SUSTAINABILITY ADOPTION IN HOTEL RESTAURANTS: EVIDENCE FROM MALAYSIA

Submitted by

JULIANA ANAK LANGGAT

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I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other university.

Signature: ………………………………

Abstract

Purpose – The aim of the present study was to explore Malaysian hotel restaurants (MHRs) and their intention to adopt sustainability practices with the aim of improving their overall competitiveness and performance. In this case, a new model to assist MHRs in the application of sustainability practices was developed in order to assess the efforts through the implementation of sustainability practices.

Design/methodology/approach – The mixed methods with quantitative dominant was designed for the present study. The first phase of fieldwork was performed in the form of a survey among the hotel managers of 3-5 star rated hotels in Malaysia which managed to collect a total of 169 responses. Next, the second phase involved the in-depth semi-structured interviews conducted with 10 informants for the purpose of conducting further discussion on the issues.

Findings – Malaysian hotel restaurants (MHRs) sustainable model illustrated that attitude towards change, top management, employee connectedness, government law and regulations; stakeholders' demand, compatibility, trialability and observability significantly influenced the intention to adopt sustainable practices. On the other hand, cost consideration, green supply chain, relative advantages and complexity were found to be insignificant. Meanwhile, government support and guidelines, by giving incentives, increasing public awareness, and providing expertise as a form of guide played a significant role in determining the success of sustainability practices.

Originality/value – The present study contributed to the understanding of innovation concept as well as the sustainability adoption practices in Malaysian hotel restaurants (MHRs). In addition, the mixed methods research design contributed to the extension of the literature which managed to explore the predictors' influences on the sustainability adoption in MHRs.

Keywords: Sustainability, Adoption, Innovation, Hotel Restaurant, Hospitality, Malaysia

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Academic Thesis: Declaration of Authorship

I, Juliana Anak Langgat,

Declared that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

Sustainability Adoption in Hotel Restaurants: Evidence from Malaysia

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;

2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;

3. Where I have consulted the published work of others, this is always clearly attributed;

4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;

5. I have acknowledge all main sources of help;

6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;

7. None of this work has been published before submission.

Signed: …………………………………………..

Date   :

ABBREVIATIONS

AT	Attitudes towards the Behaviour
BI	Behaviour Intention
CSR	Corporate Social Responsibility
DIT	Diffusion of Innovations Theory
DRP	Disaster Risk Planning
EC	Environmental Characteristics
EC	Environmental Concerns
EGSEE	Economic, Governance, Social, Ethical and Environmental
EMS	Environmental Management System
EPI	Environmental Performance Indicator
GDP	Gross Domestic Product
GHA	Green Hotels Association
GRA	Green Restaurant Association
GRI	Global Retirement Index
GSCM	Green Supply Chain Management
HCMI	Hotel Carbon Measurement Initiative
ICT	Information and Communication Technology
ITP	Intention to Purchase
MHA	Malaysian Hotel Association
MHRs	Malaysian Hotel Restaurants
MHS	Malaysian Hotel Sector
MM2H	Malaysia My Second Home
MOTAC	Malaysia Ministry of Tourism and Culture
MYR	Malaysian Ringgit
MTB	Malaysia Tourist Board
OC	Organisational Characteristics
PBC	Perceived Behavioural Control
PCA	Principal Component Analysis
PIC	Perceived Organisational Characteristics
PMS	Performance Measurement System
RevPASH	Revenue Per Available Seat Hour
ROA	Return on Assets
SDGs	Sustainable Development Goals
SN	Subject Norm
SOPs	Standard Operation Procedures
SPSS	Statistical Package for Social Science
THI	Tourism and Hospitality Industry
TPB	Theory of Planned Behaviour
TRA	Theory of Reason Action
UNWTO	World Tourism Organisation
WBCSD	World Business Council for Sustainable Development
WTCC	World Travel and Tourism Council

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"Give thanks to the Lord for He is good; His love endures forever."

~Psalm 107:1~

Publications associated with this thesis

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Conferences

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- Langgat, J., Pavic, S., Ramdani, B., (2018). Sustainability Adoption in Hotel Restaurants: Evidence from Malaysia. *UEBS Festival of Doctoral Research: Annual Management Studies Doctoral Conference, University of Exeter*.

- Langgat, J., Pavic, S., Ramdani, B., (2018). Sustainable Practices Adoption in Hotel Restaurants: Enablers and Barriers. *Council for Hospitality Management Education CHME 2018 Conference, University of Bournemouth.*

Chapter 1

1.1   Introduction

During the last six decades, there has been a rising trend in the expansion of the Tourism and Hospitality Industry (THI) which has contributed towards strengthening of the economy and prosperity in many countries globally. Consequently, this growth has also led to many businesses benefiting from the upsurge in tourist arrivals albeit many of these arrivals were uncontrolled. Between 1970 and 2009, according to the World Travel Organisation (UNWTO) (2016), there has been a 48-fold increase in international tourism arrivals from US$17.9 billion in 1970 to US$852 billion in 2009. Furthermore, between 2009 and 2010, the global gross domestic product (GDP) increased by 3.3 % (US$1,770 billion) and a further 4.4 % in 2011 (US$1,850 billion) and has shown no signs of decline since then. Therefore, these are positive signs of how the THI industry is benefiting many countries, although the extent, to which this trend will continue, is questionable. Indeed, recent reports identified that between 2015 and 2017 the tourism industry worldwide, grew by 4.9 % and contributed US$7.2 trillion to the global GDP; nearly 10 % of the total GDP (UNWTO, 2018). Not surprising, tourism is now regarded as one of the fastest growing industry's globally (World Travel and Tourism Council, 2016) and is predicted to reach a staggering 57 % of the global GDP by the year 2030 (UNWTO, 2014). As a result, the THI receives the highest number of returns, representing 10.4 % of global GDP in 2017. Notwithstanding, the explosion of this industry has increased the economic wealth and prosperity of many nations (World Travel and Tourism Council, 2018).

The expansion of the THI and resultant 'boom' to the economy in many countries has resulted in significant effects on society and the environment as a whole (Pizam, 2009). To what extent the development of this industry will affect the environment going forward is a question that needs to be addressed (Briguglio and Briguglio, 1996; Kirk 1998). Regarding this expansion the hospitality industry is known to have a significant negative effect on the

environment, economies, cultures and societies (Chen et al., 2009). Therefore, proactive counter measures must be adopted to address these issues given their impact (e.g. Kim et al., 2017; Kucukusta et al., 2013; Hyatt, 2010; Luck and Bowcott, 2009; Goeldner and Brent Ritchie, 2006). However, it is quite challenging to identify many of these impacts based on the diverse nature of this industry (Melissen, 2013), consisting of varied products and services offered by luxury hotels, cruise ships, casinos, catering firms and food stalls outside of sports stadiums, this will indeed be challenging. As a result, the industries offering of variety of products and services has caused negative impact on the eco-system and as a result, the THI is made accountable for (Jones et al., 2014).

The expansion of the THI has been quite dramatic with dozens of new hospitality properties launched and opening each week. Sadly, consideration of the impact on the environment of the development and operation of these initiatives has not been seriously considered (Nicholls and Kang, 2012). In addition, the competition between industries for market share and profit, these aspects has also contributed to these impacts. Thus, managing and operating a hospitality business in the 21st century is a challenging task. Likewise, satisfying and fulfilling guests' needs and wants is not an easy task. Providing tourists and patrons with accommodation and sustenance in meeting their needs, adds to the challenges in this industry and the environmental impacts that may result (Legrand et al., 2016, p.17).

The hospitality industry is highly dependent on the environment to provide quality service and products to customers (Darcy et al., 2010; Saarinen, 2006) and the majority of operations in this industry are located in prime scenic and panoramic surroundings. Further, often the location will be a contributing factor to attract customers to visit. However, the dependency of the industry on these attractive and compelling environments has often resulted in neglecting the need to sustain the environment and its surroundings (Buckley, 2012).

Unfortunately, limited initiatives and progress in developing sustainability practices in the hospitality industry have led to many adverse effects on the environment (Hegarty, 1992, p.316). For example, the nature of the business and operations revolves around 365 day a year, 24-hour operation which inevitably will impact the eco-system (Nicholls and Kang, 2012). Hence, there is an urgent need to adopt sustainability practices in the hospitality industry. Furthermore, to mitigating the impact of the industry on the environment is timely as play an active role to help sustain and protect the environment and to ensure that certain standards are met by operators (Jones et al., 2014).

1.2 Background of the Study

Adopting effective sustainability practices in the hospitality industry seems to be a practical solution (Bohdanowiz, Zientara, and Novotna, 2011). However, having short-term strategies and plans in a growing industry such as this can, in-turn create adverse effects and instead damage the environment and impact local communities (Chen et al., 2009). Environmental issues are important given that hotel operations are contributing to the majority of the ecological issues, such as the use of non-perishable or non-recyclable products or operating machinery and utilities (APAT, 2002; Mensah, 2004; Trung and Kumar, 2005).

Researchers and environmental protection groups have increasingly become concerned about the impact of the hospitality industry on the environment and the need for sustainable practices to be introduced (e.g. El Dief and Font, 2010; Nicholls and Kang, 2012; Hu et al., 2012; Kasim and Ismail, 2012; Kim et al., 2017). As a result, the industry has been experiencing increasing pressure to address these issues, as hospitality operators have only recently have become fully aware of the impact caused by these issues and quickly realised that the performance of their business also relies on the ability to demonstrate and implement sustainable practices (Erdogan and Baris, 2007).

According to the Global Reporting Initiative (GRI) (2017), there are 46,000 businesses globally, of which the majority are publicly listed companies,

regularly reporting on sustainability practices and performance. Indeed, this indicates that the issues surrounding sustainability have quickly caught the attention and interest of the global business community (Leonidou et al., 2013; Fraj, Matute and Melero, 2015; Leonidou et al., 2015; Molina-Azorin et al., 2015). Notably, this is seen as a growing business trend compared to prior years where companies were urged instead, to maximise their profitability and earnings by stakeholders. Concerns about the environment issues have undoubtedly influenced stakeholders' perception of the way hotels should now operate (Kasim and Ismail, 2012). In contrast, financially profitable businesses may instead be imposing significant external costs on society and the ecosystem.

While adopting a 'green' approach will enhance the hotels' long-term financial position and performance, it is also believed that it would create a positive impact for stakeholders and in turn, minimises and reduce the damage caused to society and the environment (Brockett and Rezaee, 2012). Furthermore, in the need to generate sustainable revenues, significant effort is required by hotels (Leonidou et al., 2013; Peiro-Signes, Segarra-Oña, Verma, Mondejar-Jimenez, and Vargas-Vargas, 2014). For instance, the hoteliers must ensure that customers are satisfied with their products and services, provide a conducive and safe working environment and take responsibility for their surroundings. Regarding green environmental practices, many hotels globally have initiated practices in their day-to-day operations. For example, in 2011, the Sheraton Hotels and Resorts were recognised for their linen and towel reuse programme; in 2012, the Marriott International launched the Hotel Carbon Measurement Initiative (HCMI) and Energy and Environmental Action Plan. These practices were directed towards cost savings and environmentally friendly programme (Kuminoff et al., 2010). On account of this global movement towards sustainable practice in the THI, Malaysian should take this opportunity to improve their overall competitiveness and performance by adopting the sustainable practices in the operations.

1.3   Research Rationale

The need of THI businesses to be more environmentally friendly has led the hotels industry to open their doors to sustainable practices (Kasim, 2009; Bohdanowics, 2006). Previous studies revealed that the hotel industry in developed countries had a higher tendency to be involved in sustainability practices (Bohdanowicz, 2006) such as the United Kingdom (Kirk, 1995), Sweden (Bohdanowics, 2005), Spain (Nicolau, 2008; Molina-Azorin et al., 2009) and Slovenia (Assaf and Cvelbar, 2010). However, the hotel industries of developing countries were more focuse on economic growth (Mihalic et al., 2012).

Thus, the need to implement sustainability initiatives and other programme has led to hotels in Malaysia in adopting green practices in the provision of delivering services. However, up until 2016, only ten hotels have been awarded and certified as a green hotel (Tourism Malaysia). Surprisingly in Malaysia, only 0.7 % of hotels have been identified as being environmentally sustainable from 1,400 hotels across Malaysia (Tourism Malaysia, 2016). This indicates that sustainability practices have not yet achieved a level of maturity following their introduction and latency has also been identified by many researchers relating to green practices in Malaysian hotels.

Furthermore, Malaysia has witnessed a constant increase in the arrival of tourists over the past six decades, which has made a significant impact on local businesses and resources. The most recent data from the Malaysia Tourist Board (MTB) (2015) indicates that 25.7 million people visited the country in 2015, compared to 7.4 million who visited the country in 1990, generating a net worth of US$16.6 billion for the economy. Consequently, the increase in visitors has given a tremendous boost to local businesses, but has also created increasing concern about the sustainability of the Malaysian tourism offer. An earlier study by Siti et al. (2011) indicated that while most hotels and resorts in Malaysia were aware of environmental issues, the implementation of sustainability and green initiatives remained negligible due to perceived

unattractive benefits. This service industry is more concerned about generating profit than implementing green sustainability measures and practices.

While some Malaysian hotels are aware of environmental issues the adoption of green practices and sustainability initiatives has been gradual (Siti et al., 2011). This is primarily due to the lack of support systems to positively encourage environmentally friendly practices to be adopted, which in turn, has discouraged many hotels from practising environmental programme even if they are aware of their environmental responsibilities and obligations (Kasim, 2005). Also, it has also been acknowledged that there is a lack of clear and comprehensible knowledge on environmental management practices, as most hotels do not go beyond the practices that reduce utility expenses such as the consumption of water and power (Kasim, 2009). Hence, hoteliers are reluctant to alter their current practices towards adopting more sustainable operations (Le et al., 2006; Kasim and Ismail, 2011; Cvelbar and Dwyer, 2013).

Although, the hotel sustainability movement has inspired many hotels to adopt green practices, this is an evolving trend. Awareness, consumer expectations and regulations are some of the key drivers that have helped to introduce green initiatives in hotels (Deloitte, 2008). A report by Deloitte (2008) identified that 95 % of the findings contained within the report indicated that the hotel industry should be actively involved in green activities such as recycling, using energy-efficient light bulbs and encouraging guests to use towels and sheets more than once. Also, the number of people concerned about fostering a green society has increased along with changes in consumer behaviour. The concerns regarding environmental issues and 'green consumerism' continues to grow, as shown in latest studies investigating green attitude and behaviour of green travellers' (Barsky, 2008; Lee et al., 2010; Millar and Bagloglu, 2011; Susskind and Verma, 2011).

Most of the sustainability issues identified in the hotel industry are mainly concerned with the hotel operations as a whole. However, limited research has been conducted to explore the sustainability of each department within a hotel.

Indeed, many of the green practices have originated from room division departments, which provide insight on power and chemical usage. Therefore, it is important to investigate the green practices of other hotel departments in determining the overall sustainability performance of the hotel. In this study, the food and beverage departments, specifically hotel restaurants have been selected to investigate the implementation of eco-friendly practices. Thus, it is anticipated that hotel restaurants will provide important results regarding sustainability practices in the hotel industry. Furthermore, it is assumed that hotel restaurant operations would be entirely different from usual commercial restaurants, especially from the point of view of management. As for commercial restaurants, a manager who is aware of sustainability trends will be able to take advantage of opportunities in the marketplace. However, there are many aspects to be considered by the hotel in adopting sustainability practices for their restaurant, which at this stage, has been an area neglected in this field of research.

It is further believed that sustainability practices in hotel restaurant operations and the development and adoption of environmental sustainability measures and practices can be maintained. As a result, these developments could help to increase economic growth (Alvarez et al., 2001; Blanco et al., 2009; Eiadt et al., 2008; Enz and Siguaw, 1999), competitive advantages and innovations (Goodman, 2000) and customer satisfaction and loyalty (Kassinis and Soteriou, 2003) as well as reducing the levels of carbon dioxide (CO_2) emissions (Bohdanowicz, 2009). Notably, this issue has captured the attention of the non-profit organisation called, the American Green Restaurant Association (GRA, 2008). This organisation has introduced specific criteria for the restaurant industry to work towards becoming more sustainable in their business operations.

The prerequisite for hotels to adopt sustainability practices is quite promising; however, how Malaysian hotel restaurants embrace the adoption of similar practices at this stage is uncertain. As a result, there is a need to identify what will encourage hotels to adopt such practices and whether, by utilising this form of innovation in Malaysian hotels, restaurants would become more competitive.

