

**EXPLORING AGRITOURISM SUSTAINABILITY: CASE STUDY of
DURIAN AGRITOURISM in BALIK PULAU, PENANG**

RODZIAH AHMAD

70218090012

A Thesis Submitted to Asia e University in Partial Fulfilment of the Requirements
for the Degree of Doctor of Business Administration

2022

ABSTRACT

Despite Malaysian agritourism's popularity among domestic and international tourists, the sector's sustainability is not well understood. Failure to identify and manage the sustainability factors may lead to the industry's destruction. Thus, taking durian agritourism in Balik Pulau as a sample, this study intended to explore sustainability factors and the risk management carried out by the industry players. The methodology deployed to achieve the objective was qualitative research with an inductive approach. Data was gathered from interviews with independent durian farmers who run agritourism businesses in Balik Pulau, Penang, observing the locality and electronic research on government documentation. The data were analyzed by thematic analysis and compared with the suggested sustainability agritourism model gathered from previous literature. From the analysis, durian agritourism sustainability factors in Balik Pulau emerged mainly from the microeconomy and microsocial dimensions. The agropreneurs' awareness of sustainability leads to innovation of farm products and tourism services and steers towards the sustainability of durian agritourism in Balik Pulau. While ensuring the durian agritourism sustainability, innovation geared the agropreneurs surviving the post-pandemic economic turmoil. Government policies supporting the macro-environment dimension would further successfully support the industry in Balik Pulau. The findings are significant for stakeholders to understand the importance of agritourism sustainability. It would motivate current durian agritourism operators to sustain their business; for new entrepreneurs and durian farmers to embark on this industry. In the long run, not only the agritourism business is profitable, but it also benefits the socio-economy development and increases the quality of life.

APPROVAL

I certify that I have supervised / read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in quality and scope, as a thesis for the fulfilment of the requirements for the degree of Doctor of Administration.



AP Dr Wan Sabri bin Wan Hussin
Supervisor

Examiner
AP Dr Mohammad bin Ismail
Examiner

Examiner
Adjunct AP Dr Hj Tuan Mohd Rosli bin
Tuan Hassan
Examiner

Examiner
Prof Datuk Dr Sayed Mushtaq Hussain
Chairman, Examination Committee

This thesis was submitted to Asia e University and is accepted as fulfilment of the requirements for the degree of Doctor of Business Administration.

Prof Dr Noor Raihan Ab Hamid
Dean
School of Management
Asia E University

DECLARATION

I hereby declare that the thesis submitted in fulfilment of the DBA degree is my own work and that all contributions from any other persons or sources are properly and duly cited. I further declare that the material has not been submitted either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the program and/or exclusion from the award of the degree.

Name: Rodziah Ahmad

A handwritten signature in black ink, appearing to read 'Rodziah Ahmad', with a period at the end.

Signature of Candidate:

Date: 8 June 2022

ACKNOWLEDGEMENT

Alhamdulillah. Firstly, I would like to extend my heartiest gratitude to Mr Quah Ewe Kheng, Mr. Eric, and Mr. Chang Teik Seng for their precious time spent as respondents and guides to understand the topic of my study better.

My heartfelt appreciation toward my supervisor, Associate Prof. Dr. Wan Sabri Wan Hussin and Professor Dr Juhary Ali, for their guidance and comments since the early stage of this thesis. I thank all the course leaders in AeU and the thesis writings workshop I attended for learning about this journey.

I also wish to thank my friends in AeU, particularly Asri Jusoh, for the push and pull to the finishing lines and close academic friends who spend their nights reading my initial writings and guiding me through, especially Assoc. Prof. Dr Yazrina Yahya, Saida Farhana Sarkam and my close friends for their persistent prayers, moral support and belief in me.

Finally, I am grateful to my beloved family to whom I dedicated this work and who are closest to my heart, my parents, Hj Ahmad Hj Kechut and Hjh Rukiah Sulong and my family, Muhammad Ikhwan Yusuf, Nurafrina and Nur Hidayah. I offer my most profound veneration for the endless love, patience, support, prayers, and understanding they have given me in my endurance to finish this study. Without them, I might never have finished this work.

Rodziah Ahmad
School of Management
Asia E University

DEDICATION

To my beloved parents and the jewels of my life for your love, prayers, and support.

