

# Product Development from Agriculture Products to Promote Tourism in Ang Thong Province, Thailand

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## Abstract

The objective of this research is to evaluate the role of agriculture product development to promote tourism in Ang Thong Province in Thailand. It is due to the reason that the tourism in Ang Thong province is facing problems because the new agriculture products are not being developed. The method of data collection was based on the questionnaire that was delivered to the 500 respondents to get first-hand data, later, it was collected and the response from 475 individuals was analyzed by Smart PLS 3 to test the hypothesis and develop the relationship between variables. The findings of this study reveal that there is a great contribution of agriculture products development to tourism in Ang Thong province of Thailand. Moreover, the significance of this study is important because it addresses the theoretical gap and practical gap, as no study earlier has discussed agriculture products development to promote tourism in Thailand.

**Keywords:** Product Development, Agriculture Products, Promote Tourism, Sustainability, Agritourism, Market Requirement.

## 1. INTRODUCTION

In recent years, the concept of agriculture tourism and the promotion of agritourism has been increased due to the involvement of consumers, in the production area, where the agriculture products are being produced, to serve the community. In this regard, different countries are working on agritourism to promote tourism in the field of agriculture and support the formers for generating revenue and contributing to the national economy. However, it is not an easy task because the trend of agritourism is not common and in this regard, it is the responsibility of business entities that are promoting agritourism to realize the benefits, and the value of agritourism and makes sure that they are making satisfying strategies to accomplish it. On the other hand, agritourism is increasing globally, because people want to

enjoy the movement when they purchase the agriculture products, in a natural and rustic setting, where they good spend quality time.

The agriculture tourism promotion in Ang Thong province of Thailand is facing critical challenges, due to the less productivity, and the limitation of new and interesting agriculture products development, the visitors are taking less interest in it. However, it is assumed that the agriculture tourism of other areas such as Canada and Australia is growing because of the agriculture production, and product development. The issue is that there is a lack of coordination between government policies, and the role of the agriculture department in production, to enhance the experience of consumers by product development. However, this problem is not being addressed because there are different factors including product

development, and agriculture products are reducing the productivity of agritourism, and limitations in the way of tourism promotion.

The objective of this study is to understand the role of product development from agriculture products to tourism promotion in Ang Thong province of Thailand, to ensure that the tourism promotion of Thailand should be enhanced for the better experience of consumers. In this regard, this study includes the market requirement, as a mediating variable between the relationship of agriculture product, and product development because when the agriculture products are developed appropriately, then, as a result, tourism would be promoted. On the other hand, this study highlights the role of environment stability as a mediator between the relationships of product development and tourism promotion. No doubt, tourism promotion in the field of agriculture is dependent on agriculture products, but it is important to understand that this product must be appropriately produced and developed to target the consumers.

Agriculture product refers to the product that is being produced in the field of agriculture when it comes to the development in the rustic and the agricultural area (Uduji, Okolo-Obasi, Onodugo, Nnabuko, & Adedibu, 2021). These products are important for trade and tourism activities because in modern times the concept of agritourism and tourism, in general, is developing, and in this regard, people want to visit the places before purchasing the product. In this way, when it comes to agricultural products the behavior of people is changing, and the consumers are now highly involved in purchasing the agricultural product. Secondly, market requirement refers to the expectation of the consumers related to the product development, and their conceptions about the agriculture product in the tourism business (Staneva & Vachkova, 2018). Thirdly, product development refers to the development of any product from the production to the final utilization with efficiency and effective manner to improve the standard of life of the target market (Hosseini, Soltani, & Mehdizadeh, 2018). Fourthly, environment stability is defined as the stability and sustainability in the

environment while utilizing the resources for survival on business activities. In this regard, it is important to understand that for agritourism environment ability is the core need off the market (Amankwah-Amoah, 2020). Lastly, tourism promotion refers to the marketing of tourism activities in any targeted segment to attract consumers for making a connection with business organizations (Ichsan, Suparmin, & Nasution, 2020).