Thus, these outcomes will serve as the basis for a Malaysian Hotel Sector (MHS) strategy for the adoption of sustainability practices. There has been little academic focus on sustainability practices in the Malaysian hotel sector and this thesis provides much needed research to fill this gap.

Most of the studies on hotel sustainability issues have been conducted in Europe, America, Africa and Vietnam with only five studies known to adopt a Malaysian focus. Nevertheless, these studies focused on the overall operations of hotels and freestanding commercial restaurants (Kasim, 2007; Kasim, 2009; Siti et al., 2011; Kasim and Ismail, 2012; Kasim et al., 2014). To the author's knowledge, there has been no single study investigating a specific hotel department such as the hotel restaurant. Although, past studies on the adoption of environmental initiatives by Nicholls and Kang (2012) identify the potential for examining the context of the Malaysian hotel restaurant. This study also reported on the awareness and perceptions of accommodation providers towards green issues and practices, and the level of adoption of various green initiatives in hotel operations in general.

The green initiatives made to existing hotel operations were considered as an innovation for the hotel industry to stay competitive (Ottenbacher and Gnoth, 2005). On that note, embarking into sustainable practices was relatively new to Malaysian hotel restaurants. Hence, this adoption is seen as a new process for controlling the disproportionate impact of the hotel industry on the environment (Kasim, 2009). Rogers (1962), stated that innovation could be an idea, practice, process, or product, perceived as being new by an individual that transforms a new problem-solving idea into an application. Therefore, the diffusion of innovation theory (DIT) introduced by Rogers (1962) was adapted to explore Malaysian hotel restaurants and their intention to adopt sustainability practices. This theory is explained and discussed further in Chapter 3.

1.4   Aim of the Study

This study aims to explore Malaysian hotel restaurants (MHRs) and their intention to adopt sustainability practices to improve overall competitiveness and performance. Further, this study aims to assess the efforts through the implementation of sustainable practices by developing a new framework to assist MHRs in the application of sustainability practices.

Three areas of focus are adopted in this study:

1. Investigate the perceptions of hotel managers' regarding innovation and organisational and environmental characteristics towards the adoption of environmental practices in MHRs.
2. Evaluate and analyse of the importance of sustainable performance indicators applied in MHRs.
3. Evaluate the overall sustainability performance of MHRs.

1.5   Objectives of the Study

The principal objectives of this study are as follows:

1. To critically analyse and gain insights into the sustainability of MHR.
2. To evaluate how perceived innovation and, organisational and environmental characteristics influence the decision to adopt sustainability practices in MHRs.
3. To evaluate to what extent the adoption of sustainability practices in MHRs will improve the performance and operation of the organisation.
4. To develop a new and improved sustainability framework model to facilitate MHRs in transitioning from traditional practices to sustainability practices.

1.6   Research Questions

The following research questions have been developed in this study:

1. What makes Malaysian hotel restaurants adopt sustainable practices?

    • How sustainable are MHRs?

    • To what extent do MHRs adopt sustainability practices?

    • To what extent is the adoption of sustainability practices in MHRs are influenced by innovation and, organisational and environmental characteristics?

2. Is there a noticeable difference between hotel restaurants that have already implemented sustainability practices compared to hotel restaurants that have not?

    • Do MHRs need to adopt sustainability practices to improve their overall organisational and operational performance?

1.7   The study hypotheses

Based on the research questions fourteen hypotheses have been developed as follows (Table 1.1):

Table 1.1: The study hypotheses.

Characteristics	Hypotheses
Organisational Characteristics	*H1: **Attitude towards change** is positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H2: **Top management** is positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H3: **Cost consideration** is positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H4: **Employee connectedness** is positively related to the sustainability adoption in Malaysian hotel restaurants.*
Environmental Characteristics	*H5: **Government laws and regulations** are positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H6: **Green supply chains** are positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H7: **Competitive advantage** (trade pressure) is positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H8: **Stakeholders' demands** (consumer and community) are positively related to the sustainability adoption in Malaysian hotel restaurants.*
Perceived Innovation Characteristics	*H9: **Relative advantage** is positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H10: **Complexity** is positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H11: **Compatibility** is positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H12: **Trialability** is positively related to the sustainability adoption in Malaysian hotel restaurants.*
	*H13: **Observability** is positively related to the sustainability adoption in Malaysian hotel restaurants.*
Organisational Performances	*H14: **Organisational performance**s are positively related to the sustainability adoption in Malaysian hotel restaurants.*

1.8   Contribution of the Study

This study makes the following contributions to this field:

a. The body of knowledge (Theoretical)
- An original contribution to the existing knowledge in this field by providing a sustainable framework model, which helps to influence the intention of Malaysian hotel managers to adopt sustainable practices.
- An examination of the compatibility of the diffusion of innovation theory (Rogers, 2003), organisational characteristics (Nicholls and Kang, 2012; Kasim and Ismail, 2012) and environmental characteristics (Kasim and Ismail, 2012) which helps provide a relationship between the variables.
b. The Malaysian Hotel Industry (Organisational)
- A new sustainable framework which can be employed in the hotel industry and facilitate MHRs transition from traditional practices to sustainable practices.

1.9   Thesis Outline

This thesis is structured into 8 Chapters (Figure 1.1):

Chapter 1: Introduction
↓
Chapter 2: Research Background
↓
Chapter 3: Innovation and Hotel Industry
↓
Chapter 4: Research Methodology
↓
Chapter 5: Quantitative Data Analyses
↓
Chapter 6: Qualitative Data Analyses
↓
Chapter 7: Contribution: MHRs Sustainable Model
↓
Chapter 8: Conclusions and Recommendations
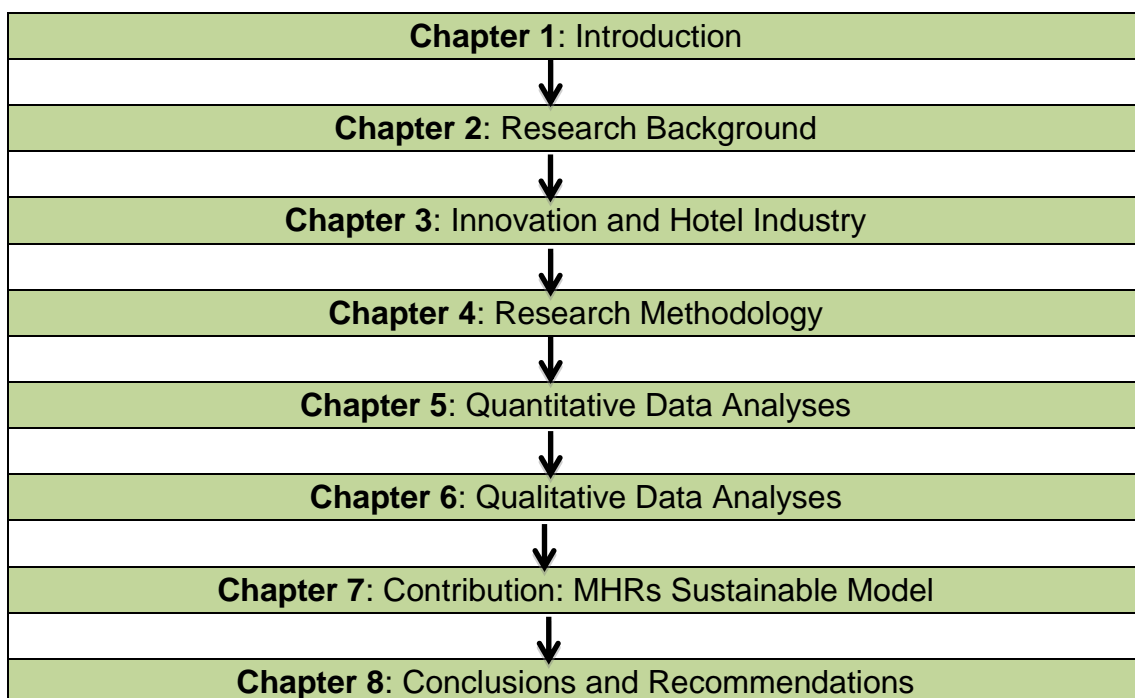
Figure 1.1: Structure of the thesis.

Chapter 1 presents the expansion of THI as having influenced the economic growth of many nations but also having had significant impacts on the environment. This chapter indicates that adopting sustainability practices seems to be a practical solution to minimise these impacts. Adopting the sustainable practices is quite promising; however, how Malaysian hotel restaurants embrace the adoption of similar practices at this stage is uncertain. This chapter discusses the aims of this study in exploring Malaysian hotel restaurants (MHR) and their intention to adopt sustainability practices to improve overall competitiveness and performance. The objectives of the study, the research questions, the study hypotheses and the study contribution are further described and highlighted.

Chapter 2 critically reviews and argues the research background on sustainable hospitality, the Malaysian hospitality industry and the evolution of sustainability practices and hotel restaurant operations. The chapter begins with the definition of sustainability in the context of hospitality, and this study is adopting the definition from Kim et al. (2017). The chapter then proceeds with the primary focus, addressing the significance of hotel operations and the current issues preventing MHRs from being sustainable. The discussion continues with the various aspects of sustainability adoption including the benefits, performance measures and barriers.

Chapter 3 critically reviews the theories employed in adopting an innovation. The underpinning theory (diffusion of innovation theory) utilised in this study is briefly discussed along with the organisational, environmental and performance characteristics towards the adoption of sustainability practices. The proposed sustainability framework is also presented and discussed.

Chapter 4 describes in detail the mixed methodology used in this research. The pragmatism research paradigm has notably led to the selection of this methodology in this study. This is followed by the discussion on the design of the research design including the population, sampling and data collection. The survey questionnaire instrument and interview structure are also discussed followed by describing the pilot study, data analysis, validity and reliability.

Lastly, research ethics; risks and benefits, informed consent protocol and data storage are presented.

Chapter 5 presents the quantitative data about the research objectives and questions. The chapter begins with the presentation of the descriptive statistics, factor analysis and logistic regression and highlights the relationships of the hypotheses thereby matching with the research objectives. This chapter further discussed the MHRs sustainable model and highlights the main findings.

Chapter 6 presents the qualitative data and matches these with the research objectives and questions. This chapter supports the findings of the quantitative questionnaire survey (Chapter 5) using qualitative textual information through the exploration of the intention to adopt sustainability practices in MHRs. The main findings from the qualitative approach also discussed further.

Chapter 7 proposes a new MHRs sustainable model. The model is based on a synthesis of the issues arising from the literature review, quantitative (Chapter 5) and qualitative (Chapter 6) findings. This chapter discusses the evolution of the MHRs sustainable model and provides practical implications regarding the findings.

Chapter 8 presents the overall conclusion of the study, which includes the key contribution to the body of knowledge and its limitations. The chapter ends with a series of recommendations and concluding remarks.

1.10 Summary

The development of the THI and the benefits afforded to the economy has unfortunately resulted in significant negative effects that impact society and the environment. This has been exacerbated by the limited effort of companies to adopt sustainability practices in the hospitality industry. Specifically, less priority in implementing sustainable practices was found in developing countries. To this end, only ten hotels in Malaysia have been recognised in employing sustainability practices in their operations. Hence, this has raised many concerns and notable gaps in the research concerning green practices in Malaysian hotels. Further, most sustainability practices in hotels have originated from the room division department. This study focuses on the hotels restaurant operation's in adoption of sustainable practices, which is an area ignored in the current research.

The issues and gaps identified in the research have formed the basis for this study to be conducted. The aims presented in this chapter will help towards achieving the objectives of this study and in answering the research questions. The contributions of the study extend the current body of knowledge and research in this field and within the hospitality industry.

Chapter 2

2.1 Research Background

Since the 1990s, sustainable practices in the hospitality industry have received significant interest and attention from researchers (Buckley, 2012). Likewise, the issues surrounding sustainability (Mensah, 2006) have continued to grow in relative importance and significance (Nicholls and Kang, 2012). For these reasons, the World Tourism Organization incorporates the Brundtland definition (Brundtland Report, 1987) of sustainable development into its own definition of sustainable tourism '*tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities*' (UNWTO, 2016). The Brundtland Report (1987) similarly emphasised three pillars of sustainable development comprising of environment, economy and society. Environmental resources should be maintained and prevented from harm caused by any human activities, while developing countries should have equality, regarding the right to have basic needs such as employment, food, energy, water and sanitation. The sustainable development was defined as '*progress that meets present needs without compromising the ability of future generations to meet their needs*' (Seuring et al., 2003).

According to Droste (1991), some interrelated phenomena have led to what Brundtland voiced out that sustainability and development are difficult to implement effectively. The voiced are not fully reflected in the normative codes of conducts how the business community should reacts and also has undergone a subtle shift in interpretation and primary focus (Barkemey et al., 2014). First, it can be seen through the devastating ecological destruction of climate change and the loss of biodiversity. Second, Brundtland expects that inequity problems can be solved and overcomed. Third, economic improvements and ecological connectivity, simultaneous declines in the power of state sovereignty, and the upheaval in the global order mean that both global sustainability and development solutions are difficult to achieve. These issues

have led the integration between sustainability development and decision making at their core (Dernbach, 2003; Stoddart, 2011).

According to Emas (2015), the key principle of sustainable development underlying all others is the integration of environmental, social, and economic concerns into all aspects of decision making. This integration also should be done across sectors, territories, and generations. For example, win-win opportunities for the environment and economy can be captured through improvements which reduce pollution in production processes (Porter and van der Linde, 1999).

The call for sustainable development is a pragmatic response to the phenomena arises. While the comprehensive goals were widely embraced, critics argued that steps towards their implementation would be unsuccessful; first, by fundamental contradictions between the revived call for economic growth in developing countries and enhanced levels of ecological conservation; and, second, the inattention to power relations among the local-to-global actors and institutions supporting unsustainable development (Lele, 1991; United Nations Conference on the Human Environment, 1992; Dernbach, 1998, Brodhag and Taliere, 2006). On that note, this is where the stakeholders identified as the key person to sustainable development.

The involvement and participation of various stakeholders are crucial to ensure sustainable development. All parties should share the values and goals towards a new synthesis and subsequent coordination of mutual action to achieve multiple values simultaneously and even synergistically. As real-world experience has shown, however, it is difficult for every stakeholder to share the same values and perspectives as each one has their ideology. This ideology has lead to uncontrollable impacts: human biomass appropriation, global warming, ozone shield rupture, land degradation, and biodiversity (Droste, 1991). These have been influenced by human activity for many years and have, in turn, adversely affected the ecosystem.

This impact on the ecosystem can be seen in many negative outcomes as documented by Nicholls and Kang (2012) and the hospitality industry has been identified as impacting sustainable development (Buckley, 2012). The hospitality industry is one of the largest industries globally and, regretfully, contributes adversely to the environment (Jones et al., 2014). As the hospitality industry is reliant on resources, it is, therefore, a significant contributor to many of the issues that compromise our ecosystem. Further discussion on the importance of sustainability to the hospitality industry is discussed in Section 2.3 in this chapter.

2.2   Defining Sustainability in Hospitality

The definitions of sustainability or 'green practices' in the hospitality industry are varied due to their diverse applications. Most definitions used in the hospitality context are based on consensus and intuition, rather than rigorous application of scientific evidence and awareness of context-specific factors (Jones et al., 2014). A review of the green practices literature in the hospitality context between 2001 and 2017 identifies many of the varied definitions of green practice or sustainable practice. Wolfe and Shanklin (2001, p.209) emphasised that sustainability should become a fundamental part of business operation. Initiatives were required to highlight sustainable practices and minimise impacts on the environment. However, the definitions seem to be weak in the understanding of how businesses should be operated profitably. Wolfe and Shanklin defined green practices through the lens of business operations:

> *"actions that reduce the impact on the environment, such as eco-purchasing or recycling."*

Further, Manaktola and Jauhari (2007) highlighted how organisations should react towards sustainability practices instead of focusing on the competitiveness of the sustainability. The focus of their definition is not directly relevant to the aim of this study therefore it was not relevance to be used for this study.

"A less environmentally damaging property which has made a commitment to various ecologically sound practices such as saving water, saving energy, and reducing solid waste."

Meanwhile, Myung et al. (2012, p.214), acknowledged that sustainability practices control the waste and use of local resources. Again, for the purposes of this study this definition is lacking in deriving organisational performance after the application of practices. They defined sustainability as:

"Minimising the impact on the environment by applying environmentally preferred practices to reduce waste and to use sustainable resources and supplies."