TABLE OF CONTENTS

ABSTRACT	i
APPROVAL	ii
DECLARATION	iii
ACKNOWLEDGEMENT	iv
DEDICATION	v
TABLE OF CONTENTS	vi
LISTS OF TABLES	xi
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS.....	xvi
CHAPTER 1 INTRODUCTION	1
1.1 Background.....	1
1.2 Problem Statement.....	6
1.3 Research Objective	7
1.4 Research Questions.....	8
1.5 Scope of Study and Assumptions	8
1.6 Significance of Study.....	9
1.7 Organization of Chapters.....	10
CHAPTER 2 LITERATURE REVIEW.....	11

2.1	Overview	11
2.2	Theory of Sustainability.....	11
2.3	Fundamentals of Agritourism Sustainability	15
2.3.1	Social Sustainability Dimension	20
2.3.2	Environmental Sustainability Dimension	21
2.3.3	Economic Sustainability Dimension.....	22
2.4	Definition of Agritourism	23
2.5	Agritourism Sustainability Model	25
2.6	A Glimpse of Malaysian Durian Industry.....	27
CHAPTER 3 RESEARCH METHODOLOGY		33
3.1	Overview.....	33
3.2	Methodology Review.....	33
3.3	Research Design	37
3.4	Selection of Subjects.....	38
3.5	Data Collection	39
3.6	Data Analysis	42
3.7	Generating Categories.....	44
3.8	Coding of Themes.....	44
3.8.1	Open Coding	44
3.8.2	Axial Coding.....	45

3.8.3	Selective Coding	45
3.9	Themes and Overlapping Themes	45
3.10	Validity and Reliability.....	46
3.11	Ethical of Researcher	49
3.12	Researcher Bias and Assumption.....	50
3.13	Research Contribution	51
CHAPTER 4 RESEARCH FINDINGS AND DISCUSSION		53
4.1	Overview.....	53
4.2	Balik Pulau: Demographic Observation and Analysis	53
4.3	Penang2030 Blueprint.....	73
4.4	Descriptive Analysis	75
4.4.1	Respondent 1(Entrepreneur: Durian and fruit farm).....	75
4.4.2	Respondent 2(Entrepreneur: Durian farm, spices garden and accommodation).....	77
4.4.3	Respondent 3 (Entrepreneur: Durian farm & accommodation).....	79
4.5	Data and Analysis	82
4.5.1	Theme 1: Identifying tourism activities.....	83
4.5.2	Theme 2: Exploring durian agritourism sustainability factors	85
4.5.3	Theme 3: Analysing durian agritourism sustainability risk.....	97
4.5.4	Theme 4: Management of durian agritourism sustainability risk	106

4.6	Summary	114
CHAPTER 5 CONCLUSION AND RECOMMENDATION		117
5.1	Overview	117
5.2	Tourism Activities in Durian Farms	117
5.3	Durian Agritourism Sustainability Factors	118
5.4	Risk In Durian Agritourism Sustainability and Its Management	123
5.5	Limitation of Study	126
5.6	Recommendation	127
5.7	Conclusion	127
REFERENCE		133
APPENDICES		145
APPENDIX 1 Agritourism Destinations in Malaysia		145
APPENDIX 2 Durian Industry in Malaysia		146
APPENDIX 3 Durian Agritourism (MAFI, n.d.)		147
APPENDIX 4 Research Protocol for conducting case studies for this research.		148
A4.1	Overview of the Case Study	148
A4.2	Data Collection Procedures	148
A4.3	Data Collection Questions	149
A4.4	Guide for the Case Study Report	152
APPENDIX 5 Evidence.....		153

A5.1 Respondent 1: Transcript	153
A5.2 Respondent 2: Website : About Us.....	159
A5.3 Respondent 2: Website : Product.....	160
A5.4 Respondent 2: Website: Tourist Reviews	162
A5.5 Respondent 2: Website: Sustainable Food Bio.....	164
A5.6 Respondent 3: Report from Buletin Mutiara	166
A5.7 Respondent 3: Tourist Review.....	171
A5.8 Respondent 3: Transcript	173
APPENDIX 6 Open Coding And Themes.....	181
A6.1 Atlas.ti Mapping on Themes.....	183