The significance of this study is that it addresses the theoretical and practical gap as well in the tourism sector of Ang Thong province of Thailand. To begin with, it addresses the theoretical gap that in modern times, the researchers are utilizing their resources to enhance agritourism by developing agriculture products, but the concept of product development is not considered by them. On the other hand, this research contributes to the practical implementation that the promotion of agriculture tourism is not an easy job, but it requires environment stability and product development, at the same time, for attracting the numbers in the target market to generate the revenue.

## Literature Review

In the tourism industry, the role of agriculture products is important because the people are interested in agriculture tourism as well, and when they observe that the production of the agriculture products is being done at the rustic area, then they got interested and visit the place to get further information. It is due to the fact, that now the consumers are highly involved in tourism activities particularly when it comes to agritourism, they want that the product should be developed, to satisfy their needs. On the other hand, it is the responsibility of the stakeholders that are providing facilities in agriculture tourism, they must be responsible to manage agriculture tourism in the best way while providing the best experience to the consumers and the visitor to enhance the revenue (Usman et al., 2021). Particularly, when the products are developed the agriculture industry grows up because it is quite

helpful for the former who are living in the rustic areas. After all, when they produce agricultural products, and according to their development, they get more benefit from it because of the direct transaction with the consumers instead of any consumer to business activities (Galli & Lopez, 2018). Further, the responsibility is on the shoulders of the farmers as well because they are interested in the important key player to develop agritourism, and the products related to the agriculture sector, to enhance the experience of the customers and develop the products to capture a big share in the market. The relationship between variables is presented in theoretical framework (see Figure 1. Theoretical Framework).

H1: Agriculture products are important products to be developed when it comes to tourism.

Also, the market requirement plays a key role in developing agriculture products because agriculture products are always produced according to the requirement of the consumers. it is due to the reason that the needs of the consumers should be met by the agriculture sector by providing the appropriate, and required product to the target market, and there should not be any kind of gap between the demand and the sales (Mashika et al., 2021). However, if there is a gap between demand and sales, then the business activities would be limited and the revenue to the agricultural products, and their delivery would be reduced. In this regard, it is important to consider that there must be a coordination between marketing people, and the production people to understand that the production of Agricultural Products should be according to the forecast of the future. In the same way, the products that are not enough to facilitate the consumers, and satisfy their needs these products reduce their worth, and as a result, the competitor gets an advantage over the local businesses due to globalism (Alrawadieh, 2020). Therefore, it is required that the policies and procedures should be made by the stakeholders of the tourism industry to ensure that the agriculture products are according to the requirement of the market, and there is not any kind of difficulty to

produce and provide these products. Agriculture products are attractive; therefore, the consumers are highly involved in purchasing these products, and at the same time, they want to enjoy the experience that's why the consumers are getting more interest in agritourism, and enjoy the transaction activities with businesses against their purchasing.

H2: Agriculture products are produced according to the requirement or market.

Agriculture products are being produced according to the requirement of the market, and the market is considered as the key player in the delivery of agricultural products. However, the important factor to understand is that agricultural products should be appropriately and efficiently produced so that they could meet the needs of the consumers (Jung et al., 2021). Due to the vast knowledge and the high capital, most of the consumers are involved in agritourism, and they want to visit the place and observe the production process of agriculture products later they are interested to visit the production process to understand the strategies of agriculture product development (Sekaran, Lai, Ussiri, Kumar, & Clay, 2021). Also, when the customers understand how the agricultural products are developed and delivered to them, they got interested to purchase and their experience of tourism is enhanced. However, the responsibility is on the production team of any business to develop agriculture products in a way that these products could complete the competitors, in the target market and helps to increase the revenue of the business organization. Those agriculture firms that are working on a highly effective and efficient way to produce and deliver products to the consumer have the unique selling point of product development in the agriculture sector and ultimately the promotion of tourism is spread widely.

H3: Products are developed based on the market requirement for tourism.