The researcher found the definition of Kim et al. (2017) definition to be suitable to explore Malaysian hotel restaurants (MHRs) and their intention to adopt sustainability practices to improve overall competitiveness and performance. They defined sustainability as;

"A value-added business strategy that benefits a hospitality operation that engages in environmental protection initiatives."

Therefore, the researcher adopted the interpretation by Kim et al., (2017) where the value-added business strategy enables hotel operations to preserve the environment while making profit and staying competitive. This study would like to propose a sustainable model for hotel business operations to improve organisational performance and at the same time preserve the environment. The most important consideration is that it will be a reference to develop and refine the MHRs sustainable model at the end of this study.

2.3   Sustainability in the Hospitality Industry

To easily determine what the role of the hospitality industry is and how it should function is challenging to say the least. The challenges facing this industry are not only due to its size and diverse activities but also towards its responsibilities

and obligations to our society. Indeed, having an array of products and services has made it difficult to differentiate between many of the players in this industry. Notably, the concepts associated with hospitality have frequently been recognised as quite challenging to implement due to their characteristics and varied criteria (Melissen, 2013). Due to these challenging factors, the industry has received increasing attention from researchers and practitioners interested in the implementation of green operational practices (Hegarty, 1992, p.316). Through the rapid modernisation and advancement of technology, it appears that there is a more challenging role for the industry. Hence, the perspective of what the industry needs to offer has become more complex than previously thought.

The hospitality industry cannot be excluded from the need to implement sustainability practices due to its enormous year-round operational impacts. Also, limited progress in developing sustainability practices has caught the attention of researchers hoping to report substantial findings regarding environmental management in the hospitality industry. Academic research in the area of sustainable hospitality is limited (Chung and Parker, 2010). Between the years 2000 and 2014, only 123 research studies have been conducted regarding green practices in the hotel and restaurant industry (Kim et al., 2017). This area is categorised as a neglected area in research and presently resides within the broader context of sustainable tourism (Bramwell and Lane, 2012) and served as the groundwork for this study.

Most of the literature is addressing issues and challenges of sustainable practices in hotels (e.g. El Dief and Font, 2010; Nicholls and Kang, 2012) and restaurants (Hu et al., 2012; Kasim and Ismail, 2012). These studies identified three main reasons for the hospitality industry to implement green practices: financial benefits (Tzschentke et al., 2004; Lee et al., 2013), consumer demand (Hu et al., 2010; Martinez and Bosque, 2013) and stakeholder relations (Chan and Hawkins, 2010; Raub and Blunschi, 2014). However, most research focuses on the observation of sustainable practices (Hegarty, 1992). Sustainability practices applied to the hotel industry, focus on technical aspects such as energy savings (e.g. by installing energy efficient appliances),

conserving water (e.g. by retrofitting shower fixtures) and reducing waste (e.g. recycling) (Erdogan and Baris, 2007; Radwan et al., 2012). However, a more in-depth and sound understanding of green practice aspects remains unclear and unexplored (Manganari, Dimara and Theotokis, 2016).

The current research trend in sustainable hospitality is to focus on the implications of green practices to specific business operations (e.g. Miao and Wei, 2013), specific communication techniques (e.g. Hu, 2012; Theotokis and Manganari, 2015) and for specific consumer profiles (e.g. Millar et al., 2012). The hotel industry is trying hard to achieve green integration (Leonidou et al, 2013; Peiro-Signes et al, 2014). Notably, these trends are stimulating great interest among industry players. Most hotels, which practice sustainability, are self-driven and encourage a more systematic management system, having realised the benefits and advantages to be gained (Bonilla-Priego et al. 2011, p.361). On the other hand, even though substantial consideration has been given, there is some evidence to suggest that the adoption of green practices is due to the pressure from stakeholders and/or through government regulations (Lynes and Dredge, 2006). For example, in the case of hotel investors, hospitality managers are reminded to report every single detail of their operations to the investors, including environmental management and, ethical and social responsibility considerations.

Some hotels have obtained a green practice certification to highlight their environmental performance and contributions, which in turn, helps to strengthen their competitive advantage and to differentiate them from others (Han and Kim, 2010). Many kinds of certification schemes, awards and labels are utilised to justify green implementation in hotels. However, it is still questionable as to whether this form of certification is a strong indicator of green adoption within the hospitality industry (Segarra-Oña et al., 2012). Also, there are hospitality businesses that do not consider environmental performance as a means to gain more significant market share and advantage (Hall, 2011). Moreover, it has been found that only a few hotel companies offer a sustainable report that is publicly available, as most companies do it in a secretive way (de Groisbois and Fennell, 2011).

To become more competitive and attract attention from the market, the majority of the more substantial hotel chains have shared their sustainability and Corporate Social Responsibility (CSR) programmes. For example, the Hilton Hotel is well known for its at "Hilton's we Care!" programme which is implemented and practised according to environmental concerns and has adopted a world environmental protection and awareness approach rather than from a sustainability context or perspective (Bohdanowiz et al., 2011, p.810). Also, this leading hotel brand focuses on social aspects; mainly sustainable sourcing and contracting of local suppliers (Bohdanowiz, Zientara, and Novotna, 2011). The main aspect of sustainable development is not in the mindset of "The Hilton's", due to the minimal engagement of customers and the lack of co-operation with other departments and environmental (third-party) organisations and groups (Bohdanowoicz et al., 2011, p.811).

Notwithstanding, it can be seen that the hospitality industry has, in fact, made some effort by making several improvements towards implementing green practices (Leonidou et al., 2013; Peiro-Signes, Segarra-Oña, Verma, Mondejar-Jimenez, and Vargas-Vargas, 2014). However, according to Hegarty (1992, p.310), the current efforts, when compared to several decades previously, are not where the industry should be today. Therefore, the present circumstances requires a new sustainable business framework (Van Marrewijk, 2003) and a 'narrower approach' (Darcy, Cameron, and Pegg, 2010, p.520) that are workable for the current situation. By not having this in place, the industry will continue to travel down the same path as previously, not aligned with its operational capabilities (King et al., 2011, p. 164).

More recent sustainable development studies have been conducted on ecological issues affecting the hospitality industry, particularly those aspects which are having a significant impact on the economy. Few studies have reported on social performance even though the hospitality industry has recently been flourishing (Darcy et al., 2010). Conversely, it has been noted that economic development has resulted in improving social performance, which is often uncommon and unpredictable (Darcy et al., 2010). Baum (2007, p.1983) argues that human activities in the industry have influenced the industry to be

less ambiguous, to have high physical and emotional workloads, low social status and prestige for the employees, poor employment conditions and irregular working hours (Kusluvan, Kusluvan Ilhan, and Buyruk, 2010, p.196).

Since the hospitality industry is heavily reliant on human capital and is strongly people-oriented, it can, therefore, be argued that this situation is full of "mutual-exclusive contrasting characteristics" (Pizam and Shani, 2009, p.148). According to Pizam and Shani (2009, p.148) the hospitality industry was focusing on industry features such as the relatively extensive and deep host-guest relationship, progress vs. stagnation, ordinary vs. extraordinary, and hospitality vs. profitability. Further, it is difficult to identify the industry as 'sustainable', in either the 'weak' or the 'strong' aspect of the concept.

The social element of the hospitality industry should be assessed in different ways as it has a significant impact on the environment, economies, cultures and societies (Legrand et al., 2016, p.17). It is clearly identified as affecting service delivery not only to tourists but also to non-tourists (Pizam, 2009). Non-tourists are the key people who run the operations in the hotel properties. The hotel industry also employs a large number of people from the local communities where the businesses operate.

Additionally, businesses rely heavily on local suppliers and other organisations to work together to maintain their operations efficiently and work towards the development of the local economy (Darcy et al., 2010; Saarinen, 2006). Therefore, it is crucial to measure the impacts associated with the Malaysia hospitality industry on local communities, economies and ecological systems (Legrand et al., 2016, p.17). In this study, Malaysia is used as the contextual setting of this research to determine the adoption intention of hotel managers and sustainability practices in hotel restaurant operations.

Malaysia's position on the equatorial line, the beauty of flora and fauna, cultural diversity and customs has made Malaysia a destination for tourist from around the world. With that, Section 2.4 and Section 2.5 in this further chapter debate

on the importance of the THI industry contributing to the national economic development and support the justification why Malaysia is required to adopt the sustainability practices in the hotel operations.

2.4   The Malaysian Hotel Industry

Malaysia comprises of thirteen states and three federals territories and is situated in the Southeast Asian region (see Figure 2.1). The South China Sea separates the states into two regions; west or Peninsular Malaysia and East Malaysia. There are eleven states located in Peninsular Malaysia and two states in East Malaysia, known as Sabah and Sarawak or the Borneo islands. Malaysia consists of more than 30 ethnic group settlements across all the states of Malaysia, and the nation is known to be a multi-ethnic, multicultural and multilingual society.

Figure 2.1: Map of Malaysia
Source: https://www.dreamstime.com/royalty-free-stock-photos-malaysia-map-image8989738

Malaysia as a nation comprises an exciting diversity of cultures, festivals, traditions and customs, offering a myriad of experiences. Two-thirds of Malaysia is covered forests, some of which have been identified as 130 million years old. Malaysia has a biodiverse range of flora and fauna throughout its states and between 59 % and 70 % is covered with virgin, green tropical rainforest that covers the total land area. This diversity and uniqueness contribute to Malaysia's status as one of the most popular tourist destinations globally (WTTC, 2018).

The Malaysian Government has developed many initiatives to diversify the tourism industry and its products; exploring ways to increase and promote further the tourism sector. There are many programme and initiatives such as; the 'Visit Malaysia' year, 'Malaysia My Second Home' (MM2H) and 'Malaysia Truly Asia'. In the years 2013 and 2014, according to the Global Retirement Index (Tourism Malaysia, 2015), Malaysia was recognised as one of the best places to retire. Furthermore, Malaysia was also ranked fifth regarding the World's Best Retirement Havens and ranked as first in Asia as the best place to retire (Tourism Malaysia, 2016). In 2016, Malaysia was also identified as one of the world's 5th 'Best Shopping Destinations' by Expedia UK (Tourism Malaysia, 2016).

In 2016, Tourism Malaysia recorded the highest number of tourist arrivals with 26.8 million arrivals compared to 25.72 million arrivals recorded in 2015, which is a 4 % increment in arrivals. Income generated by tourism in Malaysia also increased, with total revenues of 19 billion USD (MYR 82.1 billion) in 2016. The domestic tourist arrival figures in 2016 also showed a substantial increase of 7 % (189.3 million) from the 176.9 million arrivals reported in 2015. Therefore, these figures show that the tourism industry in Malaysia has been performing exceptionally well promoting Malaysia internationally and locally. However, with growth comes responsibility and the tourism sector is firmly committed to playing its part to maintain the destination's sustainability (Pizam, 2009). Figure 2.2 shows the tourist arrivals and receipts in Malaysia between the years 2011 and 2016.

Year	Arrivals	Receipts (USD)
2016	26.76 million	19.0 Billion
2015	25.72 million	16.6 Billion
2014	27.44 million	17.3 Billion
2013	25.72 million	15.7 Billion
2012	25.03 million	14.6 Billion
2011	24.71 million	14.0 Billion

Figure 2.2: Tourist arrivals and receipts in Malaysia by year
Source: Malaysian Statistics Department, 2017

Many hotels have been built to cater for the tourist market in Malaysia. Figure 2.3 displays the data. As a result, 4,377 accommodation services were operating in 2015 (Malaysia Statistic Department, 2017), generating around MYR13.9 billion with MYR7.9 billion reported as "added value" in that year.

Year	No. Of Hotels	Rough output value (RM billion)	Added value (RM billion)	No. Of Employee	Salary andWages (RM billion)	Fixed asset value (RM billion)
2015	4,377	13.9	7.9	130,675	3.0	33.0
2010	3,129	9.8	5.6	110,535	1.9	21.9
Annual growth rate	6.9 %	7.2 %	7.2 %	3.4 %	9.3 %	8.5 %

Figure 2.3: Comparison between hotel establishments between 2010 and 2015.
Source: Malaysian Statistic Department, 2017

The number of employment opportunities likewise increased by 130,675 costing the industry around RM3.0 billion for salary and wages. In 2015, total accommodation establishments rose to 4,377 as compared to 3,129 in 2010, which was an increase of 6.9 %. The majority of new hotels consisted of budget hotels, which increased from 2,123 establishments in 2010 to 3,395 in 2015 and now comprise 77.6 % of the total accommodation establishments. Figure 2.4 displays the comparison of hotel establishments.

Year	Hotels (resort hotels and apartment hotels)	Budget hotels	Chalets	Rest houses/guest houses/hostels/bed and breakfast/camping grounds	Total Establishment
2015	621	3,395	191	170	4,377
2010	515	2,123	255	236	3,129

Figure 2.4: Number of establishments of accommodation services by activity between 2010 and 2015.
Source: Malaysian Statistic Department, 2017

Currently, 629 hotel establishments are operating all year round in Malaysia (Figure 2.5), consisting of 3 to 5 star rated hotels which include resorts and apartment hotels. The hotel classification used for this study is in line with the rating system used by Malaysia Ministry of Tourism and Culture (MOTAC). Figure 2.5 depicts the number of Malaysian hotel establishments.

Location	5 stars	4 stars	3 stars	Total
Labuan	1	2	3	6
Sabah	7	16	45	68
Sarawak	7	18	39	64
Johor	2	13	54	69
Melaka	3	15	30	48
Neg. Sembilan	4	8	13	25
Putrajaya	3	3	-	6
Kuala Lumpur	29	25	34	88
Selangor	18	16	18	52
Perak	3	8	15	26
Penang	11	23	16	50
Kedah	11	13	13	37
Perlis	-	-	2	2
Kelantan	2	4	9	15
Terengganu	4	6	14	24
Pahang	6	14	29	49
TOTAL	110	184	335	629

Figure 2.5: Numbers of Malaysia hotel establishments.
Source: Malaysian Ministry of Tourism and Culture (MOTAC, 2017)

It is surprising to know there only ten hotels have been certified as Green Hotels out of the total 3-5 star rated hotel population in Malaysia (Tourism Malaysia, 2016). Investigation is needed into the slow implementation of sustainable practices in Malaysian hotels. According to Kasim (2006), even though Malaysia is a developing country, the awareness of environmental issues is far behind developed countries. Bohdanowicz (2006) also argued that most developing countries are focusing on economic growth rather than the impact to the environment.

Few studies regarding the environmental issue in Malaysia were conducted in different areas. Kasim (2004) was looking at tourist support for business environmental and social responsibility (BESR) in a tourism context. Her studies show that BESR in Malaysia would require more time to succeed due to low demand from tourists. Furthermore, in other studies, Kasim (2007) has come to remarkable findings, suggesting that imparting a sense of responsibility on Malaysian society may be extremely challenging and time-consuming. Such issues have been captured by the later studies conducted by Kasim (2009), whereby hotel managers from small and medium size hotels found not to have the knowledge of environmental management issues. Likewise, the findings of Tang, Amran and Goh (2014) have discovered that the hotel stakeholders – the Malaysian hotel industry, the hotel association, competitors, customers and top management were found not to have a significant influence on environmental management practices in Malaysia's hotels. These findings have revealed that more work and effort is needed for the Malaysian THI to operate sustainably.

Notwithstanding, Siti et al., (2011) have revealed the level of environmental practices in Malaysia resorts is still minimal. Their findings are not significantly different from Kasim in 2004. There are no changes or improvement after seven years. Malaysian hotels still do not go in sustainable directions in their business. Moreover, from another perspective on sustainability, it was identified that tourists who are concerned about such matters prefer to stay in eco-friendly hotels when visiting Malaysia (Noor and Kumar, 2014). From these aforementioned studies, it is evident that there is no focus or concentration on

seeing performance improvements after sustainability adoption. Therefore, this study will fill the gap to explore Malaysian hotel restaurants (MHRs) and their intention to adopt sustainability practices and what are the results of the practices.

It is expected that the continual growth in the tourism industry in Malaysia will increase the number of hotel establishments. Therefore, the key players in the industry should take greater responsibility maintaining the sustainability of the tourism and hospitality industry in order to preserve a balanced ecosystem. These industries must consider the implementation of sustainable practices in entire THI operations. In line with this notion, the rapid growth of the Malaysian economy has led the Malaysian government to develop the agenda of sustainability along with the expansion of the nation's economy in the National Transformation Policy between 2011 and 2020.