LISTS OF TABLES

Table 1 <i>Number of Tourists and Income</i>	4
Table 2 <i>Suggested Agritourism Sustainability Matrix</i>	19
Table 3 <i>Durian Database, Malaysia 2018</i>	29
Table 4 <i>Durian Agritourism Sustainability Matrix and Subject of Study</i>	39
Table 5 <i>Evidence to be collected from subjects on related research questions</i>	41
Table 6 <i>Data Collection Method</i>	42
Table 7 <i>List of Categories</i>	44
Table 8 <i>Research Themes</i>	46
Table 9 <i>Population of Southwest District 2005 vs 2018</i>	55
Table 10 <i>Median, mean and compounded annual growth rate of monthly statistics household gross income by strata and administrative district, Pulau Pinang, 2014 and 2016</i>	56
Table 11 <i>Number of registered head of poor households with eKasih by administrative district, Pulau Pinang, 2016-2018</i>	56
Table 12 <i>Gini Coefficient and incidence of poverty by administrative district, Pulau Pinang, 2014 and 2016 (Source: Department of Statistic, 2021)</i>	57
Table 13 <i>Percentage of households by administrative district and income group Pulau Pinang, 2014 and 2016</i>	57
Table 14 <i>Number of District Police Headquarters, Police Stations, Community Police Stations, Police Huts and Community Police Huts by administrative district, Pulau Pinang, 2017 and 2018</i>	58

Table 15 <i>Violent crime by contingent, PDRM district and type of crime, Pulau Pinang, 2016-2018</i>	59
Table 16 <i>Summary of Respondents' Profile</i>	81
Table 17 <i>Durian agritourism sustainability factors</i>	97
Table 18 <i>Durian Agritourism Sustainability Risk</i>	106
Table 19 <i>Durian Agritourism Sustainability Risk Management</i>	114
Table 20 <i>Durian agritourism sustainability risk and its management</i>	125

LIST OF FIGURES

<i>Figure 1</i> Top Ten Fruits Hectarage Planted in Malaysia (2015 – 2019).....	6
<i>Figure 2</i> Suggested Agritourism Sustainability Model. Adapted from Tourism Sustainable Development (Koodsela et al., 2019).	26
<i>Figure 3</i> The Highest Hectarage for Ten Fruit Crops, Malaysia, 2019.....	28
<i>Figure 4</i> Durians Planted Area (Ha), Harvested Area (Ha) and Value (RM) (Peninsular Malaysia).....	30
<i>Figure 5</i> Durian D4 Price in Malaysia - Ex-Farm, Wholesale & Retail (RM)	31
<i>Figure 6</i> Data Analysis Process.....	43
<i>Figure 7</i> South West District, Penang.	54
<i>Figure 8</i> Junction of Jalan Tun Sardon and Jalan Bukit Penara.....	60
<i>Figure 9</i> Single storey shops along Jalan Bukit Penara	60
<i>Figure 10</i> Shops from 1960s seen along Jalan Bukit Penara	61
<i>Figure 11</i> A mural painted on a building near the wet market.....	61
<i>Figure 12</i> Old buildings were preserved for new businesses	62
<i>Figure 13</i> Evidence of building preservations in Balik Pulau.....	63
<i>Figure 14</i> A presence of a telecommunication shop	63
<i>Figure 15</i> District Land Office (Old Building)	64
<i>Figure 16</i> District Land Office (New Building).....	64
<i>Figure 17</i> Public Primary School	65
<i>Figure 18</i> Public Chinese School	65
<i>Figure 19</i> One of the mosques in Balik Pulau.....	66
<i>Figure 20</i> One of the temples in Balik Pulau	66

<i>Figure 21</i> The roundabout in Balik Pulau township	67
<i>Figure 22</i> New shop lots for business	68
<i>Figure 23</i> Traditional village business area.....	68
<i>Figure 24</i> Business centre for a village with a bus stand.	69
<i>Figure 25</i> Modern housing estate	69
<i>Figure 26</i> Traditional Penang Malay House	70
<i>Figure 27</i> Fast food restaurant and funky modern café.....	70
<i>Figure 28</i> Telecommunication pole along Jalan Telok Bahang.	71
<i>Figure 29</i> Online road maps around Balik Pulau	72
<i>Figure 30</i> Google Street View.....	72
<i>Figure 31</i> Tourism activities in the durian farms	84
<i>Figure 32</i> Sample Tourism Activities in Durian Farms	85
<i>Figure 33</i> Other fruit trees were planted, and signage for the information was visible to tourists.....	87
<i>Figure 34</i> Organic farm products and fresh fruits counter.	87
<i>Figure 35</i> Evidence of promotion tools.....	88
<i>Figure 36</i> Fruit enzyme testing and sales counter.	90
<i>Figure 37</i> Timber chalet in Respondent 3's durian farm.	92
<i>Figure 38</i> Natural spring water pool and treehouse at Respondent 2 farm.	92
<i>Figure 39</i> Respondent 2's wife shared her experience in durian picking this year ..	108
<i>Figure 40</i> Respondent 2's Zoom recorded meeting session on his farm tour.....	109
<i>Figure 41</i> Selling of the durians in the Facebook.....	110