When it comes to tourism and the product development for agritourism the responsibility to the sustainability of the environment is important to consider by the business

organization that is promoting agritourism. It is because all the world that is a signatory of United Nations that are working on the agenda of sustainable development in which, it is important to utilize the current resources without compromising of future needs of future generations. To work sustainably, and provide environmental stability, it is the responsibility of the agriculture sector to utilize the available and inherited resources in a way that there should not be any kind of discrimination and the product that is developed by the agriculture factor should be ethically approved (Akhmadeev et al., 2019; Stephens et al., 2018). It is because most of the firms that utilize the natural resources without considering the sustainable development goals these organizations are violating the norms and ethical rules, and as result, the environment stability is a challenge and less interest of the consumer increased to the agritourism.

H4: The stability of the environment depends on the product's development.

It is also noted that to promote tourism the key is to develop the product efficiently without compromising on the quality standard, and environmental stability (Klimenko et al., 2018). There are laws in every country that are prohibiting business organizations to violate ethical standards and environmental stability to generate revenue by utilizing natural resources, to produce agricultural products. In the same way, it is the responsibility of the business organizations for the farmers that are produced agricultural products that they should not utilize any kind of resources to manipulate the environment and its stability (Aacharya & Chhipa, 2020). Therefore, if business organizations are working with the stakeholders, and the single table policy is being implemented then it would not be a hard job for business entities to protect the environment and promote tourism at the same time.

H5: To promote tourism successfully, product development is important is necessary.

In agritourism or tourism in general, as far as, the role of product development is important, at

the same time, the role of market requirement is important to consider because the market requirement is a determinator to analyze what the quantity of products is required by the target market, and what strategies should be adopted to promote the agriculture tourism (Molina-Maturano, Speelman, & De Steur, 2020). In this way, the stakeholders that are considering agriculture tourism and market requirement in a relationship then the stability of these businesses increase over time, and as result, several consumers visit because of their high involvement (da Silveira, Lermen, & Amaral, 2021). It is noted that where there is no market research concept, agriculture products are failed to attract the consumer to tourism promotion activities (Mollanorozi, Nouri, & Kalali Moghadam, 2020). Similarly, tourism promotion cannot be done alone without analytical information about market requirements and agriculture product development, because the development of the product is important in agritourism.

Lastly, environmental stability and sustainable development help to promote the agriculture tourism the relationship of product development, because when the products are appropriately developed, and there is not any kind of problem, in the agriculture tourism, then it is promoted by word of mouth because when people purchase the product, they always rate it according to its reliability and durability. Moreover, the requirement of stability is being maintained by most of the businesses in the agriculture sector because the agriculture sector is considered sustainable development, and the fair utilization of natural resources to develop agriculture products (Martínez, Martín, Fernández, & Mogorrón-Guerrero, 2019). Due to its product development, and the important role of environment stability in the agriculture sector, it is considered an important tool in promoting tourism (Romshoo & Fayaz).

H6: The stability of the environment helps to promote the tourism sector.

H7: Market requirements mediates the relationship of agriculture products to product development.

H8: Environment stability mediates the relationship of product development to promote tourism.