Moreover, this agenda should be the focus of the Malaysian hotel industry while some Malaysian hotels are aware of environmental issues, albeit they are slow to adopt these initiatives focused on environmental management (Siti et al., 2011). As previously mentioned, only ten hotels in Malaysia have been awarded certification as green hotels (Tourism Malaysia, 2016). This, in part, may change as a result of the Eleventh Malaysia Plan which is a recent government aimed at the New Economic Model but also to ensure that the Malaysian hotel industry continues to be aware of sustainability issues (Figure 2.6). The Eleventh Malaysia Plan has set goals to establish Malaysia as a high-income economy that is both inclusive and sustainable and has been in place for several years following on from the Tenth Malaysia Plan.
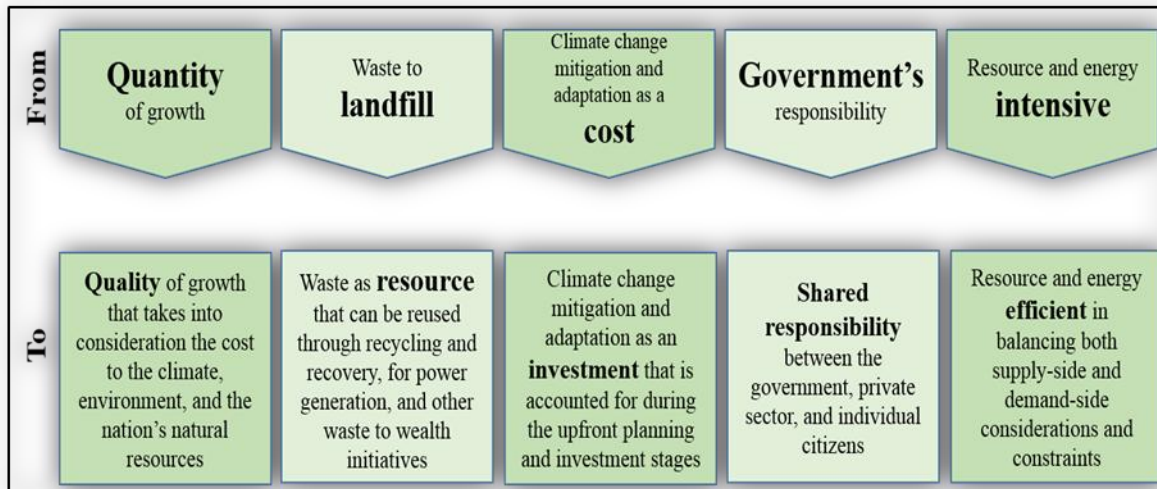
Figure 2.6: Embarking on green growth, Eleventh Malaysia Plan 2016-2020.
Source: Malaysian Ministry of Tourism Art and Culture (MOTAC, 2017).

Hence, the Malaysia green strategy is believed to lead to a better quality of growth, strengthened food, water and energy security, lowered environmental risks and ecological scarcity and, ultimately, better wellbeing and quality of life. Also, it also will minimise greenhouse gas emissions and inland water, as well as coastal and marine areas including its ecosystems. Sustainable production practices will increase the adoption of energy-efficient and low carbon buildings, transport, products and services. Climate change adaptation measures and disaster risk management, as well as the protection and conservation of natural resources, including biodiversity, will be intensified to protect the nation and its development gains.

The Eleventh Malaysia Plan has highlighted the importance of sustainability for Malaysia. The main reason is due to the challenges of balancing the growing population and the demand for sustainability, with a natural environment that is increasingly under stress. Within the global context of the increasingly intense and frequent extreme weather events, adopting green growth has now become imperative for Malaysia. It represents Malaysia's commitment to renew and, indeed, increase its commitment to the environment and long-term sustainability. As a result of the implementation of the Eleventh Malaysia Plan, it is hoped that there will be fundamental changes across every major sector

including how policy is determined, how institutions are regulated, how responsibilities are shared, and how people value their environment.

Therefore, with the expansion of the hospitality industry in Malaysia and also the sustainability agenda that have been published by the government in the Eleventh Malaysia Plan, the hotel industry in Malaysia should consider sharing the responsibility. The main reason why the industry should share the responsibilities is the negative impacts of this industry on the natural environment (Sloan et al., 2015). The impacts include the loss of natural habitats, contamination of the local water system, production of waste and contribution to global warming (Briguglio and Briguglio, 1996; Kirk 1998).

The Green Hotels Association (2014) defines green hotels as *"environmentally friendly properties whose managers are eager to institute programme that save water, save energy, and reduce solid waste-while saving money to help protect our one and only earth"* (para. 8). This international association's purpose is to bring together hotels interested in environmental issues. In order for hotels to tackle environmental issues, they can adopt corporate social responsibility (CSR) as one of the potential ways towards sustainability (for example Kim et al., 2017; Kucukusta et al., 2013; Hyatt, 2010; Luck and Bowcott, 2009; Goeldner and Brent Ritchie, 2006). Many researchers have also studied CSR in hotel operations (for example Tsai et al., 2012; Lee and Heo, 2009; Lee and Park, 2009; McGehee et al., 2009). Apart from the corporate social responsibility (CSR), hotels should change what they do to be more sustainable. Although, it was initially the responsibility of the Malaysian government, now is the time when the responsibility should be shared between the government and the society.

Given this need for cooperative measures, if the hotel industry would consider adopting sustainability practices they should adopt sustainability practices. In order to understand how sustainability practices can be best be implemented, the different market segments in the hotel industry must be understood. Some customers demand green hotel operations, which has led to some hotels

moving into green management. It is believed that green management has become directly associated with product quality (Tarí et al., 2010), employee morale (Enz and Siguaw, 1999), customer satisfaction and demand (Manaktola and Jauhari, 2007), the willingness to pay extra for green products (Laroche, Bergeron, and Barbaro-Forleo, 2001) and corporate image (Mensah, 2004; Penny, 2007).

Most of this type of market segment prefers to stay in a hotel that emphasises green practices (Mensah, 2004). Having such practices in the hotel operations impacts on guest satisfaction and guests' intention to return (Berezan et al., 2013; Han and Kim, 2010). Furthermore, a green hotel's overall image can lead to repeat hotel visits (Lee et al., 2010). However, it is found that environmental concern of hotel guests has no relation to their age, education and household income (Han et al., 2011). It is apparent that the concern and consciousness about the environment come from the hotel guests themselves.

Adopting sustainability might involve huge changes in the management, policies and aspects of operations (Revilla et al., 2001). The dramatic adjustment involves financial and operations budgeting. According to Yusof and Jamaludin (2014), there are twelve barriers preventing the lodging business from becoming more sustainable.

- High implementation cost;
- High maintenance cost;
- Lack of green information and practice;
- Lack of green experts;
- Uncertainty of outcome;
- Lack of resources such as manpower and equipment;
- Lack of support from owners and management;
- Lack of government regulations and enforcement;
- Difficulty in balancing the quality of service with environmental performance;
- Lack of consumer support;
- Lack of networking with green suppliers and difficulty in managing and training staff.

In addition to the above findings, to understand more about sustainability adoption in the hotel industry, the managers should know about the potential barriers. Further studies have also provided insights that there are obstacles for hotel operations to be sustainable. Section 2.7 in this chapter discusses further the barriers that have been identified for the Malaysian hotel industry to adopt sustainability practices. Previous studies have concluded that this industry's leaders acknowledge the impacts of the operations but alter practice accordingly (Iwanowski and Rushmore, 1994; Anguera et al., 2000; Pryce, 2001).

The green practices are believed to be meticulous in a process which needs more resources and time (Chan, 2008). As previously stated, hotel operations have been found to have influenced the earth's ecosystem for decades. The effect on the ecosystem has been influenced by daily human activities in the hotel industry. There are several departments found in the hotel operations. These are determined by the star rating and size of the hotel business. To be more precise, some of the hotels consist of more than four departments. Those departments include front office, housekeeping, food and beverage, accounts, sales and marketing and security. It should be noted that each of these departments can have smaller divisions which can operate independently.

While green practices in hotels have been implemented for the past 20 years in European countries, the issue of sustainability only started receiving attention in Malaysia in 1997 (Yusof and Jamaludin, 2013). A study conducted by Yusof and Jamaludin (2013), found that Malaysian hotel operators only adopted sustainable practices in three areas, energy, waste and water. This had also been found to be the case previously by other researchers (Anton et al., 2004; Potokish and Prakash, 2005; Wang, 2012). Most of these practices were found in the room department. It was also revealed that there was less concentration on indoor air quality, sustainable management of the site, renewable energy and rainwater harvesting system in the hotel operations. The numbers of Malaysian's hotels implementing sustainable practices are still low and the figures have not been seen to increase (Tourism Malaysia, 2016). The

sustainable practices were implemented by some of the 5-star rated hotels due to their various operations in their hotels (Bohdanowiz, Zientara and Novotna, 2011; Kasim, 2007, 2009). The basic organisation chart for 5-star rated hotels is shown in Figure 2.7.
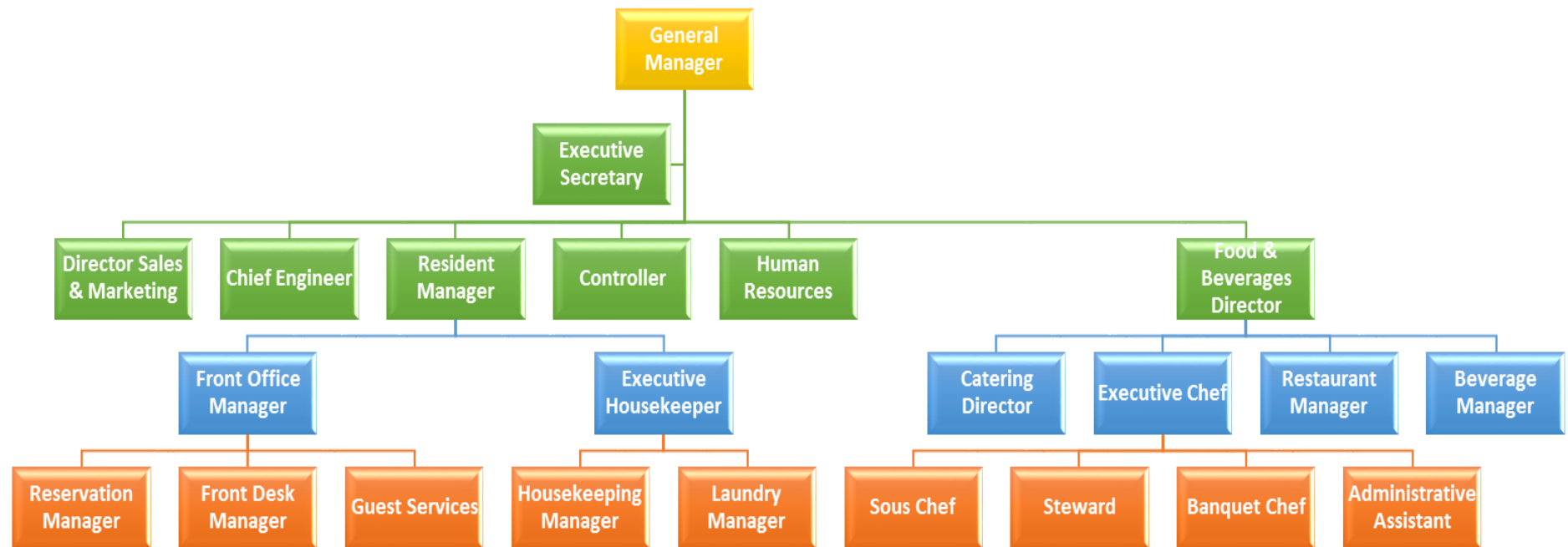
Figure 2.7: Organisation Chart of 5-star rated Hotel (example)
Source: Author

The housekeeping department can also include a room department and have responsibility for the cleanliness of public areas and other areas. The housekeeping department has always been the main focus for hotel operations in terms of implementing green practices. The structure of the housekeeping department is shown in Figure 2.8.
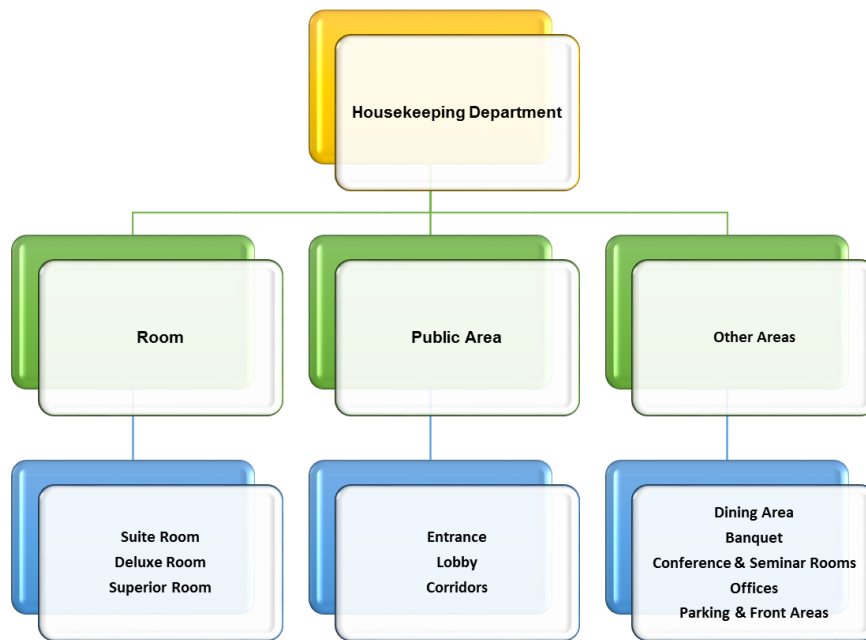
Figure 2.8: Housekeeping Department areas (example)
Source: Author

The hotel room department has been most studied (e.g. Bohdanowicz, Zientara, and Novotna, 2011; Kasim, 2007, 2009) because it contributes to the hotel revenues (Jones and Lockwood, 1998). This is because this division is the main income generator for the hotel operations. Most of the green or sustainability practices have been implemented in this department through the housekeeping department. Unlike other departments in a hotel, this department is seen to be the most crucial department affecting the natural environment (Yusof and Jamaludin, 2013). Guests come and stay at a hotel for a night or for few days. The usage of linen, cleaning detergent, water and electricity can be excessive due to the continuous opening hours this business (Nicholls and Kang, 2012; Buckley, 2012; Jones et al., 2014). Therefore, it is essential for hotels to emphasise sustainability practices in their room department.

As mentioned previously, there are three majors' areas of sustainability practices for hotel room departments: energy management, waste management and water conservation (Middleton and Hawkins, 1993; Shanklin, 1993; Iwanowski and Rushmore, 1994; Mackie, 1994; Forte, 1994; Sloan et al., 2004; Faulk, 2000; Webster, 2000; Bohdanowicz, 2005; Mensah, 2006; Chan, Wong and Lo, 2009; Park, 2009). These practices were popularly adopted by hotels and monitor their operations to reduce the negative impacts of hotel activities towards the eco-system (Mensah, 2006). The most effective sustainability measure in Malaysian hotels seems to be the implementation of key card control systems for lighting in hotel guestrooms (Kasimu et al., 2012). This practice showed saved the more costs and corresponded with findings from previous studies from other countries (Chan and Lam, 2003; Edwards, 2004; Bohdanowicz, 2005; Mensah, 2006; Park, 2009).

Another department in a hotel that has been shown to operate excessively is the food and beverage department. The food and beverage department deals with the purchasing of materials and products, their storage, retrieval, processing and serving (Cavagnaro, 2018, p.274). This department can consist of the restaurant, banquet, beverage, kitchen, room service and steward department. Each activity in this department presents several specific sustainability challenges. For restaurants, some of the hotels have more than two outlets on their premises depending on their star rating. These restaurants can be operated 365 days a year. The operations not only involve the restaurants themselves but also the other departments such as the kitchen, room service and steward department. Consequently, the number of outlets and operating hours contributes to high environmental impacts and possibly affects the local community and the whole nation (Nicholls and Kang, 2012; Buckley, 2012; Jones et al., 2014, Kim et al., 2017).

The impacts arise due to the growth of hotel buildings, the operations and the working schedule of hotel properties. These indirectly contributed to the major impact on the environment caused by food and beverage department (Ismail, Kassim and Zahari, 2010). The food and beverage department should be responsible for the environmental issues (Kasim, 2012; Tan and Yeap, 2012;

Schubert, 2008). Therefore, there is a need for innovative and sustainable management systems to be adopted in hotel restaurants to overcome these problems.