<i>Figure 42</i> Selling of organic vegetables for fast turnaround time and supplement income	110
<i>Figure 43</i> Respondent 2 explaining on their sustainable durian farming activities.	113
<i>Figure 44</i> Holistic View of Balik Pulau's Durian Agritourism Sustainability Factors	118
<i>Figure 45</i> Atlas.ti -Tourism Activities in Balik Pulau Durian Farms	183
<i>Figure 46</i> Atlas.ti -Durian Agritourism Sustainability Factors	184
<i>Figure 47</i> Atlas.ti -Durian Agritourism Sustainability Risk	185
<i>Figure 48</i> Atlas.ti -Managing Durian Agritourism Sustainability Risk	186

LIST OF ABBREVIATIONS

COVID-19	-	Corona Virus Disease 2019
MAFI	-	Ministry of Agriculture and Food Industry, Malaysia
MARDI	-	Malaysian Agriculture Research and Development Institute
MoTAC	-	Ministry of Tourism, Arts and Culture Malaysia

CHAPTER 1 INTRODUCTION

“It is your Lord who drives your ships across the seas that you may seek of His bounty. He is verily kind to you.”- QS Al-Isra (17:66)

1.1 Background

Over the last couple of decades, scientific literature on agritourism and sustainability has grown. Scholars agreed that agritourism could be the right tool to balance the needs of agritourists and rural communities. It offers economic and social development while preserving the environment, which supports the principle of sustainability. The findings of the scholars were divided between macro and micro dimensions (Ammirato, Felicetti, Raso, Pansera, & Violi, 2020). The macro dimension was related to the external community of the agritourism organization, while micro dimensions were factors related directly to the organization. Most of the studies were done based on one or two factors whilst sustainability experts commented that sustainability must be viewed holistically.

The primary economic resources of agritourism are based on farming activities in selling raw grains, production, processing, and marketing agricultural produce (Ciolac et al., 2019; Gil Arroyo, Barbieri, & Rozier Rich, 2013). At the same time, the specific elements in tourism that are usually incorporated or as ‘complimentary’ within the agricultural setting are those related to accommodation, food, tourist education and experience program (Barbieri, 2013; Ciolac et al., 2019; Toader & Mocuta, 2018; Tseng et al., 2019).

From an economic point of view, agritourism was more sustainable than other agribusinesses (Barbieri, 2019; Broccardo, Culasso, & Truant, 2017; Tseng et al., 2019). Business diversification from agritourism could prevent younger generations of farm households from leaving the farm as the tourism activities attracted them apart from farming (Bojnec & Knific, 2021). Thus, the population of the rural areas where the agricultural activities were carried out will not be depleted.

Not only for the farmers, but agritourism also creates wealth for the local society through business support and networking with the farmers (Ajagunna, Pinnock, & Amode, 2017; Evgrafova, Ismailova, & Kalinichev, 2020; Leh, Mohd Noor, Marzukhi, & Mohamed Musthafa, 2017; Mohd Nordin, 2014; Starcher, 2016). During the COVID-19 pandemic crisis, it has been shown that the supply chain and local business network were crucial to ensure the food supply reached the retail customers. Even though the farm's tourism activities were halted, the business connection pre-crisis had connected the retail customers from the agritourism activities direct to the agriculture producers for their food supply. With the support of electronic commerce and the exchange of knowledge through farmers, this could be a new insight to strengthen the future policy for the food supply (Cattivelli, Rusciano, & Gatto, 2022; Mastronardi & Cavallo, 2020; Mastronardi, Cavallo, & Romagnoli, 2021). It was an interesting finding from the pandemic crisis; farmers learned that the short supply chain led to their work satisfaction that they reached their customers even though it requires hard work and they had to overcome their individual resilience towards change of doing the business traditionally (Azima & Mundler, 2022). The discussion showed

that, agritourism does not only lead to farmers' wealth but also to intangible social development.