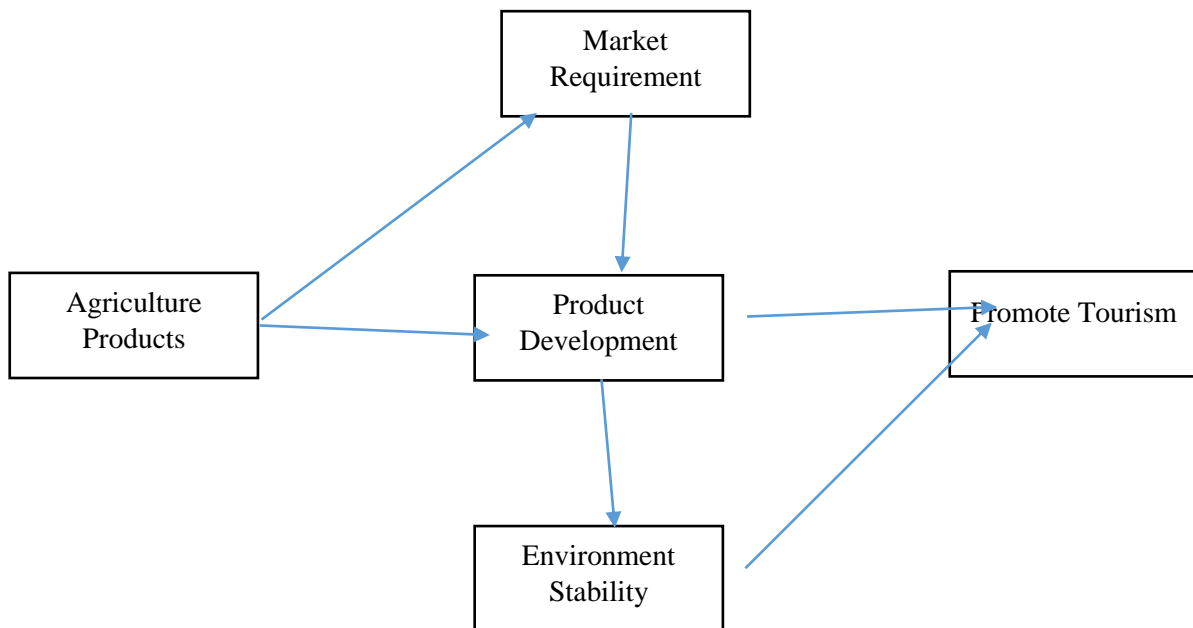


Figure 1. *Theoretical Framework*

## 2. Methodology

### 2.1 Prepare Questionnaire

The questionnaire was prepared to collect the quantitative data from the respondents to understand the relationship between the variables and test the hypothesis. In this regard, the scale items were collected by different studies that have developed these scale items according to the variables used in this study. Similarly, the questionnaire was categorized into two different sections. In the first section, the data for the demographics of the respondents including their gender, age, and income. Also, the category questions were included to get the response about their interest, and information related to tourism. On the other hand, the second section was designed to carry the scale items of the Likert scale to get the response of five items of each variable. It was ensured that the questions are clear to the respondents, and there are no ambiguous questions that could act as a barrier in the way of collecting the appropriate response.

### 2.2 Data Collection Method

The questionnaire was provided to the respondents of the diverse sub-culture and ethnicity including their social class to get the response. In this regard, the respondents were informed about the purpose of the study. Secondly, the variables were verbally defined to them, and also, the relationship between the variables was provided to them. Importantly, it was informed to the respondents that their information would not be used for any other purpose, except this purpose of study, and no third party would have access to their demographics and personal information. To proceed further, they were informed about the items, and five-point Likert, and the available options to be selected as strongly agree, agree, neutral, disagree, and strongly disagree. Additionally, the data was collected by cross-sectional process, because it is appropriate to get the best response for the research to complete the results of this study.

### 3. Findings

To proceed further with this study, the collected data was analyzed by using Smart PLS 3 which is the most recommended tool for modern research. In this regard, by using Smart PLS, PLS Algorithms, and Bootstrapping were identified to check the Loadings on the scale items, including CR, and AVE. Similarly, the divergent validity, discriminant validity including mediating analysis was identified with the tool, recommend for tourism studies (Wong, 2013).

#### 3.1 Divergent Validity

In this section of the study, the discriminant validity was analyzed, and factor loadings were

identified (see Figure 2. Measurement Model Assessment). In this regard, the loadings of all the scale items of all variables including dependent and independent variables were greater than 0.6, however, one loading was less than 0.60, which was deleted. Similarly, the value of Cronbach's alfa for all the variables was greater than 0.70 which is recommended by Ringle, Da Silva, and Bido (2015) for tourism studies. Also, the values of CR for all the variables were greater than the recommended value of 0.70. This divergent validity shows that the variables are reliable and all the scale items were carefully selected for this study (see Table 1. Factor Loadings).

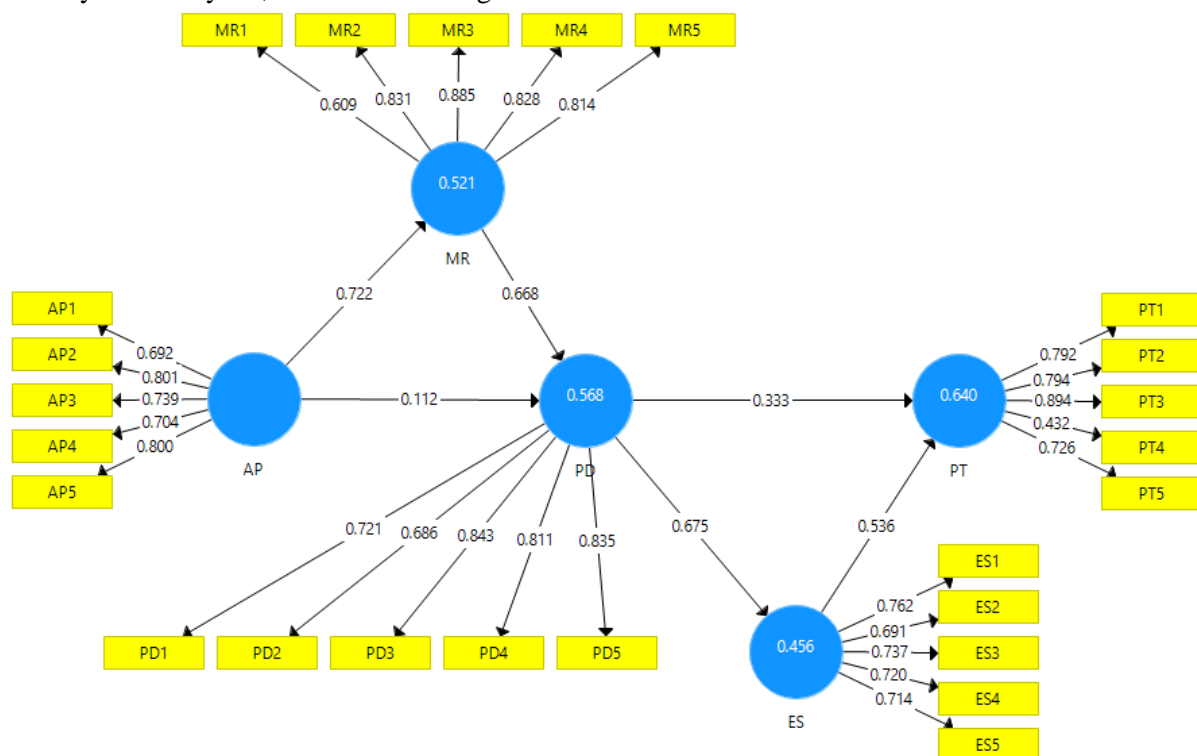


Figure 2. Measurement Model Assessment

Table 1. Factor Loadings

Variables	Items	Loadings	Alpha	CR	AVE
Agriculture Products	AP1	0.692	0.803	0.864	0.561
	AP2	0.801			
	AP3	0.739			
	AP4	0.704			
	AP5	0.800			
Environment Sustainability	ES1	0.762	0.777	0.847	0.526
	ES2	0.691			

	ES3	0.737			
	ES4	0.720			
	ES5	0.714			
Market Requirement	MR1	0.609	0.854	0.897	0.638
	MR2	0.831			
	MR3	0.885			
	MR4	0.828			
	MR5	0.814			
Product Development	PD1	0.721	0.839	0.886	0.611
	PD2	0.686			
	PD3	0.843			
	PD4	0.8110			
	PD5	0.835			
Promote Tourism	PT1	0.792	0.787	0.856	0.554
	PT2	0.794			
	PT3	0.894			
	PT4	0.432			
	PT5	0.726			

### 3.2 Discriminant Validity

This section of the study contains the discriminant validity that is identified by the HTMT method using Smart PLS because according to Ramayah, Cheah, Chuah, Ting, and Memon (2018), it is the most recommended method for modern studies (see

Table 2. Discriminant Validity). The discriminant validity narrates the distinction between the variables of the framework. In this regard, the values of discriminant validity for all variables were not greater than 0.90. The values of discriminant validity should be less than 0.90, to ensure the distinction between the variables.

Table 2. *Discriminant Validity*

	AP	ES	MR	PD	PT
AP	0.749				
ES	0.789	0.725			
MR	0.722	0.753	0.799		
PD	0.595	0.675	0.75	0.782	
PT	0.741	0.761	0.887	0.695	0.744

AP= Agriculture Products, PD= Product Development, MR= Market Requirement, ES= Environment Stability, PT= Promote Tourism

### 3.3 The Smart PLS – SMEs Results

In this section, the hypotheses were tested according to check their significance or insignificance. (see Table 3. Results of Direct Effects). Firstly, H1 was tested to check its significance and according to the results, AP has a significant effect on PD ( $\beta = 0.112$ ,  $t = 2.523$ ,  $p < 0.012$ ), and H1 is supported. Secondly, H2 was tested to check its

significance and according to the results AP has a significant effect on MR ( $\beta = 0.722$ ,  $t = 29.654$ ,  $p = 0.000$ ) and H2 is supported. Thirdly, H3 was tested to check its significance and according to the results, MR has a significant effect on PD ( $\beta = 0.668$ ,  $t = 19.897$ ,  $p = 0.000$ ), and H3 is supported. Fourthly, H4 was tested to check its significance and according to the results, PD has a significant effect on ES ( $\beta =$

0.675,  $t = 27.973$ ,  $p = 0.000$ ), and H4 is supported. Fifthly, H5 was tested to check its significance and according to the results, PD has a significant effect on PT ( $\beta = 0.333$ ,  $t = 8.409$ ,  $p = 0.000$ ), and H5 is supported. Lastly,

H6 was tested to check its significance and according to the results ES has a significant effect on PT ( $\beta = 0.536$ ,  $t = 13.376$ ,  $p = 0.000$ ) and H6 is supported (see Figure 3. Structural Model)

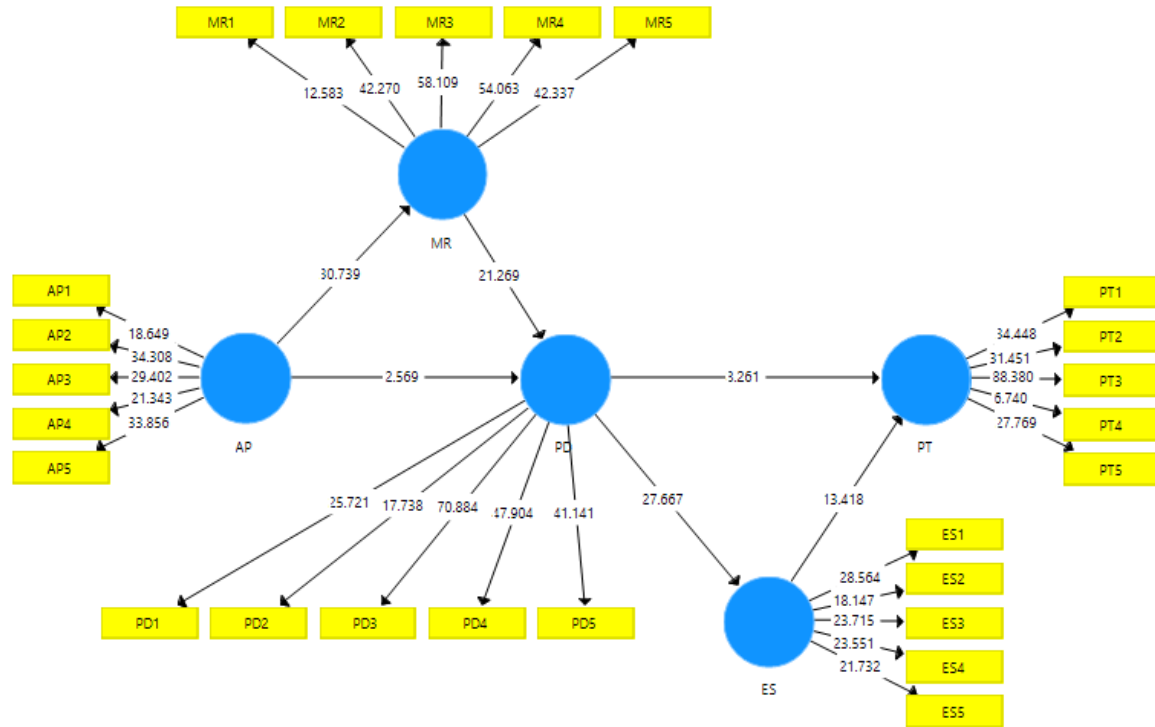


Figure 3. *Structural Model*

Table 3. *Results of Direct Effects*

Hypotheses	B	SD	T Values	P Values	Decision
AP -> PD	0.112	0.045	2.523	0.012	Supported
AP -> MR	0.722	0.024	29.654	0.000	Supported
MR -> PD	0.668	0.034	19.897	0.000	Supported
PD -> ES	0.675	0.024	27.973	0.000	Supported
PD -> PT	0.333	0.040	8.407	0.000	Supported
ES -> PT	0.536	0.040	13.376	0.000	Supported

AP= Agriculture Products, PD= Product Development, MR= Market Requirement, ES= Environment Stability, PT= Promote Tourism

### 3.4. Mediating Analysis

In this section of the study, to analyze the role of mediators, the results of mediation analysis are identified to highlight the mediating role of MR on the linkage between AP and PD (see Table 4. Mediating Effect Analysis). Further, the results shows that the total effect of AP on PD was significant ( $\beta = 0.595$ ,  $t = 20.201$ ,  $p = .000$ ). Additionally, with the mediating role of

MR, the impact of AP on PD is also significant ( $\beta = 0.112$ ,  $t = 2.597$ ,  $p = .000$ ). Also, the indirect effect on AP on PD was significant ( $\beta = 0.482$ ,  $t = 15.891$ ,  $p = .000$ ). The results demonstrate that MR partially mediates the relationship between AP and PD (available in table 3). Moreover, the mediating role of ES between the relationship of PD and PT was identified, and according to the results, the



mediator ES mediates between the relationship of PD and PT ( $\beta = 0.362$ ,  $t = 12.399$ ,  $p = .000$ ).

Table 4. *Mediating Effect Analysis*

Total Effect (AP -> PD)		Direct Effect (AP -> PD)		Indirect Effect of (AP on PD)				
Coefficient	p-value	Coefficient	p-value		Coefficient	SD	T value	P value
0.595	0.000	0.112	0.000	AP->MR->PD	0.482	0.030	15.891	0.000
(PD-> PT)		(PD-> PT)		(PD->ES->PT)				
0.695	0.000	0.333	0.000		0.362	0.029	12.399	0.000