This department would be able to make changes and save the environment by reducing its consumption of solid waste, energy and resources (Kasim, 2012; Tan and Yeap, 2012; Hu et al., 2010; Schubert, 2008). The implementation of sustainable practices in hotel restaurants can be a difficult task. It involves all the stakeholders, such as management, employees, supplies and local community. Notably, there are a number of hotel in Malaysia already practicing eco-friendly practices; therefore, this study will investigate the hotel general managers regarding innovation and, organisational and environmental characteristics towards the adoption of environmental practices in Malaysian Hotel Restaurants (MHRs); evaluate and analyse the importance of sustainable performance indicators applied in MHRs and evaluate the overall sustainability performance of MHRs. Figure 2.9 illustrates the food and beverage division in hotel operations.
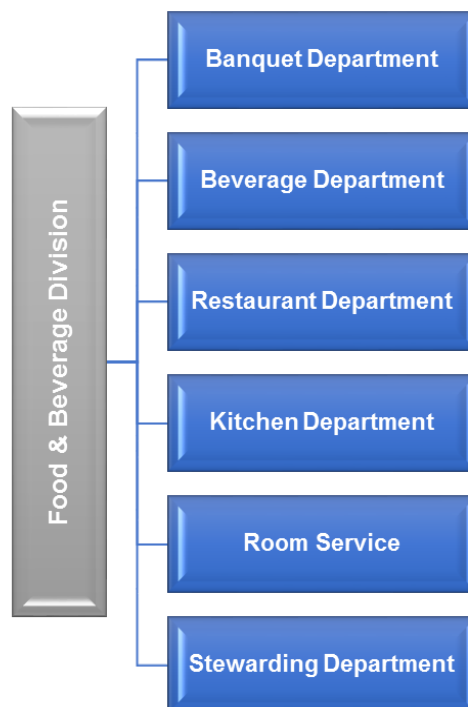
Figure 2.9: Food and beverage division (example)
Source: Author

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2.5   The Demand for Sustainable Restaurant Operations

Restaurants in hotels have been found to play an important role in generating revenue and responding appropriately in meeting customer expectations (Ashton et al., 2010). Furthermore, hotel restaurants can offer a competitive advantage in meeting the needs and desires of hotel guests that result in increased revenue for the hotel and in some cases, increasing the number of customers staying at the hotel (Siguaw and Enz, 1984; Rutherford, 2002). Since 1999, the hotel restaurants have been studied by many researchers (e.g. Kimes, 1999; Hemmington and King, 2000; Heung and Lam, 2003; Choi and Maltida, 2004; Weiss et al., 2005; Liu and Jang, 2009) with much of the research focussed on customer satisfaction regarding service quality and revenue management. Additionally, hotel managers have attempted to understand customer expectations to efficiently cater to their needs wants and desires by offering excellent service quality.

Previously, and before acultural turn towards "consumers" society and an increased popularity of eating out, it was acknowledged that many restaurants were in fact, under-achieving (Market Tracking International, 1998) and therefore unprofitable (Scarpa, 1993). The main reason for this was mainly due to their immediate competitors, such as freestanding commercial restaurants (Market Tracking International, 1998). In 1997, the average number of meals that were served in hotel restaurants' in the UK totalled 16,600 meals per annum, compared to 25,310 meals served in pub restaurants, and 66,120 meals served in fast food restaurants outlets (Market Tracking International, 1998). Noticeably, hotel restaurants have been viewed as a supporting business product given that the primary business of the hotel is lodging (Strate and Rappole, 1997).

Since that time, hotel companies have taken the initiative to address many of the issues described earlier and revived their restaurant business by implementing revenue management strategies (Kimes, 2000). However, some hotel properties have instead downsized or even eliminated their food and beverage operations as a result. Also, there have been newly established hotel

properties situated near to freestanding commercial restaurants, for example, this is a strategy currently employed by the Travelodge and Travel Inn in the UK (Hemmington and King, 2000). Other hotel properties have also developed collaboration strategies with independent restaurants, and making premises available in the hotel through franchising, contracting out or through leasing arrangements (Boone, 1997). Changes in consumer behaviour have compelled businesses to adapt accordingly (Jang and Namkung, 2009).

This has resulted the rise in the demand of quality restaurants in the THI, the food and beverage department outlets such as restaurants have quickly evolved as one the most important outlets for hotel operations. The average occupancy for restaurants also increased in line with increasing room occupancy, despite hotel restaurant dining previously not being seen as a preference for many hotel guests (Hensdill, 1996). Perhaps, this could be due to the efforts of hotel managers to encourage guests to utilise all of the hotel's services and facilities on offer. Additionally, hotels continually pursue marketing and promotional activities, promoting new menus and introducing exotic dishes with á la carte or table d'hôte menus as well as offering buffet meals during weekends and festive occasions. Interestingly, the hotel business has its own market segment as people sometimes relate hotels with being prestigious and luxurious places, and it has become the norm that those who dine in hotel restaurants have high profiles. This hotel restaurant experience can lead to enhanced guest satisfaction and the intention to revisit (Stevens et al., 1995; Kivela et al., 1999; Jang and Namgkung, 2009). Therefore, hotel restaurants are more likely to have repeat visits from both hotel guests and the community in which the hotel is located.

The growth of tourism in Malaysia was no different from other places around the world, and this is believed to have helped increase the number of hotel rooms and restaurant occupancies. Malaysia recorded an increment in tourist arrivals since 2015 and it is predicted that there will be continuous growth in the coming years. Therefore, the sustainability impacts resulting from these two departments should be continuously monitored and measured. Further, due to the impacts resulting from hotel food and beverage departments (Kasim, 2012),

it is timely for hotels to consider adopting sustainability practices, especially in the restaurant department. Currently, it is evident that there are poor environmental practices implemented in restaurant operations (Kasim and Ismail, 2011; Nicholls and Kang, 2012). Indeed, this information is unsurprising as Kamalulariffin et al. (2013) suggested that sustainability practices in Malaysia are still 'blurred' and indeed 'rare', and it is assumed that this issue has not yet become a focal point for many hotel operators. Therefore, the Malaysian hotels could make a significant contribution by adopting sustainable practices throughout the industry to reduce the operational consumption of solid waste, energy and resources (Hu et al., 2010).

Malaysian hotels appear to be aware of environmental issues, but with little update in the implementation of such initiatives (Siti et al., 2011). This is due to limited support systems to help encourage environmentally friendly practices, which in turn, discourages hotels from practising and introducing environmental initiatives even though they are entirely aware of their ecological responsibilities (Kasim, 2005). Further, hotel managers acknowledge the importance of protecting the ecosystem and the impact of their operations but are reluctant to implement sustainable practices (Iwanoski and Rushmore, 1994; Anguera et al., 2000; Pryce, 2001). This is exacerbated by the interest shown by the hotels' stakeholders in urging sustainability practices in hotel operations (Tang, Amran and Goh, 2014).

Nevertheless, it has also been reported that there is limited knowledge on environmental management as most hotels do not extend their present practices to reduce their utility expenses, such as water and energy (Kasim, 2009). Hence, hotel managers are reluctant to change their current practices towards more sustainable operations (Le et al., 2006; Kasim and Ismail, 2012; Cvelbar and Dwyer, 2013). Hotel managers should be familiarised with environmental management practices to help in maximising profit. They should educate about the importance of being sustainable and the benefits garnered when adopting the practices.

Prior research has identified that adopting sustainable practices offers significant benefits to the hotel industry (Perramon et al. 2014) as it can improve hotel competitiveness and overall performance (Le et al., 2006; Kasim and Ismail, 2012; Cvelbar and Dwyer, 2013). To achieve this requires identifying to what extent adopting sustainability practices influences organisation performance. Further, this study also aims to examine the Malaysian perspectives about the performance of adopting said practices. The study of the restaurant business has attracted the attention of researchers investigating both freestanding commercial restaurants and hotel-owned restaurants. For example, regarding freestanding commercial restaurants, Heung and Lam (2003), Weiss et al. (2004) and Liu and Jang (2009) provided several insights. Heung and Lam (2003), suggested that there is a significant relationship between complaints and the socio-demographic profile of visitors, particularly with regard to age groups and the level of education. In another context, Weiss et al. (2004) explored four attributes of restaurant experience; food quality, service quality, atmosphere and novelty, and their influence on the intention to repurchase.

Further, Liu and Jang (2009) found there was a relationship between dining atmospherics, emotional response and perceived value intention in Chinese restaurants in the United States, and that perceived value significantly influences the post-dining behaviour of consumers. The perceived value and the intention to purchase aspects have also been studied in hotel owned restaurants by Ashton et al., (2010). This study indicates that three key variables positively contribute towards the intention to purchase (ITP); perceived brand image, perceived quality and perceived sacrifice (both monetary and non-monetary price). Their study also extends further by highlighting the relationship between perceived brand fit and the ITP (Ashton et al. 2011). The study has discovered that the components of brand fit siginificantly influence the intention to purchase.

Several studies have examined the adoption of sustainability practices and measures in the freestanding commercial restaurants (DiPietro, Chao and Partlow, 2013; Tan and Yeap, 2012; Tseng, 2010; Jeong and Jang, 2010). The

lessons learned by such studies could provide an example for hotel managers to adopt sustainability practices in hotel owned restaurant settings. In a study by Chou et al. (2012), they propose an integrated model that combines the theory of planned behaviour (TPB) and innovation theory to investigate the attitudinal and behavioural decision factors on adopting green practices in the restaurant industry in Taiwan. The results of the study indicated that attitude and perceived behavioural control have a positive effect on behavioural intention while social influence was found to be insignificant. Wang (2012) also investigated the importance and the impact of green practices in restaurants. Likewise, the findings also discovered that customers valued satisfactory levels of service in a restaurant.

Consumers nowadays, seem to be more anxious regarding environmental issues and found to be more particular in this regard when purchasing products and services that are environmentally friendly (Han, Hsu, and Sheu, 2011). This is due to the current trends in consumer market (Chan, 2011; D' Souza and Taghian, 2005; Ottman, 1992). There is growing evidence to suggest that consumers are choosing products or avoiding other products based on their impact on the eco-system (Mohr and Webb, 2005; Tilikidou, 2007). Other studies have additionally shown that consumers not only choose to consume products that are environmentally unsafe but are also willing to pay extra to procure these products (Laroche, Bergeron, and Barbaro-Forteo, 2002; Coddingtoon and Florain, 1993; Ottman, 1992). Thus, many commercial restaurants have started introducing initiatives to adopt green practices to cater for this segment of the market (Namkung and Jang, 2014; King, 2012; Plautz, 2010; Wong, 2010). Also, these green restaurants focus on providing products and services that satisfy customer needs and help reduce damage to the environment. By doing so, it is believed that their business image and reputation can be further promoted to attain operational objectives and in the longer term, will contribute towards improving customer loyalty (Ryu, Han, and Kim, 2008).

A similar result regarding customer loyalty and green practices was also highlighted in the study conducted by Jeong and Jang (2010). The study indicated that customers' perception of green practices has a positive

relationship with the green image of the restaurant and customer behavioural intentions regarding the restaurant. A separate study by Lita et al., (2014) investigated the relationship between attitudes, image, the intention to visit and the willingness to pay more for environmentally friendly services in hotels and restaurants in Indonesia. Accordingly, these findings are also supported by the study of Hsin et al., (2010), where it was reported that the consumers' knowledge of environmental concerns and green practices were a strong influence on the customers' intention to patronise green restaurants.

2.6   Sustainability Performance in Hotel Industry

Separate study by Yang et al. (2011) defines environmental and sustainability performance as the degree to which an organisation enhances its performance towards globally sustainable development responsibilities. To this end, the hotel industry should introduce a Performance Measurement System (PMS) for hotels when adopting sustainability practices in order to measure sustainability performance. Such a system would be extremely useful for hotel managers and operators to measure and assess the environmental performance of their restaurant operations (Labuschange et al., 2005).

Hotel operators who proactively pursue sustainable practices in their operations could likewise benefit from using a PMS (Molina-Azorin et al., 2009). Indeed, the most common actions undertaken to date have been related to energy usage and resource consumption, waste management, and environmental protection programme (Kirk, 1995; Ce´ spedes-Lorente, Burgos-Jime´nez and A´ lvarez-Gil, 2003; Bohdanowicz, 2006; Erdogan and Baris, 2007; Mensha, 2006; Scanlon, 2007; Garcı´a Rodrı´guez and Armas Cruz, 2007;). These practices, therefore, offer significant benefits and advantages towards the competitiveness of hotels (Briassoulis, 2002; Mihalic, 2000).

As described in the aforementioned, adopting sustainability practices in the restaurant of a hotel is considered to be innovative process, transitioning the former (more traditional) operations into more environmentally friendly

practices. Yet hotel restaurants are not always responding to those needs. To help hotel restaurants meet these needs, four main categories of innovation in hotel operations have been developed by Orfila-Sintes and Mattsson (2009); management; external communication, service scope and back-office. The adoption of sustainability practices in hotel restaurants can be considered to fall under all four of these categories. Incorporating sustainable practices in the whole system of a hotel restaurant enhances the performance and competitiveness, while transitioning the business to more eco-friendly operation. Sustainability practices need to involve all the relevant stakeholders, including the hotel management, service operations, suppliers as well as the employees. Therefore, one of the objectives for this study is to evaluate how innovation could influence the decision to adopt sustainability practices in MHRs.

The adoption of such practices is a relatively new concept for MHRs, as there are only few hotels in Malaysia certified as green hotels, and hence requires innovative thinking. However, there is no agreement or consensus in 'innovation' literature on how to define success (Craig and Hart, 1992; Johne and Storey, 1998; Hjalager, 2010). This is because organisational innovation is related to resource sufficiency, innovative belief, and willingness to accept risks (Wan et al., 2005). The achievement of innovation is rarely measured using a single factor but rather, is measured through a number of characteristics (Storey and Easingwood, 1998). For example, direct benefits such as sales revenue, profitability, and market share (Griffin and Page, 1993; Montoya-Weiss and Calantone, 1994) and service innovations were identified as leading towards several ancillary benefits such as improved image, enhanced customer loyalty, and the ability to attract new customers (Storey and Easingwood), 1999). Through the adoption of sustainability practices, the aim of this study can be achieved as it improves overall competitiveness and performance of MHRs.

Furthermore, there is limited information in the literature to suggest how innovation could contribute to the hotel's operational performance (Hjalager, 2010). Therefore, this study will contribute towards the topic of innovation in hotel operations specifically in MHRs. This study also contributes through the evaluation of the extent to which the adoption of sustainability practices in

MHRs will improve the performance and operation of an organisation. Most studies investigating innovation have focussed on the application of innovative technology in the manufacturing industry rather than the hospitality industry (Drejer, 2004; Evangelista and Sirili, 1998; Salavou, 2002; Schiavone, 2011; Vries, 2006). Interestingly, it was found that innovation and its performance may vary between countries (Mairesse and Mohnen, 2010). Firms considering adopting innovation in their operations should allow enough time for it to become effective, as it could have an indirect or untimely impact (Hipp et al., 2000; Mairesse and Mohnen, 2010). This study will use the theory of innovation in an entirely new context, as no studies have applied this theory to the adoption of sustainable practices in Malaysian Hotel Restaurants (MHRs). This will provide new insights both into the theory and the context to which it is applied.

Nicholls and Kang (2012) reported that hotels adopting sustainability practices in their operation achieved optimum performance. For instance, adopting sustainability practices improved hotel image and relationships with the local community, provided a marketing advantage over competitors, increased profitability, and improved customer and employee satisfaction. Therefore, the adoption of sustainability practices in hotel restaurants could help to improve the attitude of customers regarding the hotel's operations by improving the image of the hotel, thereby contributing to increased customer revisit intentions and loyalty (Anisimova, 2007; Barone et al., 2000; Brown and Dacin, 1997; Cornwell and Coote, 2005; McDonald and Rundle-Thiele, 2008; Nan and Heo, 2007; Salmones et al., 2005; Sen et al., 2006). Furthermore, a strong commitment to green practices on the part of hotels conveys a positive image to their stakeholders (Montegomery and Ramus, 2003). According to Sheldon and Park (2011), highlighting environmental practices in business could help to increase the reputation and brand image, shaping the firm's traditions, values and business strategies, and supporting employee recruitment and retention.