On the other perspective, Kazlouski, Ganski, Platonenka, Vitun, & Sabalenka (2020) emphasize that ecology directly impacts agritourism development. It is important to maintain the quality of the agricultural produce, but the originality and activities on the farm also attract agritourists and natural lovers. It further led to customers' appreciation of local agricultural produce due to the exposure and product familiarity during their involvement in tourism activities on the farm (Kim, Lee, Lee, Jeong, & Moon, 2019). This view is also supported by Airriess (2019) that geographical durian terroir in Penang had been a successful marketing tool for the Malaysian "King of Fruits". The holistic factors and benefits of agritourism from the economic, social and environmental perspectives enable this sector to be given a spotlight for sustainability study.

Agritourism sustainability has been given a deliberate focus of study globally as the tangible and intangible resources from the farmers' traditional practices have become the drivers for innovation (Palmi & Lezzi, 2020). It is supported by the farmers' awareness of "environment-oriented preservation", sustainability experts, and non-monetary motivations such as community engagement and quality of life were their priorities (Abadi & Khakzand, 2022; Quella et al., 2021). Agritourism sustainability can be another influencing factor to secure government financial subsidies for the development of rural areas as being practised in the European Union (Galluzzo, 2021)

Despite scholars' agreement on the importance of agritourism, the reality in Malaysia was not encouraging even though the country was rich with agricultural settings. The Ministry of Agriculture and Food Industry (MAFI) 2011 blueprint projected that this sector might attract 6 million visitors to agritourism destinations by 2020. However, the data compiled from the ministries proved otherwise, which is presented in Table 1.

Table 1 *Number of Tourists and Income*

Year	Number of Tourists		Income (RM'000)			
	Tourism (+/-%)	Agritourism (+/-%)	Tourism (+/-%)	Agritourism (+/-%)	Tourism (+/-%)	Agritourism (+/-%)
2016	26,757,392	2,942,840	85,098,200	22,226		
2017	25,948,459 -3.0%	2,253,174 -23.4%	82,165,000 -3.4%	28,415 27.8%		
2018	25,832,354 -0.4%	3,016,398 33.9%	84,135,200 2.4%	29,629 4.3%		
2019	26,100,784 1.0%	2,711,357 -10.1%	86,143,500 2.4%	33,505 13.1%		

Note. Author's compilation from the Ministry of Tourism, Arts and Culture (MOTAC) and Ministry of Agriculture and Food Industry (MAFI)

From 2016 until 2019, the data shows that, on average, only about 3 million tourists visited agritourism destinations yearly, which was far below the total of 26 million tourists to this country. This figure only achieved 50 per cent of the targeted numbers in the earlier blueprint. Further to Movement Control Order (MCO), due to the COVID-19 pandemic, the numbers were expected to drop significantly in 2020. These indicate that agritourism has not yet a bloomed industry in Malaysia, despite promotions done by the ministry (APPENDIX 1 to APPENDIX 3). It has yet to be reported why this sub-sector was far left behind in the tourism industry. The absence of such a report is crucial to understand the obstacles faced by the farm owners in venturing into agritourism.

Regardless of current pandemic issues and related social movement restrictions, farmers still can depend on the sales of their agriculture products and visits from domestic tourists. Experts predict that agritourism and outdoor recreational activities will rise in popularity in this new norm of living. It is also easier to apply social distancing outdoor, making it safe for the tourist and agritourism destination operators (Benedek et al., 2021; Fish, 2020; Roman, Roman, & Prus, 2020). In countries where the tourism sector is open, agritourism helps the local society survive the economic crisis with the business network (Henry, 2021; Rodriguez, 2021; Whiteside & Hynninen, 2021). Henceforward, as a country rich with agricultural resources, including durians (*Figure 1*), we must take the opportunity to venture and sustain the industry for the benefit of its stakeholders (Tern Chern, 2019).

Apart from the restriction of social gatherings and tourism activities during the MCO, other issues related to durians were reducing planted and harvested area of durians (A. A. Ahmad, Yusof, Mispan, Rasid, & Nizar, 2020) and climate change that affected the durians' quality. The big questions now arise, is durian agritourism in this country lead to its sustainability? Thus, this dissertation is intended to address this issue.