#### 4. Discussion and Conclusions

First of all, the results of H1 and H2 shows that there is a significant relationship between agriculture product and product development. Furthermore, agricultural products are produced according to the requirement of the market, because they are produced on a need basis. However, in the tourism industry, the importance of agriculture projects increases because, in tourism, the visitor wants to get information and be directly involved in the production process of agriculture products (Pareek, Dhankher, & Foyer, 2020). In this way, their products are directly dependent on consumer behavior, and at the same time, according to the demands of consumers (Zilli et al., 2020). On the other hand, the role of market requirement in the production of agricultural products is important because the market is a tool to determine what quantity of agricultural products should be produced (Kurbatova, Aisner, & Naumkina, 2019). Similarly, the role of market requirement is also important, because due to the change in seasons, and the trends in agriculture production, it is important to understand what is the requirement of the market in that particular season to provide and facilitate them with agriculture products (Andrei, Popescu, Nica, & Chivu, 2020). Also, the results of H3 highlights the importance of market requirement in the product development of the agriculture sector according to the agritourism requirement. The stakeholders are directly involved, in the production process, and product development of agriculture products.

Additionally, the results of H4, H5, and H6 show that in the promotion of tourism the role of product development is important for generating more profit. Tourism depends on the

production process of agricultural products, in which the people who are interested, to produce these products in quantity and utilize their resources to facilitate the market are contributing to the promotion of agritourism (Aldebi & Aljboory, 2018). In the same way, the importance of environmental stability is considered when the farmers are producing an agricultural product and the stakeholders are developing that product for the promotion of agritourism. The responsibility is on the shoulders of all the stakeholders because according to the requirement of the United Nation sustainable development is necessary for the businesses (Mensah, 2022; Pramanik & Rakib, 2020). Therefore, the agritourism sector should also consider sustainability, and sustainable development by utilizing the existing resources of nature fairly to promote tourism in the Ang Thong province of Thailand. However, the mediating role of environment stability between product development, and tourism promotion is important to understand due to the reason that more efficient, and effective products would be developed, as a result, the promotion of tourism would be done to attract the target market.

The results of H7 show that market requirement mediates the relationship between agriculture products and product development. According to these results, it is important to understand that agricultural products should be produced in a way that could be according to the needs of the market, and facilitate the people to satisfy their needs. Therefore, the stakeholders who are involved in product development should work on it to produce and deliver agricultural products efficiently and effectively (Whitcraft et al., 2019).

The results of H8 show that there is a mediating role of environment stability between product

development and tourism promotion. Tourism is promoted when the products are developed according to the requirements of the market, and environmental stability is a priority of product development. Therefore, product development with the involvement of environmental stability helps to promote tourism.

## 5. Implementations

### 5.1 Academics Implications

This study contributes to the literature by addressing the tourism promotion of Ang Thong province of Thailand by presenting the theoretical framework that product development of agricultural products is important to promote tourism. On the other hand, this study analyses the relationship between market research when it comes to tourism promotion because when the agriculture products are produced according to the market requirement and fulfill the environment stability, then as result, the tourism would be promoted efficiently. The core of this study addresses the theoretical gap of product development of agricultural products in the promotion of tourism in and thong province of Thailand.

### 5.2 Practical Implications

This study is conducted to provide a practical approach to develop and promote tourism in Ang Thong province of Thailand by highlighting the fact that the stakeholders of tourism should understand the role of product development when it comes to agriculture products, to attract the consumers, and expand the market share. Besides, the hospitality of the agriculture products that are produced according to the market requirement fulfills the environment stability to ensure there is no compromise on the sustainability and sustainable development by marketing communication tourism would be promoted. In this regard, the policymakers and the stakeholders related to the agriculture sector in Ang Thong province of Thailand should understand that by producing agriculture

products, a large number of consumers can be attracted to tourism, because now the consumers are highly involved in product development and they want to observe the process. Therefore, if the consumers are provided with the opportunity to look agriculture products production process, then the market requirement would be fulfilled according to environment stability, and the tourism sector would grow in terms of generating more revenue.

## 6. Limitation and Future Direction

This study suggests that future research should focus on the role of consumer perception, and hospitality management in the business of Tourism in the Ang Thong province of Thailand because these variables are not discussed by any study earlier. In this regard, it would be quite useful for future research to focus on these factors in the tourism business, because the dynamic perception of individuals is more attractive to hospitality management when it comes to tourism management.

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