Notwithstanding, it is further believed that adopting sustainability practices in hotel restaurants improves the relationship of the hotel with the surrounding community, improves customer relations and the relationship with hotel

employees (Cvelbar and Dwyer, 2013). Interestingly, hotels adopting eco-friendly practices are often found to enhance and improve the quality of life in local communities and the wellbeing of their employees (Bohdanowicz and Zientara, 2009). The relationship of the hotel with local communities could also be improved by the hotel's co-operation with the municipality and residents. The residents would be happy and satisfied if hotels considered and incorporated social aspects into their sustainability practices. Nevertheless, less sustainability practices in Malaysia hotel industry is due to slow demand and limited pressure from surrounding communities (Kasim and Ismail, 2012, Kamalulariffin et al., 2013; Yusof and Jamaludin, 2014). If communities, as well as other stakeholders, are educated about the importance of sustainability, there will definitely be an increase of green practice in Malaysia business operations. Therefore, in order to build the knowledge of evidence that can then be disseminated to communities and stakeholders, the sustainability model highlited in Section 1.4 will provide a clear pathway for MHRs to implement sustainability practices, which can provide the public with a means of understanding the environmental impact of different business.

There is a strong correlation between adopting sustainability and increased profitability in business operations (Aragon-Correa et al., 2008; Bird et al., 2007; Bragdon and Marlin, 1972; Grave and Waddock, 1994; Hart and Ahuja, 1996; Nicolau, 2008; Orlitzky et al., 2003; Pava and Krusz, 1996; Preston and O'Bannon, 1997; Russo and Fouts, 1997; Studivant and Ginter, 1997; Waddock and Grave, 1997). Additionally, there appears to be a strong argument among some researchers regarding the relationship between environmental practices and financial performance (Abbott and Monsen, 1979; Alexander and Buchholz, 1978; Aupperle et al., 1985; Teoh et al., 1999). The argument exists due to there being many confounding factors for researchers to examine when assessing the specific impacts of eco-friendly practices in hotels.

The argument surrounding these impacts was put aside when the findings of Garcia and Armas (2007) revealed the possibility of a positive relationship between hotel environmental practices and return on assets (ROA). For example, the restaurant profit earned based on the RevPASH (Revenue per

Available Seat Hour) increased (Kimes, 2000). In this case, when the restaurant seat occupancy increased, the average taking of the cheques also increased. This reflected financial performance in the restaurant business (Cvelbar and Dwyer, 2013). The occupancy rate and energy consumption were also determined to have a strong relationship (Del Monaco, 2000; Önüt and Soner, 2006). Therefore, applying sustainability practices in business operations can provide additional value to hotels and customers' satisfaction (Nicolau, 2008).

The majority of satisfied customers are expected to revisit the hotel (Nicolau, 2008). If customers are concerned about environmental issues, there will be a significant percentage of customers having a preference for green hotels. Indeed, the customer's intention to return to a particular hotel brand is usually linked with loyalty (Clemes et al., 2009; Gracia et al., 2011; Kim et al., 2008; Lee and Back, 2010). Customer loyalty has been defined as *"the likelihood of a customer's returning to a hotel and that person's willingness to behave as a partner to the organisation"* (Shoemaker and Lewis, 1999, p.349). Therefore, customer loyalty is associated with satisfaction, which results from a positive response resulting from the overall service experience of the customer (Oliver, 1981) and is one performance indicator when adopting sustainability practices in hotel restaurants.

A study by Bruns-Smith et al. (2015) discovered contradictory findings concerning the relationship between customer satisfaction and the adoption of sustainability practices in hotel operations. Sustainability practices do not necessarily result in the satisfaction of a guest as compared to more traditional drivers for satisfaction such as the room, facilities and food and beverage quality. Guest satisfaction instead resulted from the quality of service received from the hotel. Whether the hotel did or did not adopt sustainable practices it did not significantly influence the guest satisfaction. Even so, this finding should not be seen as a barrier for hotel restaurants in adopting sustainability practices in their operations. A separate study by Namkung and Jang (2017) showed that there are customers who are likely to spend more for sustainable practices in a restaurant. Therefore, the hotel industry should be acutely aware of this

information and the need to focus on market demands driven by customer needs.

Adopting sustainability practices in hotel restaurants affects employee satisfaction (Chan and Hawkins, 2010; Umweltbundesamt, 2000; Rondinelli and Vastag, 2000; Harrington and Knight, 1999). The decision to implement this environmental friendly must consider employee involvement. Notably, the employees are the people who will provide and perform the services and carry out the operations for hotel guests. Employees should be trained and equipped with the latest skills and knowledge especially during the implementation of changing work practices and procedures brought about by the adoption of sustainability practices. Some studies have revealed that employee job satisfaction is enhanced when organisations make environmental practices a priority (Harvey et al., 2010). Employees will have positive intentions to implement the sustainable practices if they are triggered to do so (Chan et al., 2014). Indirectly, the employee involvement in sustainability practices contributes to the hotel performance (Miles and Covin, 2000).

Another factor that sustainability practices can affect is competitive advantage. Hotel sustainability practices were found to positively contribute towards competitive advantage and hotel performance (Cohen et al., 1995; Greeno and Robinson, 1992). Indeed, these contributions can be attained through competitive cost advantages and by being environmentally and socially responsible (Cvelbar and Dwyer, 2013), by reducing resource costs and water and energy consumption (Chan, 2005; Chan and Lam, 2003). Further, the implementation of sustainability practices can help to differentiate products and services in the industry. According to the World Tourism Organisation (WTO) (1998), the perceptions of guests regarding the quality of service provided in hotels are influenced by operational environmental practices. If hotels are serious about implementing sustainability practices, especially in restaurants, it may help to shape the perceptions of guests positively and in turn, increase the level of customer satisfaction (Chan and Wong, 2006; Kirk, 1998).

The level of customer satisfaction can be assessed through environmental performance indicators (EPI). EPI have been adopted by hotel operators to evaluate activities, processes, equipment and services (Carlson, 2002). Most studies in the area do not highlight any dissimilarity between environmental management and environmental performance (Buckley and Araujo, 1997; De Burgos-Jimenez et al., 2002; Feldman, Soyka, and Ameer, 1996; Walls, Phan and Berrone, 2012). Hence, environmental management activities could be utilised as a possible indicators to measure environmental performance (James, 1994; De Burgos-Jimenez, 2002). The impacts towards the environment can be reduced or controlled through environmental management activities.

However, to measure environmental performance, environmental education programme need to be introduced as one of the important indicators (Buckley and Araujo, 1997; Erdogan and Tosun, 2009; Rivera and de Leon, 2004, 2005). The engagement of hotel guests and employees in the context of restaurant operations would also be a useful indicator in assessing how well the practices have been implemented and are performing. Further, hotel guests and staff need to be well educated regarding sustainability, climate change and more importantly, about the hotel's environmental activities, policies and plans. Indeed, it is found in the sustainability literature that the participation of hotel employees has positively influenced most of the successes associated with hotel restaurant sustainability practices' (Ajzen, 1991; Han and Ryu, 2006; Oliver, 1997; Chan et al., 2014).

Notwithstanding, educating and influencing the behaviour of hotel guests has been recognised as one of the important aspects for measuring hotel environmental performance (Leslie, 2007). According to Barber and Deale (2014), individuals are more concerned about the wellbeing of others and interested in the pursuit of products and services that have high emotional and environmental benefits. However, it is also found that guests will volunteer to participate in green programme when invited, even though their main priority is to visit and stay in the hotel (Bruns-Smith et al., 2015). Therefore, hotel managers could help guests to respond to the hotel's stewardship and sponsorship of the environment by engaging in sustainable consumerism.

In fact, hotels can offer incentives to the local community to engage in sustainability and green practices (Mensah and Blankson, 2013), and even develop a joint environmental plan to improve community welfare through adopting environmental programme (Lee and Park, 2009): for example, purchasing produce and other consumable products from local businesses for hotel and restaurant use (Eber, 1992).

Importantly, sustainability performance can also be achieved through conservation certifications. Conservation projects could be identified and executed to explore cost savings, waste management, recycling and energy and water conservation (Mensah and Oduro, 2007; Withiam, 1995). Most hotel organisations globally are now adopting certification and accreditation schemes such as ISO 1400, ISO 14004, which are adapted to improve resource-use efficiency, reduce operating costs, increase staff involvement and guest awareness and to gain international recognition in the THI (Meade and Pringle, 2001).

2.7   Barriers to Adoption

While the previous section explored the sustainability performance in hotel industry, the next step is to examine what are the barriers in adopting sustainability practices. Recent studies argue that adopting sustainability practices is challenging given the many barriers to implementing eco-friendly practices, especially in Malaysian hotel operations (Kasim and Ismail, 2012; Vikneswaran Nair et al., 2012; Kamalulariffin et al., 2013; Yusof and Jamaludin, 2014). Table 2.1 provides a summary of the potential barriers towards adopting sustainability practices in the hotel industry.

Table 2.1: Barriers to Sustainability Adoption in the Hotel Industry.

Barriers	Study
• Archaic governmental environmental laws and regulations and deficient enforcement • Lack of diverse and competitively priced organic products • No trade pressures • Lack of societal demand	Kasim and Ismail (2012)
• High maintenance and implementation costs • Lack of sufficient knowledge of green practices • Lack of resources • Lack of momentum from hotel owners • Lack of a sense of urgency and ambiguity of environmental guidelines • Lack of qualified verifiers • Conflict guidance • Lack of government regulation and enforcement • Difficulties in operating a green hotel	Vikneswaran Nair et al., (2012)
• Regulation and government • Customer demand • Level of competition • Greenest at the organisational level • Attitude towards change	Kamalulariffin et al., (2013)
• Lack of green experts • Lack of resources • Difficulty in balancing quality of service with environmental performance • High implementation and maintenance costs • Lack of government support	Yusof and Jamaludin (2014)

For instance, outdated government environmental laws and enforcement are seen as one of the principal barriers towards the adoption of these practices in hotel operations. Further, there is a deficiency regarding the number of restrictions imposed by the government towards implementing sustainable practices in the Malaysia tourism industry. Notably, this barrier has been found in a study by Al-Shourah (2007). Kasim and Ismail highlight further obstacles such as the lack of diverse and competitively priced organic products, lack of trade pressure and the lack of societal demand which are external factors that lead to the slow adoption of sustainability practices in the hotel industry (Gunningham et al., 2004).

Furthermore, Vikneswaran Nair et al. (2012) and Yusof and Jamaludin (2014) identified additional barriers which were not only considered as external factors but within the context of the organisation (Gunningham et al., 2004). For instance, high maintenance and implementation costs were one of the major considerations (and barriers) in adopting sustainability practices. Small hotel organisations were not actively implementing these practices because they did not consider the environment to be as important as the number of costs involved in moving from their current practices (Florida, Atlas, and Cline, 1999). Notably, a sizeable budget is required for the hotel to adopt changes across their entire operations (Kasim and Ismail, 2012). Many hotels are aware of the benefits to be gained by adopting environmentally friendly practices but need to acquire the necessary funding and prefer to monitor the changes before committing to the implementation of such practices (Garcia and Adam, 2007).

Surprisingly, management attitude was found to be one of the barriers in adopting sustainability practices in hotel operations (Vikneswaran Nair et al., 2012; Kamalulariffin et al., 2013). Knowing to what extent the hotel operation harms the environment should undoubtedly increase the level of awareness and understanding of the issues among hotel operators and management (e.g. El Dief and Font, 2010; Nicholls and Kang, 2012; Hu et al., 2012; Kasim and Ismail, 2012; Kim et al., 2017). This would assist in driving a greater sense of urgency towards minimising the potential impact of hotel operations on the environment (Kim et al., 2017; Kucukusta et al., 2013; Hyatt, 2010; Luck and Bowcott, 2009; Goeldner and Brent Ritchie, 2006). Therefore, the impetus to adopt sustainability practices can be seen as an alarm call to all hotel operators, especially in Malaysia to consider the adoption of eco-friendly sustainability practices in their operations.

Previous studies undertaken in Malaysia identified that there is indeed a lack the lack of green specialists or experts in this field (Yusof and Jamaludin, 2014). Sustainability issues have started to attract attention from the hotel industry, with ten Malaysian hotels, as mentioned previously, certified as a green hotel (Tourism Malaysian, 2015). However, expertise is needed to help the hospitality

industry evaluate the activities, processes, equipment and services to support sustainable practices (Carlson, 2002).

The lack of both customer and societal demand regarding eco-friendly practices is also a further barrier towards the adoption of these practices (Kasim and Ismail, 2012; Kamalulariffin et al., 2013). The lack of pressure from customers and the community has also contributed to the slow update of these practices in Malaysia. These findings however, contradict previous studies identifying that stakeholders including customers play a significant role in influencing sustainability practices in hotel operations (Rahman et al., 2012; Bohdanowicz, 2005) as they prefer to spend the night in a green-certified hotel (Rahman et al., 2014b; Han and Kim, 2010; Han et al., 2011). Stakeholders can play an important role by taking greater responsibility for protecting the environment in conjunction with hotel operators (Davies et al., 2011; Coy et al., 2013; Rahman and Reynolds, 2016). The community and society at large were found to be a strong influencer for customers in choosing environmentally friendly services and products (Gunningham et al., 2004).

Based on the previous discussion and literature review, the author is of the view that no study has been undertaken on the intention to adopt sustainability practices or green initiatives in hotel restaurants in Malaysia. Furthermore, there is a research gap in this area from a broader perspective. The adoption of sustainability practices in hotel restaurants is one way towards introducing innovation into hotel business operations. Therefore, hotel managers need to pay close attention and consider adopting sustainable practices in hotel restaurants that can positively drive and influence performance.

2.8 Summary

The primary focus of the discussion in this chapter is centred on sustainability in the context of the THI industry. This study is adopting the definition of the sustainability practices by Kim et al., (2017) that explains *"A value-added business strategy that benefits a hospitality operation that engages in environmental protection initiatives."* Importantly, the hospitality industry must recognise the significance of their operations and the impact on the surrounding community and environment.

An overview of the Malaysian hotel industry given its importance in the context of this study is presented adding useful statistics and insight into the adoption of sustainability practices of hotels in Malaysia. The sustainability issue only started to receive attention from the Malaysian hotel industry from 1997 whereas awareness of this issue in European countries started 20 years earlier. Malaysian hotel operates, when sustainability practices have been implanted; tend to focus on three basic areas: waste management, water and energy saving. The figures of Malaysian hotels in adopting sustainable practices are still minimal and there are only ten hotels have been certified as green hotels as of 2016. The recent expansion of the hotel industry in Malaysia has led to the need for hotel restaurants to adopt sustainable practices. Malaysian hotel restaurants need to consider adopting sustainable practices that can positively drive and influence performance. Adopting the practices is one way towards introducing innovation into hotel business operations in Malaysia.

The following chapter discusses the innovation and adoption theories and explains the implication of the literature findings for the present study.

Chapter 3

3.1 Innovation and Hotel Industry

Economic growth and development have increasingly led towards businesses becoming more innovative (Huybers and Bennett, 2000). To this end, neither the tourism nor the hospitality industry (THI) will want to miss out on this opportunity to create value-added services via adopting an innovation. In fact, the THI strongly believes that innovative activities will enhance the competitiveness of business and subsequently increase profitability (Martinez-Ros and Orfila-Sintes, 2009). Gatignon et al. (2002) however, argued that there are a number of differences in each business process and innovation results from various factors which should not be considered as problems but rather as opportunities. For example, innovation in the services and manufacturing sectors is different (Damanpour, 1996; Amable and Palombarini).

Innovation in hotels is known to be more economically weighted due to its homogeneity (Martinez-Ros and Orfila-Sintes, 2009). Offering mainly services as products to customers has influenced the hotel business to consider at what stage innovation should be applied. As stated by Gallouj and Weinstein (1997) two types of innovation should be understood by hotels, namely radical and incremental innovation. Gallouj and Weinstein (1997) identified innovation in hotels as occuring if there is a need to add to existing features (incrementally) or to adopt new features (radically). Adopting sustainability practices in MHRs could apply to either one or both and will depend on how extensive the innovation that the hotel operation requires is. As described by Hjalager (2002), innovation in the hotel sector involves technological improvements in all departments and in delivering services, especially in control processes. Most innovation occurs in order to sustain and improve the operational efficiency of the hotel. For example, Ottenbacher and Gnoth (2005), Jones (1996) and Orfila-Sintes and Crespi-Cladera and Martinez-Ros (2005) identified that innovation involves management, external communications, service scope and

the back-office of hotel operations. Innovation in these aspects is getting a great deal of attention from hotels with a high star rating compared to low-rated hotels. More resources and strong financial support enable them to apply innovation on a bigger scale. Low-rated hotels try to be half innovation and adjust some part of the operations.

According to Orfila-Sintes and Mattsson (2009), there are three determinants as to why hotels introduce innovation into their operations: (1) service provider capabilities, using physical assets and additional services to create the added value, (2) customer aptitude and getting customers to actively participate in a way which enhances their service experience, and (3) market drivers, in order to be more competitive in the market. Therefore, considering these determinants, two key factors should be taken into account when exercising innovation in business operations; the management and the skills of the human resources. Changes in current operations to more innovative operations would require some adjustment and transition that needs attention from the management. Some training is also needed for the staff to be able to perform the task. Therefore, McAdam et al. (2004) suggest that businesses should have a proper plan to undertake innovation by introducing it carefully within the organisational structure, leadership and human resources. This is to avoid short-term fixes and address the underlying cultural barriers to innovation where both time and work pressure influence innovation activities (Wong and Pang, 2003). Therefore, there is a need to perform training if innovation is to be considered as part of the operations within a business (Peter and Buhalis, 2004).

Adopting innovation directly into the operations of a hotel will influence the service quality and performance of the business (Lin, 2013). It affects firms' performance direct and indirectly where service quality is the mediating role. Additionally, innovation is cost-reductive; and requires the assessment of the service quality. Notwithstanding, the firm performance will have a positive effect on the image and reputation of the company in this case the hotel, (Jacob, 2003), performance (Agarwal et al., 2003; Orfila- Sintes and Mattsson, 2007; Mattsson and Orfila-Sintes, 2009; Tajeddini, 2009) and will also influence

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customer satisfaction regarding the services provided (Jacob et al., 2003). On the other hand, Pikkemaat and Peters (2005) strongly contended that there is no statistically significant relationship between innovation activity and the satisfaction of hotel managers' regarding the level of profitability received in executing innovation activities. Therefore, as previously argued, managers need to be made aware of the impact of innovation on performance as not all innovation activities will provide a direct and positive outcome (Hipp et al., 2000; Mairesse and Mohnen, 2010). McAdam et al. (2004) argued that innovation should be properly planned and introduced to minimise negative outcomes.

3.2   Types of Innovation in the Hotel Industry

It was known that hotel industry was a homogeneous industry that provides an important part of the tourism services (Borooah, 1999). Innovation is the key lever for the hotel industry to stay competitive and a better understanding of innovation and its effect on performance should be studied (Ottenbacher and Gnoth, 2005). A model depicting hotel innovation behaviour was initially introduced and developed by Orfila-Sintes and Mattsson (2009). From a sample of hotels in the Balearic Islands (near the eastern coast of the Iberian Peninsula), they verified the model which later identified four types of innovations that exist in the hotel industry, namely; 1) management, 2) external communication, 3) service scope and 4) back-office to the key determinants: service provider characteristics, customer competences and the market drivers (Ottenbacher and Gnoth, 2005; OECD, 1997; Harrington, 2004). The model also verified the managers are able to measure the links between their innovation decisions and the expected performance effect based on the industry as a whole.

3.2.1 Management

Innovation in management occurs when there is a need to enhance the quality of management implement new technology within the business or to improve the structure of the organisation. Innovation in management includes new ways of planning, leading, organising and controlling the organisation (Ottenbacher

and Gnoth, 2005) and it is extremely challenging to solve management issues through organisational innovation (Wright and Mechling, 2002; Choi, Poon and Davis, 2008). Many of these issues are associated with managerial competencies, comprising of product and group management skills and the learning culture which is critical for innovation to be effective and successful (Enz and Siguaw, 2003; Kumar, Kumar, and Grosbois, 2008). The innovation in management is influenced by hotel managers' attitude towards change (Siguaw, 2003). An attitude towards innovative management establishes leadership behaviour (Damanpour and Schneider, 2006) and could influence the manager work performance (Chih, Yang and Chang, 2002). However, firm performance can be enhanced if the manager is willing to accept the innovation in management (Harrington, 2004).

3.2.2 External Communication

Innovation in external communications has been known to have a significant influence on the hotel industry, especially in terms of service products and processes. In this case, innovation aims to accelerate the efficiency, productivity and flow of services and products. Information and communication technology (ICT) has been the largest influencer in the application of innovation and, which has caught the interest and attention of many researchers (Buhalis and Law, 2008). ICT enables "traditional" services to be integrated into new and existing "services" thereby increasing the competitiveness of hotels (Saleh and Ryan, 1992). Furthermore, the application of ICT (e.g., the Internet) is an extremely relevant innovation where it assists the management relationships with customer through information exchange. For example, it helps the customer to access hotel information and to make reservations online without the need to visit the hotel or make a phone call. Thus, the innovation can increase hotel's competitiveness if it improves the efficiency in building relationships between the hotel and its stakeholders (Camison, 2000). However, Calveras and Orfila-Sintes (2008) argued that booking through hotel operators and agents still appears to be important even though ICT has made the ability to book online easier. Some customers still prefer the counter service and want the service to be delivered directly.

3.2.3 Service Scope

Service scope innovation has been applied to improve hotel services that are familiar to the customer and simultaneously add value to the products and services on offer. Many authors reach the conclusion that most of the innovations in tourism are technological (Poon, 1988; Hjalager, 2002; Orfila-Sintes et al., 2005; Victorino et al., 2005; Sundbo et al., 2007; Orfila-Sintes and Mattsson, 2009; Hjalager, 2010; Aldebert et al., 2011; Lopez-Fernandez et al., 2011; Meneses and Teixeira, 2011). The most prominent innovation in service scope is in the application of automatic check-in systems, which are known to save time and provide significant advantages to both the customer and hotel staff. Service scope innovation is very important in order to enhance the hotel's ability to stay competitive (Saleh and Ryan, 1992) and is often combined with service delivery technology to maximise the delivery and quality of services to the customer (Conlon et al., 2004). Notably, technical developments have also led to service scope becoming more complicated, and therefore more knowledge and resources are required to innovate in this area (Mattsson and Orfila-Sintes, 2014). Thus, training should focus on the core service and back-office operations and not involve too many objectives. For example, previous hotel innovation studies were concerned with Internet access, nowadays a rather basic service.

3.2.4 Back-office

The integration of technology is needed in back-office innovation in order to enhance the efficiency of delivering services to customers (Ngai and Wat, 2003; Sheldon, 1983). However, Jones (1996) contends that some of the new technology products in the hospitality industry have implications for service delivery. Therefore, modifications or changes in back-office operations are needed to ensure service delivery processes are aligned. Innovation in back-office operations could improve work processes, productivity, profitability and customer satisfaction. However, technologies were not always found to be fully accepted if barriers relating to human factors were overlooked (e.g., Ross et al., 1996; Lee and Miller, 1999; Roepke et al., 2000; Hassan, 2003). The barriers are employees' willingness and, ability and managers' support.

3.3   Adoption Theories in Hotel

There are many adoption theories used in the tourism and hospitality context. Among these, the Theory of Planned Behaviour (TPB) by Ajzen (1991), the theory of Reasoned Action (TRA) by Ajzen and Fishbein (1980), and the Diffusion of Innovation Theory by Rogers (1962) have been widely adopted.

3.3.1 Theory of Planned Behaviour (TPB)

TPB was first introduced and developed by Ajzen (1985) to investigate the behaviour of people and is an extension to the Theory of Reasoned Action (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). Notably, since 1991, the theory has been widely adopted; and since its introduction, TPB has been the most cited theory and is presently used in many academic disciplines (Ajzen, 2011, pp113).

According to the TPB (Ajzen, 1985, 1991), personal behaviour relies on individual behavioural intention (BI), which is influenced by three elements, namely attitude towards the behaviour (AT), the subjective norm (SN) and the perceived behavioural control (PBC). AT is associated with the willingness (feelings) to perform a behaviour, whereas SN is associated with approving OF a particular behaviour. PBC is associated with the restriction to receive within the internal and external environment to perform behaviour. Accordingly, a positive attitude will increase the pressure experienced through societal impacts thereby increasing control over one's behaviour which will lead to increasing an individual's behavioural intention. Figure 3.1 illustrates the TPB model.
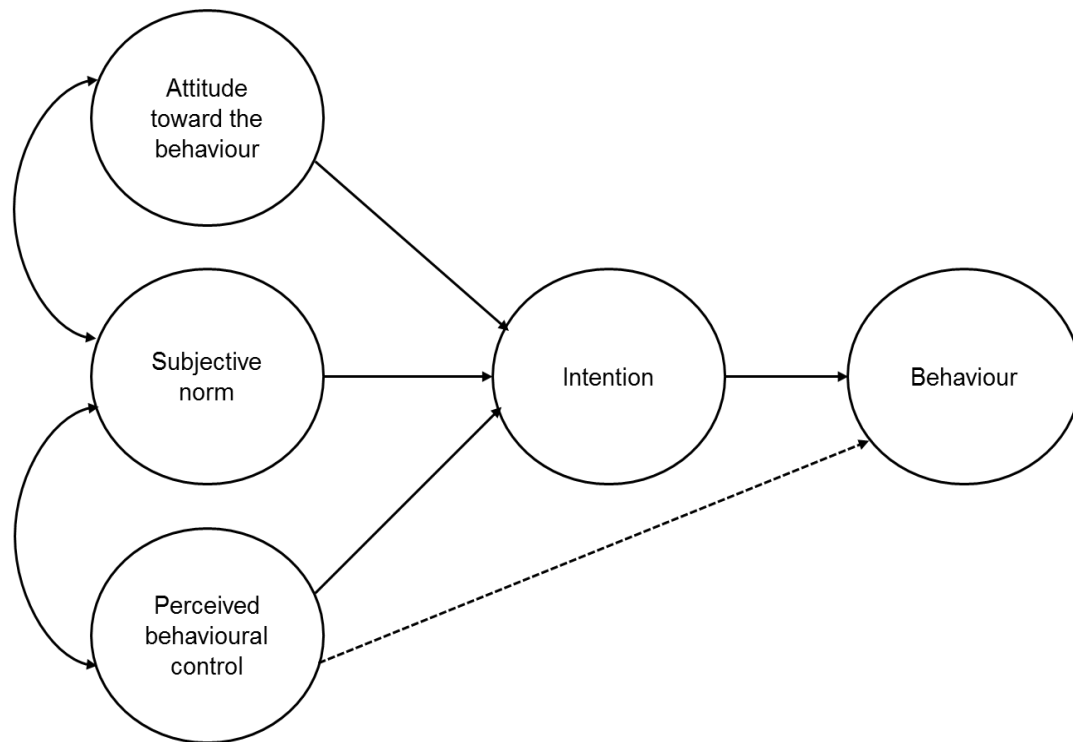
Figure 3.1 Theory of Planned Behaviour Model
Source: Ajzen (1991)

TPB is widely used in the THI to study various aspects of tourist and consumer attitudes and beliefs (e.g., Brown et al., 2010; Han et al., 2010; Han and Kim, 2010; Lam and Hsu, 2006; Parra-Lopez et al., 2007; Pilling et al., 2006; York et al., 2009). However, this theory is used to identify individual behaviour and therefore its application is unsuitable in the context and study of attitudes and beliefs (Boldero, 1995; Bissonnetter and Contento, 2001). TPB has been applied to understand individuals' acceptance, usage and adoption of many technologies (Ajzen, 1991). Previous studies have also used TPB to measure the attitudes and behaviours of managers towards aspects of environmental management (Cordano and Frieze, 2000; Montalvo, 2008). However, it was argued that the perceived behavioural control variable was negatively rather than positively predictive of behavioural preferences for environmental management activities.

Moreover, Chou, Chen and Wang (2012) used TPB to observe the intention to conduct green practices in commercial restaurants. Notably, commercial restaurants do not have complicated organisational structures compared to

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hotel-owned restaurants. Therefore, considering the entire operations and the other aspects associated with the structure of a hotel, this theory is expected to provide a partial understanding of the reasons why sustainability practices are adopted. In hotel operations context, TPB will focus on individual behaviour and applying the model at the organisational levels, such as not including any of the organisational factors.

The main consideration for not adopting the TPB in the context of this study is because some of the theory's propositions exclusively focus on rational reasoning, excluding unconscious influences on behaviour (Sheeran, Gollwitze and Bargh, 2013) and the role of emotions beyond anticipated affective outcomes (Conner, Gaston, Sheeran, and Germain, 2013). Therefore, TPB was identified as "falsely patterned" (Sniehotta et al., 2014). Furthermore, it was argued that TPB has been known as "an empty gesture to tick the box as science should be theory-based" (pp4) and, consequently, does not provide a plausible outcome. It does not help to understand the evidenced effects of behaviour on cognitions and future behaviour (McEachan et al., 2011; Sutton, 1994).

3.3.2 Theory of Reasoned Action (TRA)

Besides TPB, the Theory of Reasoned Action (TRA) by Ajzen and Fishbein (1980) is extensively used to predict behavioural intentions and/or behaviour in the discipline of social psychology (Corner et al., 2001; Buttle and Bok, 1996), and provides explanations of various social behaviour (e.g. Sheppard et al., 1998; van den Putte, 1991). This theory assumes that an individual naturally acquires rational thinking, collecting information and then analysing it (Ajzen and Fishbein, 1980). Figure 3.2 presenting the model of TRA by Fishbein and Ajzen (1975).
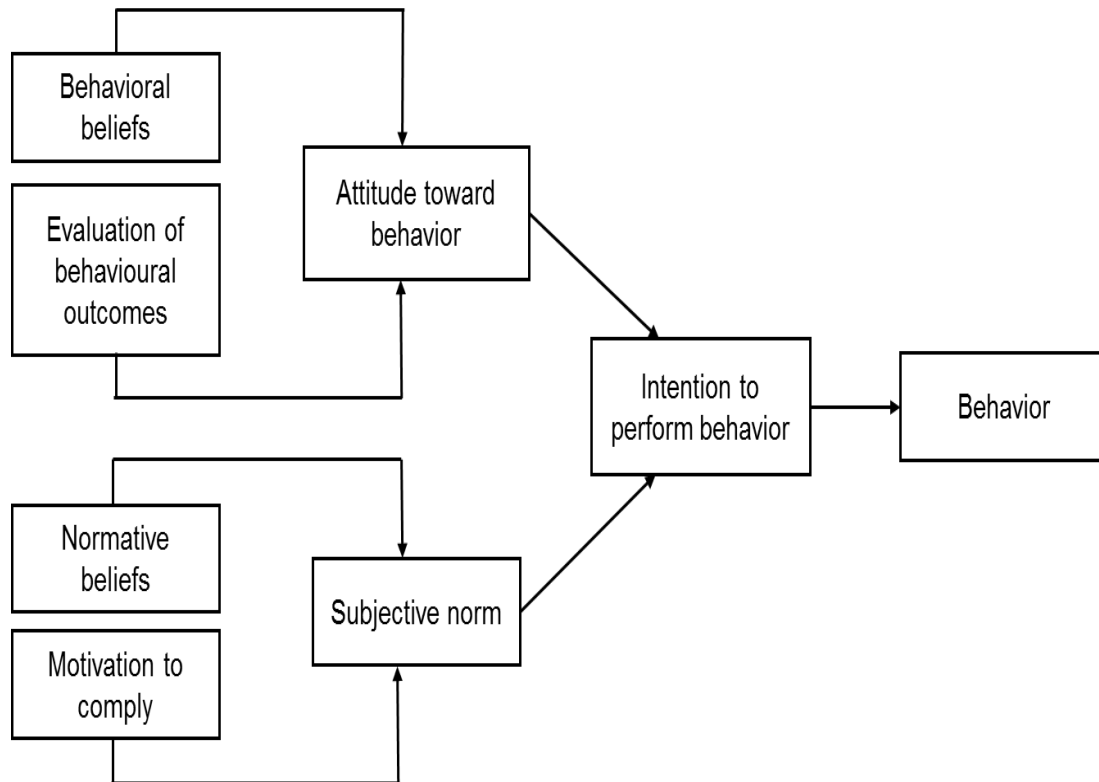
Figure 3.2 Theory of Reasoned Action Model
Source: Ajzen (1991)

Furthermore, Fishbein and Ajzen (1975) suggested that individuals tend to act on specific behavioural intention because there is a stimulus object or things. It is an individual's attitude towards his/her subjective norm. Like TPB, SN in TRA is also recognised as the perception of social pressure in responding or not responding towards a particular act. For example, hotel managers who have a favourable attitude towards eco-friendly behaviour are willing to adopt the sustainable practices without making a collective decision as a whole organisation (Han, Hsu and Lee, 2009). Multiplicatively combined underlies in subjective norm as normative beliefs (Fishbein, 1967). A judgement or decision-making process usually occurs before any decisions are made, and accordingly, the individual will respond to the behavioural intention if the social pressure is considered to be greater from the third party, acting as a reference.