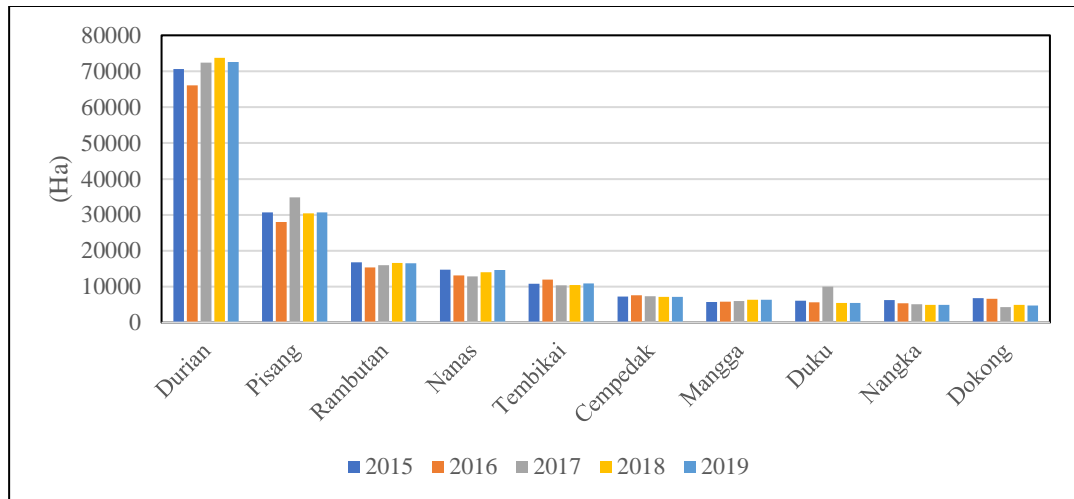


Figure 1 Top Ten Fruits Hectarage Planted in Malaysia (2015 – 2019).
Note: Source: Author’s compilation from Department of Agriculture, Malaysia, (2016--2020)

1.2 Problem Statement

Studies in agritourism sustainability were either biased toward developed countries or focused on one sustainability dimension. Some of the studies involved the agropreneurs, who were researchers themselves and knowledgeable about sustainable concepts. Studies on the supply side or focused on one or two sustainability dimensions and not holistically could not conclude the real concept of sustainability (Ammirato et al., 2020; Baipai, Chikuta, Gandiwa, & Mutanga, 2021). Little has been done, at this juncture, to establish an ideal agritourism sustainability model and to determine its achievability.

Secondly, it was found that agritourism was not developed further in this country due to insufficient motivation for farmers to venture into the business, apart from their assumption of a high investment cost on the infrastructure (Annamalah, Munusamy, & Ilham, 2016; Mohd Rabu, Tawil, Ahmad, & Mohd Rabu, 2016; Muhammad, 2015). On top of that, globally, the ecology disturbance due to human

development has changed the need for agritourism, making the industry not favoured by agropreneurs (Barbieri, 2019). Unfortunately, up to this point, not much literature discusses the effects of the above factor, which were the pillar of sustainability in local agritourism.

Last but not least, comprehensive literature was absent in durian agritourism. Scholars have attempted to highlight the importance of agritourism in Malaysia, but it mainly leads to societal benefits (H. Ahmad et al., 2020; Leh et al., 2017; Wan Suzita, Ahmad, & Jusoh, 2016). Studies also focused on agritourism as a proactive marketing tool for the local agriculture product (Airriess, 2019; Mohammad, 2018). Notwithstanding, the popular agritourism subsector based on the agricultural activities chosen for the studies were homestays, fishery villages, and paddy-farming or agricultural destinations such as Sekinchan and Cameron Highlands. Not many studies have focused on this subsector, regardless of the growing numbers of durian farmers providing stay-in-the-farm activities and boomed demands for durians in recent years. From the internet search for the last two decades, only one study was carried out specifically on durian agritourism by Airriess (2019). He found that Penang's durian agritourism was a successful marketing tool to expand the durian exports. Still, sustainability issues for durian agritourism have yet to be pursued.

1.3 Research Objective

This dissertation intended to explore durian agritourism sustainability based on the theoretical knowledge and underpinning literature. Specifically, it has three specific objectives: