technique. This innovative process enables the creation of products that are beneficial to humans in addition to being safe. Organic food items are not only safe but also beneficial for one's health. The products are carefully manufactured to preserve environmental sustainability ensuring the preservation of the environment and its natural resources. Food security and improved nutrition are also achieved. According to Melović, et al. [3], the progress of the organic agriculture sector may be influenced by consumers' favourable views, their willingness to make purchases and sustainable marketing tactics [3].

Prior research in this field mostly examined the overall consumer response to various offers from organic food stores. Although a precise definition is lacking, researchers describe organic agricultural customers as those whose purchasing decisions are greatly influenced by social media marketing and environmental concerns [4, 5]. Furthermore, it is crucial to comprehend their beliefs and attitudes towards buying such items to satisfy the consumer's need for organic food goods [6].

Research on sustainable marketing methods for farmers in the Philippines has been limited. More studies have to be done on the growth of agricultural businesses and the factors influencing consumers' choices when buying agricultural goods. Thus, the benefits of agricultural organic products, their appearance, taste and processing, sustainable marketing techniques, the development of organic agricultural businesses, the lack of genetically modified organisms and consumer purchasing decisions such as the cost of sustainable products are all the primary focus of this study. Moreover, it helps Asian farmers, producers and consumers understand how effective marketing can be for agricultural businesses. Researchers, entrepreneurs, students and consumers benefit as well. Previous studies cited by the authors enhanced the literature for the current study. According to some researchers, food sustainability transitions are the processes that must occur to move towards sustainable food systems and sustainable marketing techniques have an impact on consumer preferences when it comes to purchases [7-9]. Most of the studies only investigated the relationship among variables and not the impact of the suggested independent variables on the dependent variable (the purchasing decision). In another study by Suki and Suki [10], it was confirmed that promoting green goods and behavior-related attitudes like health consciousness and the high demand for natural products might contribute to the development of a very profitable agricultural operation. This study was carried out to fill in some research gaps which include the lack of research on the effects of sustainable marketing strategies on the growth of agricultural businesses and the mediating role of sustainable marketing strategies in the relationship between consumer perception and the development of organic agriculture businesses.

Organic products for consumers ensure food safety and healthy lives. The range of biodiversity impacts everything from soil organisms to plants, animals and lands. The agriculture is now concerned with restricted use of fertilizers and enhanced crop diversity through rotations and the use of legumes. Additional activities undertaken by individual organic farmers include building on their baseline organic status. For example, the creation and management of habitats to encourage biological pest control. Land sharing with biodiversity enhancement and agricultural management designed to be mutually beneficial is a key theme. Crop rotation and the limited use of artificial fertilizers and pesticides as well as the improvement of soil health have an important bearing on biodiversity in organic farming systems.

2. LITERATURE REVIEW

This study is anchored on the *organic agricultural product model* of Melović, et al. [3]. Their review of literature related to the market for organic agricultural products and customer perceptions about purchasing decisions for

organic agricultural products yielded numerous insights for this study particularly in identifying the factors affecting consumers' perceptions of organic agricultural products and their purchasing decisions [3, 4].

2.1. Consumers' Perceptions and the Organic Agriculture Business Development

Earlier research done in Asia has shown that organic agriculture is an advanced method that enables the production of safe and nutritious goods while safeguarding the environment and natural resources [11]. It was emphasized in a study that organic farming is now confronted with a significant challenge; only a small fraction of organic customers' accounts for the bulk of organic agricultural product purchases despite the associated health advantages [12].

Organic farming employs methods that eliminate the use of fertilizers, pesticides, animal pharmaceuticals and food items that may pose risks to human health with the aim of producing wholesome goods [13, 14]. Multiple farms and enterprises in the agri-food industry have integrated the ideas of environmental, social and economic sustainability into their operational frameworks. The increasing focus on the three dimensions of sustainability, namely, environmental, social and economic is principally motivated by a shift in consumer behavior prompted by the global economic recession.

The influence of customer attitudes and perceptions on the development and sustainability of the organic food business is clearly apparent. These impressions are not fixed but rather fluid shifting with growing consumer values and market circumstances. It is crucial for those involved in the organic farming sector to customize their approaches to match consumer tastes and successfully convey the advantages of organic products in terms of health and sustainability to fully use the implications of these discoveries [15]. Thus, it is hypothesized that *there is a positive and analytical relationship between consumer perceptions and the development of organic agriculture businesses (H_1).*

2.2. Consumers' Perceptions and Sustainable Marketing

When brand differences are great, consumers behave in a variety-seeking manner. Customers frequently test out many brands in this situation. For example, while purchasing corn, a consumer makes a decision based on expectations and chooses a brand without giving it much thought or subsequently assessing it. *Perception* as defined According to Dipjyoti (2023) [15], perception is the cognitive process by which people choose, organize and interpret information to construct a coherent representation of the environment. As a result, consumers' decisions to purchase goods depend on their opinion of a particular item.

Capital investments increased with 20 times more capital invested in agriculture business ventures in 2021 than in 2012 [16]. Investors changed the way they planned to allocate capital in their next funds using new technologies such as new farming methods and food technology practices.

The prevalent misconception about consumer behavior is that it just involves the purchase of products and services. In fact, consumer behavior includes the decision-making process that occurs before and after these acts. Understanding how to better align marketing effort with consumer values and sustainability preferences is essential for learning how organizations may implement sustainable marketing activities [17].

Nevertheless, a study conducted in 2012 by Nguyen and Dang [18] highlighted that it is crucial to combine green marketing strategies and comprehend customer behavior to create company value and sustain business growth. Based on these studies, it is hypothesized that *there is an analytical relationship between consumers' perceptions and their purchasing decisions (H_2).*

2.3. Consumers' Purchasing Decisions and Organic Agriculture Business Development

It has been observed that buyers often have the misconception that a high price is indicative of superior quality, which is not. Moreover, pricing is a factor that amplifies brand perception Orsini, et al. [19]. Weinand, et al. [20] noted that when examining the relationship between marketing ideas, it is important to point out any connections

among marketing concepts, strategic marketing concepts and the concept of marketing that focuses on environmental concerns.

The relevance of place of production purchase and other aspects can be exploited and controlled to have a positive influence on customers' decisions to buy agricultural products [19]. Consumers' purchasing decisions constantly depend on external environmental marketing and other circumstances [21]. Thus, it is *hypothesized that consumer purchasing behavior affects how the organic agriculture industry develops (H_3).*

2.4. Sustainability Marketing and Purchasing Decisions with Agriculture Business Development

Business expansion requires human capital which may not be properly invested and sustained. New partnerships can help close these gaps by engaging in new ventures and sustaining the agriculture business. A concrete example of this is a successful partnership between an agricultural commodities trader and one of the world's largest oil companies to establish a secure supply of feedstock for renewable fuels. The oil company can purchase soybean oil produced by the trader's plants when developing biofuels [22]. As marketing and purchasing decisions are established, their agriculture business develops and progresses.

Sustainable agriculture such as soybean oil should meet the dietary requirements of consumers by producing enough nutritious food while also minimizing harm to the environment and ensuring that farmers are adequately compensated. This promotes the ongoing adoption of eco-friendly production methods. An assessment of the agricultural goods market must be conducted on an individual basis to ascertain its feasibility for a particular holding. The location and distribution of farm products have a positive impact on green consumption [23]. Therefore, it is hypothesized that *the development of organic agricultural businesses may be influenced by sustainable marketing strategies (H_4).*

Moreover, studies pointed out that creating specific packaging for organic agricultural products and adopting sustainable marketing strategies influence purchasing decisions. Food sustainability transitions are the change processes required to advance towards sustainable food systems [3, 7].

According to Weinand et al. [20], a key to connecting sustainability's pillars is changing consumption patterns through customer perception [20]. They agree that there is a strong emphasis on the consumer's role in fostering sustainable food supply chains to raise the quality and safety of all food items internationally and locally including agricultural produce. Thus, this study attempts to validate earlier studies in the field that examined consumer views of sustainable marketing strategies, purchasing patterns and business development in organic agriculture. Therefore, it is hypothesized that *consumer perceptions of agricultural organic products may be influenced by sustainable marketing strategies (H_5).*

There are many variables that influence how green consumers perceive products from organic agriculture but not all of them are equally important [24]. Understanding the factors that consumers consider when making a purchase decision regarding organic agricultural products could help mitigate their negative perceptions of organic products.

There is a relationship between the marketing of green products and the attitudes of customers including health awareness and confidence in the demand for organic products [10].

In addition, green marketing is one of the most important trends in contemporary business, occurring more frequently in advanced nations than in low- and middle-income ones [8]. As a result, promoting the purchase of organic agricultural products may be regarded as a useful tool for a country with low- and intermediate-income levels. Therefore, *it is hypothesized that sustainability marketing influences purchase decisions (H_6).*

2.5. The Mediation Effect of the Sustainable Marketing Concept

Additional constructs or dimensions could be added to any established theory or an adoptable model could be designed [9, 25]. A *mediator variable* is a variable that facilitates a causal relationship between the dependent and

independent variables. It elucidates the relationship between the dependent variable and the autonomous variable [26]. *Complete mediation* refers to the comprehensive intervention brought about by the mediator variable. As a result, the beginning variable ceases to have an impact on the outcome variable. *Partial mediation* refers to a situation where there is only partial involvement [9, 26].

Agriculture businesses are in demand as farmers enjoy large profits in the market. Skilled farmers look for new opportunities. It is their time to invest in acquiring skills and talent to support the development of a marketing strategy particularly as farmer and consumer expectations become increasingly technology-focused [27]. New partnership models outside of the food and agriculture sectors are being explored. An example is collaboration between an agricultural business oilseed producer and an oil supplier. The agriculture business provided financial assistance to allow the partners to plant a new kind of cover crop that would protect the quality of the soil.

Meanwhile, one of the main purposes of the study is to confirm the mediation effects of sustainable marketing strategies by testing the importance of the pertinent total effects in the extended model. Hence, it is suggested that using this hypothetical framework, the mediator variable's outcomes can be achieved as seen in Figure 1.

The framework indicates the indirect effect of sustainable marketing strategies through consumers' perceptions of agricultural organic products. It is the product of the path coefficients from sustainable marketing strategy to consumers' perceptions of agricultural organic products and from consumers' perceptions of agricultural organic products to organic agriculture business development [mediation path 1(H5, H1) in Figure 1].

Similarly, the indirect effect from sustainable marketing strategy through purchasing decisions for agricultural organic products to organic agriculture business development is the product of the path coefficients from sustainable marketing strategy to purchasing decisions for agricultural organic products and from purchasing decisions for agricultural organic products to organic agriculture business development [mediation path 2, (H6, H3) in Figure 1].

Based on the illustration, it is *assumed that sustainable marketing strategy mediates purchasing decisions towards agricultural business development (H_7)* and that *sustainable marketing strategy has a mediation effect on consumers' perceptions towards purchasing decisions for organic agricultural products (H_8).*

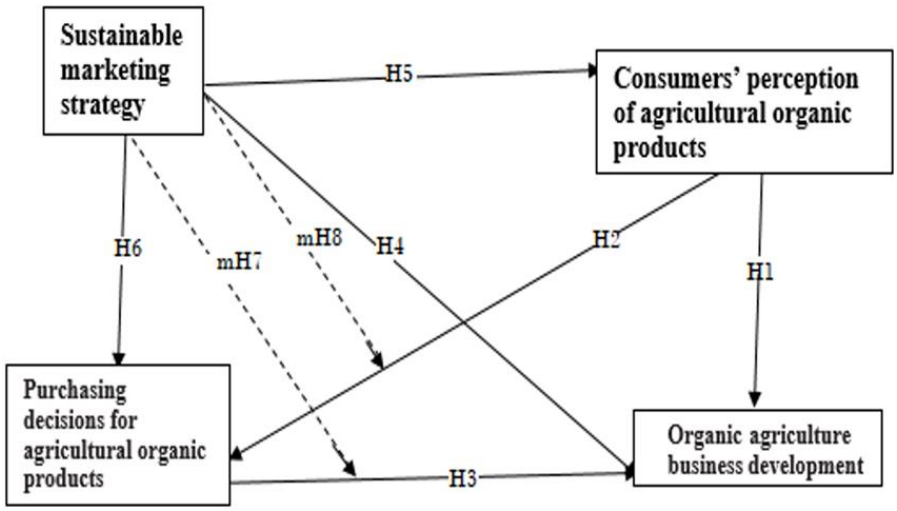

Figure 1. Hypothetical framework of the study

Previous studies served as the foundation for the study model. Some researchers agree that sustainable marketing strategies influence customer preference when it comes to purchasing and food sustainability transitions are the transformation processes required to move towards sustainable food systems [7-9]. These studies examined only the relationships between the variables; they did not examine how the proposed independent variables affected the dependent variable (the purchasing decision). In another study by Suki and Suki [10], it was confirmed that

promoting green goods and behavior-related attitudes like health consciousness and the high demand for natural products might contribute to the development of a very profitable agricultural operation. Research gaps include not examining how sustainable marketing techniques affect the growth of agricultural businesses and how they function as a mediator between consumer perception and the development of firms in organic agriculture.

3. METHOD

3.1. Subjects and Instruments

The current study used SmartPLS to suggest the structural equations and final structure modeling of the framework. The questionnaire was reproduced and distributed to Philippine agricultural business and administration experts, including one Nigerian for pilot testing and face validation. In addition, 22 chosen organic buyers from the Department of Agriculture for Central Luzon, the City of San Fernando, Pampanga and post-graduate students from Bulacan State Agriculture, Philippines were given copies to confirm the validity of the instrument. The questionnaire's final version was prepared based on their suggestions with a total of 22 questions. The content consisted of two sections, namely, a demographic segment and a model design segment.

A 5-point Likert scale that ranges from 1 to 5 with 1 representing "strongly disagree", 2 representing "disagree", 3 representing "neutral", 4 representing "agree " and 5 representing "strongly agree" was considered to determine the efficiency of agriculture business marketing to customers in relevance to sustainable business development based on previous publications [3, 28]. These studies supported the notion that consumer perception (heather products), sustainable marketing strategies (marketing mix) and purchase decisions (lifestyle, constant price regulation) are among the modeling questions used to identify influencers of organic agricultural business development (satisfaction, value and economic improvement) and demographic questions including gender, age and employment status.

3.2. Sampling Technique

Obtaining the sample size is a crucial step in performing research [29] which consists of seven provinces, namely Aurora, Bataan, Bulacan, Nueva Ecija, Pampanga, Tarlac and Zambales. Additionally, it includes 14 cities and 116 municipalities. According to Santos, the research would have been most suitable to be conducted in Nueva Ecija province due to its vast geographical area [30].

Convenience sampling is an inexpensive and expedient approach to collecting initial data. However, it lacks the ability to determine whether the sample accurately represents the whole population, therefore rendering the conclusions non-generalizable [29]. The study opted for an online survey conducted using Google Forms as the research tool in order to facilitate and expedite the data collection process. Nevertheless, Bulacan (Walter Mart, SM Baliwag, and UniTop Mall), Pampanga (Walter Mart at San Fernando, SM Pampanga, Pure Gold Duty Free, and Clark Pampanga) and Bulacan Facebook Organic agricultural online market provinces were chosen because of convenience in using *convenient sampling techniques.*

3.3. Data Collection and Sample Size

Data collection includes the processes of obtaining data assigning labels to the data and enhancing either the data or the model itself [31]. Similar to the study of Ditlevsen et al. [32], the researchers included surveying customers who willingly participated and had previous experience purchasing organic or other agricultural goods. A related study by Hassen, et al. [33] affirmed that conducting the study in physical locations such as shops, malls, and other places where organic produce is sold as well as online agricultural market sellers was suitable. This decision was made to effectively target consumers of environmentally friendly food products.

However, research indicates that the methods used to gather data, the processes followed and the tactics used for selecting samples generally remain consistent in quantitative research investigations [34]. Based on the

information, personal electronic gadgets (android, smart phone and tablet) of the researchers were allowed to be used by volunteers with internet access during the 5-month period to answer the survey with one attempt (August to December, 2022). With this approach, some 279 participants were deemed suitable for this study.

3.4. Adopted Analytical Tool

Smart Partial Least Squares statistical software examines the relationship between variables both latent and manifest [35]. SmartPLS produces visually appealing graphical results. The output of this programme is very adaptable unlike R or other graphics programmes. This adaptability is valuable for analyzing the replies of study participants and drawing dependable and coherent findings. IBM SPSS lacks user-friendliness [35, 36]. Therefore, the SmartPLS 4 analytical instrument is reliable, legitimate and appropriate for the study. The purpose was to analyze and forecast the importance of the functions performed by the specified factors.

The evaluation of the measurement model's quality for the constructs involved assessing reliability (Cronbach's alpha), validity (AVE), discriminant validity (HTMT, $R^{2)}$ and factor loading of 0.6 or higher using the algorithm properties of SmartPLS. Additionally, bootstrapping is employed to test the statistical significance of various results such as path coefficients (mean, standard error, *p*-value, and *t*-statistics), total effect, direct and indirect effect, among others.

3.5. Measurement of Construct Reliability and Validity

The reliability and validity of the scales used in research are crucial for generating favorable results. Furthermore, several studies assert that the recommended alpha values should fall between the range of 0.70 and 0.95 [37, 38]. The measure's consistency is determined by its reliability as measured by Cronbach's alpha and composite reliability which should be above 0.7 [39, 40]. On the other hand, the measure's accuracy is determined by its validity and the recommended value of 0.5 for average variance extracted (AVE) [36, 41-43].

This study achieved a *composite reliability* value of 0.7 and all the constructs for *AVE were* ***above*** 0.5 for consumer's perception, sustainable marketing strategy, organic agriculture business development constructs and expected factor loading which are presented in Table 3.

3.5.1. Discriminant Validity

The Fornell-Larcker criteria and the evaluation of partial cross-loadings provide guidance on addressing concerns related to discriminant validity in variance-based structural equation modelling [36]. The cross-loading achieved is shown in Table 1.

Table 1. Discriminant validity through the criteria of Fornell-Larcker

Code	ConP	OrGA	PurD	SuMa	SuMa x PurD	SuMa x ConP
ConP	0.797					n/a
OrGA	0.612	0.715				n/a
PurD	0.477	0.659	0.724			n/a
SuMa	0.430	0.505	0.550	0.762		n/a
SuMa x PurD	0.254	0.100	0.275	0.190		n/a
SuMa x ConP	0.326	0.121	0.198	0.022	0.379	n/a

Note: *ConP* stands for consumers' perception of agricultural organic products, *SuMa* stands for sustainable marketing strategy, *PurD* stands for purchasing decisions for agricultural organic products, and *OrGA* stands for organic agricultural business development.

Discriminant validity between two latent indicators is considered to be achieved when the Heterotrait-monotrait ratio of correlation (HTMT) value is below 0.90 as stated by previous studies [36, 44]. Meanwhile, Table 2 of this study demonstrated the achieved level of discriminant validity through the Heterotrait-monotrait ratio of correlations (HTMT) which was suggested to be less than 0.90 [36, 44].

Table 2. Discriminant validity through Heterotrait-monotrait ratio (HTMT).

Latent indicators	HTMT value< 0.90
OrGA -> ConP	0.828
PurD -> ConP	0.791
PurD -> OrGA	0.764
SuMa x ConP	0.781
SuMa -> OrGA	0.862
SuMa -> PurD	0.788
SuMa x PurD -> ConP	0.357
SuMa x PurD -> OrGA	0.136
SuMa x PurD -> PurD	0.321
SuMa x PurD -> SuMa	0.232
SuMa x ConP -> ConP	0.518
SuMa x ConP -> OrGA	0.179
SuMa x ConP -> PurD	0.268
SuMa x ConP -> SuMa	0.034

Note: *ConP* stands for consumers' perception of agricultural organic products, *SuMa* stands for sustainable marketing strategy, *PurD* stands for purchasing decisions for agricultural organic products, and *OrGA* stands for organic agricultural business development.

Measurement model reliability and validity were confirmed and statistically justified with a series of investigations. Thus, the tested hypotheses and mediation effects obtained from the bootstrapped process of SmartPLS 4.0 in addition to its attributes are provided.

Table 3. Retained reliable and valid construct measurement

Code	Consumers' perception items	FA	Comp	AVE
ConP1	I think organic agricultural products are ecologically sound.	0.719		
ConP2	I know a lot of information about green products.	Nil		
ConP3	I prefer to purchase healthier items over non-green ones.	0.868	0.776	0.636
ConP4	I believe organic items are more environmentally friendly than other products.	Nil		
ConP5	I am searching for this kind of product.	Nil		
Code	*Sustainable marketing strategy item*	*FA*	*Comp*	*AVE*
SuMa1	All the information required about green products is fairly simple to find online and locally.	0.679		
SuMa2	The appearance is attractive.	Nil		
SuMa3	The taste is good and processing is just like non-organic products.	Nil	0.805	0.580
SuMa4	I can distinguish organic items from non-organic ones due to my marketing savvy.	0.769		
SuMa5	Despite the price variations, I think green products in terms of the 4Ps are fair.	0.830		
Code	*Purchasing decisions item*	*FA*	*Comp*	*AVE*
PurD1	Green product prices are suitable for me.	0.715		
PurD2	Green products fit my lifestyle.	0.747	0.814	0.524
PurD3	In my opinion, green products are secure,	Nil		

Code	Consumers' perception items	FA	Comp	AVE
	wholesome and devoid of genetic manipulation.			
PurD4	I want to buy and use green items more frequently.	0.777		
PurD5	The company presents its goods as helping to protect natural resources.	0.649		
Code	*Organic agricultural business development*	*FA*	*Comp*	*AVE*
OrGA1	I am satisfied since there is no use of genetically modified organisms.	0.728		
OrGA2	Organic farming is said to be innovative since organic wastes are recycled.	0.738		
OrGA3	I believe the emergence of organic agricultural products has provided a steady source of nutrition.	0.678	0.758	0.512
OrGA4	Organic products are safe for everyone.	Nil		
OrGA5	Nutritional content, taste, freshness, appearance, color and other sensory aspects are good.	Nil		

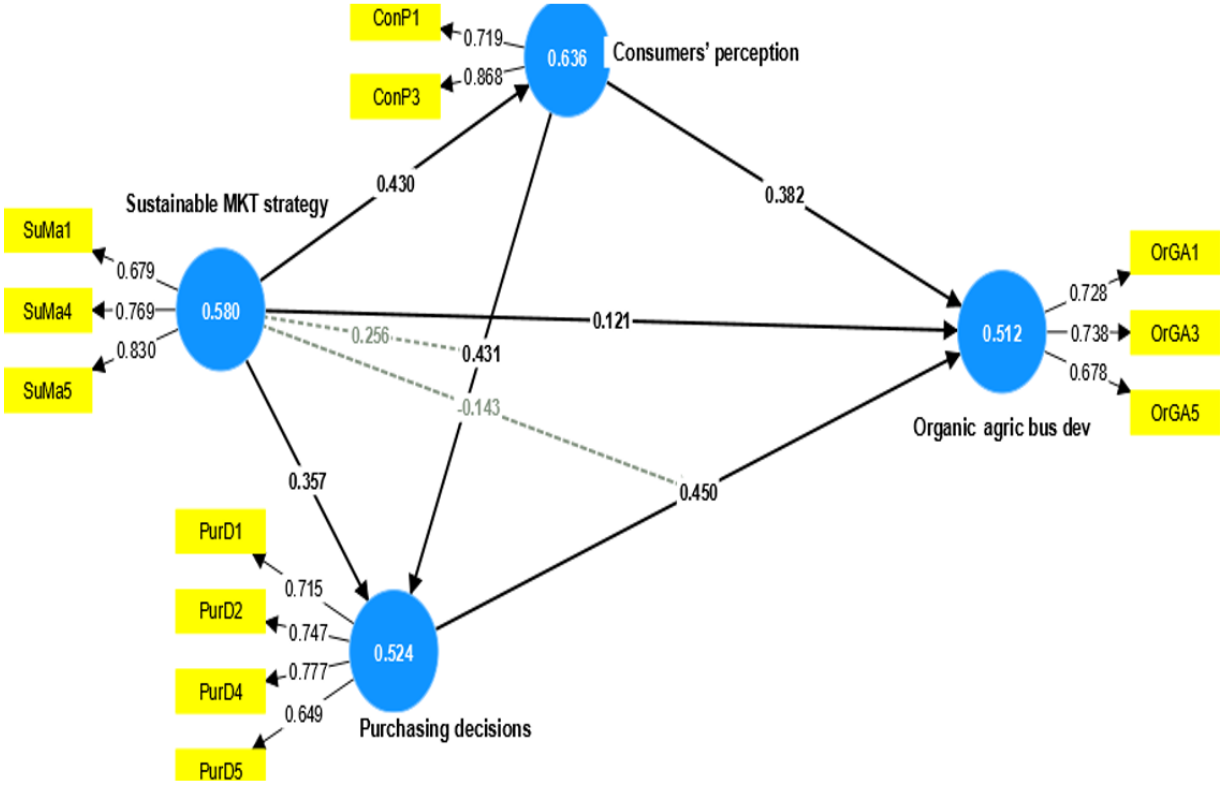

Figure 2. Algorithm reporting the quality criteria of the construct and the items

Table 3 and Figure 2 illustrate the retained measurement items with their factor loading and confirmed average variance achieved. These recommendations were made because the items' factor loading values were found below 0.6 [9, 44, 45]. The results of the retained instruments are reported in Table 3 before bootstrapping was performed.

3.6. Bootstrap Model Report

This study employed bootstrapping in SmartPLS 4.0 to determine the significance of the estimated path analysis (hypothesis testing) in terms of path coefficients, standard deviation, *t*-statistics, *p*-values and mediation effects [46].

4. RESULTS

4.1. Demographic Details

The demographic data includes 279 participants with 68.1% being female and 39.9% being male. This report assumed that females are more likely to be interested in buying organic agricultural produce than males or have more concerns about their health. The majority of the respondents were 36–40 years old with a total of 33.3% followed by ages 40 and above with 30.2%, then ages 31–35 with 25.7% and ages 25–30 with 10.8%. This finding could be related to a study conducted by Melović, et al. [3]. The fact that the majority of the participants are employed may also justify quality data collection.

4.2. PLS Algorithm and Retained Report

A total of 20 variables with 5 measurement items for each of the four constructs were projected for the organic agricultural business development structural equation modeling and 12 were found valid through the PLS algorithm analysis.

The investigation recommended deleting PurD3 from the purchasing decisions construct, the organic agriculture business development construct (OrGA4 and OrGA5), SuMa2 and SuMa3 from the sustainable marketing strategy construct and ConP2, ConP4 and ConP5 from the consumers' perceptions construct.

4.3. The Tested Hypotheses

The following are the results of the tested hypotheses previously included in Figure 1, the hypothetical framework of this study based on the quantitative statistical treatment performed:

H_1: There is a positive relationship between consumer perceptions and the development of organic agriculture businesses. The consumers' perceptions can be perceived as a stepping stone in the transition to organic agriculture business development ($p<0.001$). This shows that the hypothesis on consumers' perceptions of agricultural organic products has a significant relationship with that on organic agriculture business development and the efficiency of agriculture business marketing to consumers. Hence, this study found the connection significant and could relate to the study of Krauss, et al. [47] and future research directions.

H_2: There is a positive relationship between consumers' perceptions and their purchasing decisions. Since the p-value achieved is 0.000 which is less than 0.05. There is a relationship between consumers' perceptions of agricultural organic products and their purchasing decisions for these products. This shows that consumers' perceptions of agricultural organic products have a significant relationship with their purchasing decisions. As a result, the study found the assumption to be supported and consistent with the previous recommendations [18].

H_3: Consumer purchasing behavior affects how the organic agriculture industry develops. The relationship between customers' decisions to buy agriculturally organic products and the development of the organic agriculture business hypothesis examined statistically shows a p-value of 0.000. The predicted value should be less than 0.05. This demonstrates that consumer preferences for organic agricultural products have a legitimate influence on the development of the organic agriculture business. As a result, the study concluded that the relationship was substantial and consistent with previous study suggestions [48].

H_4: The development of organic agricultural businesses may be influenced by sustainable marketing strategies. The expectation was that the relationship between sustainable marketing practices and the growth of the organic agriculture industry would be supported but disappointingly, results showed p-values of 0.207 which are higher than the recommended 0.05 [34]. This could be investigated in a future study. In H5, "Sustainable marketing practices may affect how consumers perceive organic agricultural products" as supported in another study [48].

H_6: Sustainability marketing influences purchase decisions. The study found that sustainable marketing strategies had a significant relationship with customers' views of agricultural organic products. As expected, the result was supported by p-values of 0.000. The same result was observed for H6. It is supported by p-values of 0.001. This shows that sustainable marketing strategy determinants have a significant relationship with organic agriculture business development.

H_7: A sustainable marketing strategy mediates purchasing decisions towards organic agricultural business development. The mediation effect hypothesis for H7 was not supported. The expectation was that sustainable marketing practices have a positive mediation effect on purchasing decisions for organic agricultural products towards organic agricultural business development. However, the results showed p-values of 0.067 which is slightly higher than the recommended 0.05 following the recommendations of previous studies [9, 49].

H_8: Sustainable marketing strategy has a mediation effect and a total effect on consumers' perceptions towards organic agricultural product purchasing decisions. As expected, the results showed p-values of 0.009 which was less than the recommended 0.05 [9, 49]. This demonstrates that a sustainable marketing strategy has a mediation effect as well as a total effect on consumers' perceptions of purchasing organic agricultural products.

Based on the results of the conceptual and structural equation modeling with SmartPLS V4.0, all of the relations-effect tests were supported at *p*-values of 0.009 or higher. The achieved mediating role of sustainable marketing strategy and the influencing factors in the development of an organic agriculture business model in the Philippines are depicted in Figure 2 and Table 4.

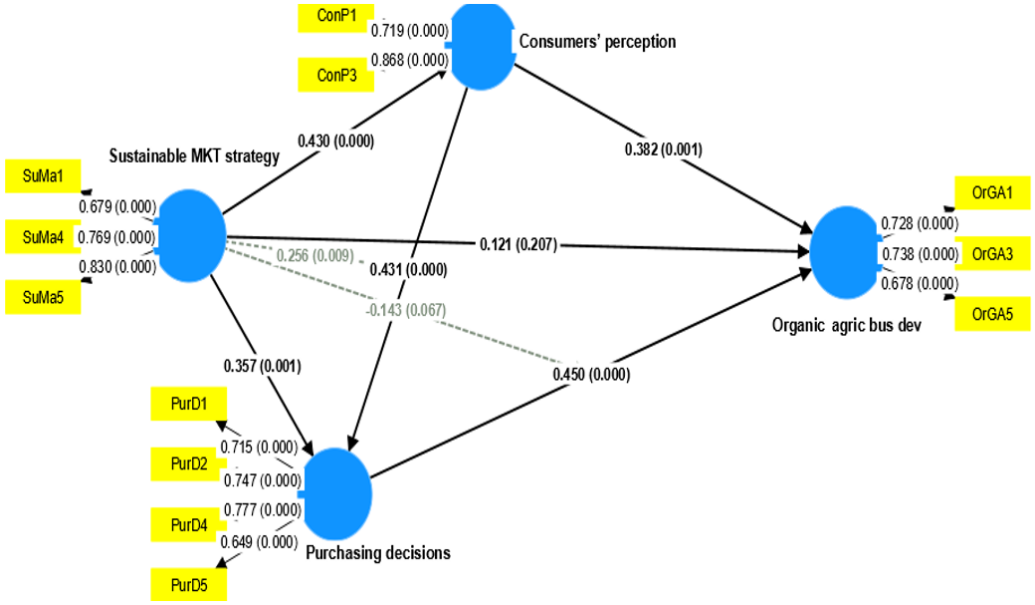

Figure 3. The mediating role of the sustainable marketing strategy model

Figure 3 and Table 4 show the model dimension and path coefficients such as the sample mean (*M*), standard deviation (*STDEV*), *t*-statistics (*O/STDEV*) and *p*-values about the mediating role of sustainable marketing strategy and the influencing factors in the development of an organic agriculture business in the context of participants from the Philippines.

Table 4. Model dimension and path coefficients

Dimensions	Sample mean (M)	Standard deviation (STDEV)	T statistics|O/STDEV|)	P-values
ConP -> OrGA	0.372	0.111	3.433	0.001
ConP -> PurD	0.426	0.120	3.588	0.000
PurD -> OrGA	0.455	0.107	4.216	0.000
SuMa -> ConP	0.114	0.096	1.265	0.207
SuMa -> OrGA	0.435	0.112	3.860	0.000
SuMa -> PurD	0.367	0.111	3.203	0.001
SuMa x PurD -> OrGA	-0.120	0.078	1.837	0.067
SuMa x ConP -> PurD	0.236	0.098	2.616	0.009

The coefficient of determination of the study includes independent variables which account for 20% of the variance explained for the consumers' perception model approximately 48% of the variance explained for the purchasing decision model and 58% of the variance explained for the development of the organic agricultural business. The result shows that the suggested model is good.

5. DISCUSSION

All the hypotheses in the study were positively supported except for *H4, the development of organic agricultural businesses may be influenced by sustainable marketing strategies* and *H7, that sustainable marketing strategies mediate purchasing decisions towards organic agricultural business development.* The negative support for H4 demonstrates that sustainable marketing strategies are not at all related to the development of the organic agriculture industry. Developers of the organic agriculture industry are independent of their own businesses. They do not care about any marketing strategy to improve their business. According to Nguyen and Dang [18], there are certain difficulties in efficiently acquiring and using information in agricultural marketing. Similarly, the negative support for H7 implies that a sustainable marketing strategy does not mediate purchasing decisions towards organic agricultural business development. Sales agents' sustainable marketing strategies have no impact on the decisions that customers make about what to buy. Such negative support defies the assertion of Nguyen and Dang [18] and is noted as well in the study of Feil et al. [28] that every aspect of "agribusiness" should use agricultural marketing strategies to improve consumers' perceptions of entities like small-scale farms and distributors, farm equipment, agrochemicals and genetically modified crops and livestock.

6. CONCLUSION

The findings revealed in the study demonstrate that customer perceptions, sustainable marketing strategy components, consumer purchasing decisions and organic agriculture business development are all related. Six of the eight hypotheses were significantly related based on the results of the SmartPLS 4 path analysis. Purchasing decisions about buying organic produce suggested the most influential factor while consumers' perceptions were the least influential.

The achievement of sustainable goals in the Philippines is dependent on whether and how much the market recognizes the sustainable efforts of any company. It is essential to enhance the demand for sustainable goods, hence enabling the continued production and sale of such items for the firm to achieve and maintain sustainability. Creating a market for sustainable products is the most effective way to encourage people to buy sustainable goods. The corporation has to create demand in the market by directly targeting customers. It is necessary to focus on consumers' sustainable development functions which include recognizing the need for ecologically and socially responsible supply, meeting information requirements and addressing other relevant aspects. An improved course of action would include showcasing the generation of market demand among two crucial consumer segments end customers and product sellers.

This study will benefit researchers, entrepreneurs, students and consumers. The findings will help Asian farmers, producers and consumers understand how effective marketing can be for agricultural businesses. The main purpose of agricultural research in a company is to demonstrate its efficacy in augmenting farm output, improving product quality and diminishing costs in manufacturing and services.

This research helps academic institutions understand the significance of sustainable marketing strategies, consumer perceptions, purchasing decisions and organic agriculture business development. The presented framework gives insights on how small organic food farms and businesses could be managed. The information provided may assist students in better understanding the importance of balancing business development strategy and organic agriculture.

7. PRACTICAL IMPLICATIONS

This study has significant practical implications in addition to its theoretical contribution. Sustainable marketing strategies may be used as interventions to create positive purchasing decisions for organic agricultural products produced in the Philippines. It may assist entrepreneurs in creating healthy and consumable products for all markets. The findings could be used to increase the number of people who buy organic agricultural products resulting in more sustainable purchases.

The study can also assist an Asian community in easily browsing information about sustainable business development with regard to organic products by utilizing various references. The results may differ among countries although attitude and health awareness could become more accurate indicators of the desire to buy organic food. Consumer awareness could influence the intention to buy organic food in a positive way. Customers stated they prefer to purchase organic products over inorganic ones when the determinants of sustainable development are satisfied. Through research, Asian businessmen may collaborate with their Asian neighbors on how they can improve organic agriculture businesses.

Academic institutions in Asia can help organic farm producers develop an agriculture business. They can be influential in disseminating information as a result of their research findings through ASEAN and international conferences. Universities in Asia that offer degree programs in agriculture can start with a project on organic farming and report their success stories through research. They can learn from other universities and adopt their strategies through ASEAN conferences. When they go back to their respective countries, they can extend their projects to their communities until the whole region benefits.

8. LIMITATIONS

The benefits of agricultural organic products, their appearance, taste and processing, sustainable marketing techniques, the development of organic agricultural businesses, the lack of genetically modified organisms and consumer purchasing decisions such as the cost of sustainable products are all the primary focus of this study. Features on packaging, labelling, purchasing location, promotion through mass media or place of production were not included. Significant strategies explored by other producers and consumers in Asia had not been covered.

9. RECOMMENDATIONS

The Philippine government should find ways and means to promote the production of organic agricultural products in the countryside. Providing precise recommendations to organic agriculture producers based on the obtained results is necessary to establish a sustainable marketing strategy that will attract potential consumers. Features on packaging, labelling, purchasing location, promotion through mass media or place of production may be tapped by future researchers. Marketing strategies found effective by other producers and consumers may be adapted to facilitate the sale of organic agricultural products which may contribute to the future expansion of an agricultural business sector.

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