TRA is also one of the most important theories used to investigate an individual's positive behaviour within the THI business (Zeithaml et al., 1996;

Yesawich, 1997, Bowen and Shoemaker, 1998; Lewis and Chambers, 2000; Han and Back, in press; Namkung and Jang, 2007; Lam, Cho and Qu, 2007; Han, Hsu and Lee, 2009; Kim, Kim and Goh, 2011). Even though TRA is widely used in the THI literature, it may not effectively identify the adoption of sustainability practices in hotel restaurant operations (Jeyaraj et al., 2006). Considering the dynamic structure and the competitiveness of the hotel industry, TRA will possibly provide a different outcome as compared to an individual's decision-making process (Fraj, Matute and Melero, 2015). Furthermore, Davis et al. (1989) agree that TRA *"does not specify the beliefs that are operative for a particular behaviour"* (p.984). Therefore, the behaviour must be identified first by any researchers.

3.3.3 Diffusion of Innovations Theory (DIT)

Even though TPB and TRA are also known as a common theories to identify an individual behavioural, DIT is also popular among researchers for studying innovations from in areas ranging from agriculture to organisational structures (Tornatzky and Klein, 1982). The founder of the theory, Rogers (1962), claimed that innovation could be an idea, practice, process, or product, perceived as being new by an individual that transforms a new problem-solving idea into an application. The theory developed by Rogers was most frequently used in research investigating the adoption of technology within the educational environment (Medlin, 2001; Parisot, 1995).

According to Rogers (2003), adoption is an act of behaviour to decide the *"full use of an innovation as the best course of action available"*, and rejection is a decision "not to adopt an innovation" (p.177). As this study is to identify whether Malaysian Hotel Restaurants (MHRs) would like to adopt or not adopt sustainable practices, this seems like it could do with further explanation beyond 'Rogers' theory has a definition of adoption, and this study looks at adoption. Rogers (2003) further posited diffusion as *"the process in which an innovation is communicated through certain channels over time among the members of a social system"* (p.5). Furthermore, as argued by Rogers (1983), there are five perceived characteristics of the innovation that are critical factors

influencing the adoption decision: (1) Relative advantage or *'the degree to which an innovation is perceived as better than the idea it supersedes'* (pp15); (2) Compatibility or *'the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters'* (pp15); (3) Complexity *or 'the degree to which an innovation is perceived as relatively difficult to understand and to use'* (pp15); (4) Trialability or *'the degree to which an innovation may be experimented with on a limited basis'* (pp15); and (5) Observability or *'the degree to which the results of an innovation are visible to others'* (pp16).

Rogers (1995) has identified four main elements that come together to form the DIT: the innovation, communication, time, and the social system which belief could be a guideline for MHRs to adopt the sustainability practices. The change needs to be new to the person or organisation that is adopting and implementing it. For MHRs, adopting sustainable practices into the operations is a new thing where only a few hotels were certified as a green hotel. The characteristics of the innovation discussed in the previous paragraph were identified could help to explain its rate of adoption by MHRs. Surprisingly, the lack of spread or diffusion of innovations found in the practice of organisation development and performance improvement (Lundblad, 2003). The organisation does not adopt the innovation for which there would be a benefit. Thus, MHRs should take this opportunity to embark into sustainable practices as it can improve organisational performance (Nicalau & Santa Maria, 2013).

DIT identified as a social process where it is relied on the effective communication between two or more individuals to make it successful (Rogers, 1995). When a decision to adopt sustainability practices made, the hotel manager should brief the staffs on how to implement it. Changing the whole operating system need a substantial adjustments. Therefore the communication process should be made clear. However, the organisation's level of formality identified could inhibit the innovation from taking place (Lundblad, 2003). The hotel manager should minimise the formality to make sure the MHRs's innovativeness well performed. Even though sustainability practices are

relatively new to some Malaysian hotels, MHRs can refer to hotels that have long practised.

The third element of DIT is the time where it consists of three components that should be emphasised by the organisation: the innovation-decision process, adopter categories, and the rate of adoption (Rogers, 1995). The top management of the organisation made the innovation-decision process, and for the MHRs it was made by the hotel manager (Enz and Siguaw, 2003). However, some managers are reluctant to change to sustainable practices due to the lack of clear and comprehensible knowledge of environmental management practices (Kasim, 2009). The decision to adopt the practices should undergo five stages of the innovation process within an organisation: agenda-setting, matching, redefining/restructuring, clarifying, and routinising. The initiation phases are agenda-setting and matching where information is gather and planning is taking place after the decision to adopt the sustainable practices made. Then, the latter three stages which include the execution phase is conducted.

The second components of the time element of DIT are the adopter categories. It is to measure how the hotel manager is to adopt sustainability practices in MHRs compared to other hotel managers in Malaysia. It believed this would lead to the rate of adoption element, the third components of the DIT time element. As posited by Rogers (1995), the rate of adoption is the speed that innovation is adopted within a social system. The central gap of this current study has revealed there are only ten hotels in Malaysia embarked into these practices. Hence, it hoped that the rate of adoption would increase as THI aware of the impact of the business on the environment. Thus, organisational and environmental are part of predictors to influence the sustainable adoption in MHRs along with DIT for the current study. These were discussed and critique further in the following section 3.4 for conceptual framework development.

DIT was commonly used for technology adoption studies (e.g. Lee et al., 2011; Agymam, et al., 2009; Tung et al., 2008) and has proven to be a good model (Lee, 2004; Zhang et al., 2015). Compared with TPB and TRA, DIT is more sophisticated and robust as the characteristics are used as a core constructs in many later models. Therefore, this study is applying DIT as an underpinning theory in this study.

3.4   Conceptual Framework Development

The framework of this study was developed using the three variables mentioned previously from the organisation characteristics (Nicholls and Kang, 2012; Kasim and Ismail, 2012), environmental characteristics (Kasim and Ismail, 2012), and perceived innovation characteristics (Rogers, 2003). Fourteen hypotheses have been developed using the construct to determine the relationship between the intention to adopt sustainability practices in Malaysian hotel restaurants and organisational performance.

3.4.1 Organisational Characteristics

Chan et al. (2014) discovered that green triggers are positively connected to environmental concerns and are positively associated with the intention to adopt sustainability practices in lodging operations. The organisational or hotel characteristics appear to have a strong influence on the decision to adopt sustainability practices in hotels and specifically in restaurants. This particularly, relates to the size of the establishment and the location. The larger companies are often assumed to have stronger financial and human resource capabilities as compared to small organisations (Nicholls and Kang, 2012). The larger companies were reported to have greater adoption of sustainable practices. Furthermore, their attitude and decisions concerning innovation are a reflection of the pressure from within the organisation as to whether or not to take the risk of adopting the practices.

Conversely, small hotels deciding to adopt sustainability practices are considered to have insufficient resources and might act according to the capacity and skills of individuals (Bramwell et al, 1996). However, in the study conducted by Dewhurst and Thomas (2003), the findings indicated that small lodging businesses have strongly bonded to the locations where they are situated and tend to emphasise the issue of sustainability practices in their operations. Likewise, the location and environment have been found to contribute to place or location attachment and personal involvement for the visitor (Alexandris, Kouthouris, and Meligdis 2006; Hwang, Lee, and Chen 2005; Yuksel, and Bilim 2010; Prayag and Ryan 2012).

The manager's attitude towards change has been identified as one of the factors in making decisions to adopt sustainability practices in restaurants. The findings of Enz and Siguaw (2003) indicate that innovation adoption is strongly affected by outstanding hospitality individuals, usually hotel managers who demonstrate leadership skills and problem solving skills and the ability to support and lead in the adoption of sustainability practices. Furthermore, a manager's attitude towards any changes or innovative operations will establish strategic leadership behaviours (Damanpour and Schneider, 2006).

Notwithstanding, the manager's attitude towards change has further been shown to significantly relate to work performance (Chih, Yang and Chang, 2012). However, if the decision to adopt sustainability practices is uncertain and the direction towards sustainability practices is unclear, it might induce stress among managers. This, in turn, will lead to managers not being satisfied with the current changes which will undoubtedly affect employee job performance (Yu, 2009, pp28). The direction to introduce sustainable operations in a hotel restaurant should be made clear to employees in the department(s) impacted. The employees should be sufficiently equipped and trained regarding how to implement sustainable operations, which will help to prevent employees from experiencing unnecessary pressure and stress due to the adoption of sustainability practices in their working environment (Giauque, 2015; Giauque, Anderfuhren-Bigetand Varone, 2013b; Rush, Schoel and Barnard, 1995).

Likewise, managers with a positive attitude towards the change will facilitate the achievement of the hotel's goals towards acquiring sustainable hotel operations (Eby, Adam, Russell and Gaby, 2000; Gilmore and Barnett, 1992; Kotter, 1996). Thus, it was argued the adoption of sustainability practices in hotel restaurants will influence the changes in the current operations and will also involve managing the risks (Naranjo-Gil, Hartmann, and Maas, 2008; Pettigre, Woodman and Cameron, 2001). Accordingly, the hotel industry should introduce a working culture that encourages innovative behaviour which will allow managers to be risk takers (Wan, Chin and Lee, 2005). Therefore, the following hypothesis has been developed.

> **H1:** *Attitude towards change is positively related to sustainability adoption in Malaysian hotel restaurants.*

The risk-taking behaviour of managers is attracting significant attention from scholars in the context of management and organisational behaviour (e.g., Garcia-Granero et al., 2015; Chakraborty, Sheikh and Subramanian, 2007; Colquitt et al., 2007). Hotel managers are recognised as decision-makers, as they should be capable of decision-making regarding opportunities to develop the business and encourage innovation (Alexiev, Jansen, Van den Bosch and Volberda, 2010; Elenkov, Judge and Wright, 2005). However, the adoption of sustainability practices in hotel restaurants requires time, effort, substantial investment financially and resources. Furthermore, the certainty of success is unknown (Ling et al., 2008; Wu et al., 2005). In other words, the uncertainty surrounding the outcome afforded by sustainability adoption could be a risk that managers will need to face. However, according to Ling et al. (2008), most managers will choose to take the risk where they believe and expect a positive outcome from being innovative.

Notably, the level of risk-taking is the main concern when operating a business (Jawarski and Kohli, 1993). A study by Jawarski and Kohli (1993), found that a manager who was a risk taker considered the positive effect and profit to be earned when deciding to take the risk of undertaking something new; they might have believed that the higher financial risks were worth taking for higher

rewards. Indeed, such managers also accepted an occasional new product failure as normal. Managers of this type will generally encourage the development of innovative strategies knowing that sometimes they will fail. However, these managers also like to play it safe and will only implement plan if they are confident they will work. It is evident that this is still a long way to go regarding adoption (Garay and Font, 2012). Managers of large hotels are known to be more responsible towards environmental practices as compared to those managers who operate small operations (Bohdanowicz, 2005).

Notwithstanding, the personal values of top management could be one of the factors that influence the decision to adopt sustainability practices in hotel restaurants. In fact, top management was identified as one of the most crucial internal drivers in changing corporate attitudes towards the implementation of environmental practices (Banerjee, 1998; Griffiths and Petrick, 2001; Lusser and Riglar, 1999; Stone, Joseph, and Blodgett, 2004; Vercalsteren, 2001). In a separate study by Kasim (2009), it was revealed that there was a lack of clear and adequate knowledge about environmental management amongst managers, and they have a tendency to be "politically correct" with regards to environmental issues. However, the latest findings by Kasim and Ismail (2012) suggest that most of the managers are concerned about the preservation of the environment and are aware of pollution prevention programmes. Also, the managers in the study considered themselves to be well educated concerning environmental issues. Moreover, they considered establishing an environmental management system (EMS) in their organisations, implementing it as one of the top-three priorities in their company policy. These ambitions would be considered successful if top management integrated these practices into the management structure and in this case, the success rate would be higher and more achievable (Faulkner, Carlisle, and Viney, 2005; Kasim, 2007; Stone et al., 2004). With that being said, the following hypothesis has been developed to show the relationship between top managers and with adoption of sustainability practices.

H2: Top management is positively related to sustainability adoption in Malaysian hotel restaurants.

Another important factor, which is also ranked as one of the key considerations in adoption, is the cost involved in adopting sustainability practices. Hotels that have strong financial support and workforce are believed to be more proficient at managing the expenditure needed in introducing ecological practices (Florida, Atlas, and Cline, 1999). Changing the operation's location will, of course, involve a substantial adjustment. The adjustment can be seen according to the investment made by introducing an EMS, which includes purchasing organic and local produce supplies. According to Kasim and Ismail (2012), the financial aspect relating to environmental practices was seriously considered. When the business operations became more aligned with environmental protection, the managers then considered advertising to promote this aspect of the restaurant's operations. However, some managers would only consider implementing the EMS when not doing so would cost them a penalty.

Schubert et al. (2010) observed that restaurants always identified cost as a major constraint or drawback in implementing environmental practices. However, despite the costs involved in implementing sustainability practices, this investment in-turncould has significant benefits for hotel operations. For hotels adopting sustainability practices, this may help to achieve optimum performance (Nicholls and Kang, 2012). Investing in environmental practices will enhance the hotel's image or reputation and, it will lead towards the customers' revisiting intention and loyalty (Anisimova, 2007; Barone et al., 2000; Brown and Dacin, 1997; Cornwell and Coote, 2005; McDonald and Rundle-Thiele, 2008; Nan and Heo, 2007; Salmones et al., 2005; Sen et al., 2006). Furthermore, even though there will be a substantial fiscal adjustment needed when implementing these practices in hotel restaurants, it has been found that the investment in environmental practices would inevitably provide a return on investment (ROI) (Garcia and Adam, 2007). Notwithstanding, it will also increase profitability of the hotel in the long run (Aragon-Correa et al., 2008; Bird et al., 2007; Bragdon and Marlin, 1972; Grave and Waddock, 1994; Hart and Ahuja, 1996; Nicolau, 2008; Orlitzky et al., 2003; Pava and Krusz,

1996; Preston and O'Bannon, 1997; Russo and Fouts, 1997; Studivant and Ginter, 1997; Waddock and Grave, 1997). Indeed, this is because the performance of the hotel will increase when the surrounding environment proactivity grows (Claver-Cortés et al., 2007). Therefore, the hotel managers should take into consideration the long-term benefits of adopting sustainability practices in hotel restaurants. With that in mind, the following hypothesis has been constructed to classify the relationship.

> **H3:** *Cost consideration is positively related to sustainability adoption in Malaysian hotel restaurants.*

Regarding the participation of employees' in the environmental plan, the connectedness of employees' was additionally identified to be one of the reasons why hotels like to adopt green practices. Employees are key individuals for distinguishing the services provided (Ottenbacher et al., 2006). In one study, employees were observed to exhibit a behaviour that was relatively easy to alter when it involved the workplace (Beard, 1996). For that reason, and in line with the findings of Kasim and Ismail (2012), the hotel should include a module covering environmental awareness in the training of employees. Managers tend to reward their employees of they contribute ideas that help to enhance the sustainability practices (Stone et al., 2004). Most studies revealed that employees appreciate working for organisations that are concerned about the preservation of the environment (Harvey et al., 2010). The main underlying reason for this is that it can enhance their job satisfaction (Chan and Hawkins, 2010; Umweltbundesamt, 2000; Harrington and Knight, 1999; Rondinelli and Vastag, 2000).

The employees' ecological behaviour can likewise influence the success of adopting sustainability practices in hotel restaurants (Ajzen, 1991; Han and Ryu, 2006; Oliver, 1997; Chan et al., 2014). However, there is also the possibility of employee resignations if management is contemplating the implementation of environmentally safe practices in the operation (Brown, 1996). In this case, employees may be resistant to change given they need to be sufficiently trained and equipped with new knowledge in order to perform the

practices. Furthermore, the employees may experience extreme stress and pressure when the adoption occurs in restaurants (Giauque, 2015; Giauque, Anderfuhren-Biget and Varone, 2013b; Rush, Schoel and Barnard, 1995). Interestingly, this behaviour may be due to human psychology, as people do not always want to abruptly change their behaviour (Hon and Chan, 2013; Hon et al., 2013; Oreg, 2003). Therefore, hotel managers should promote a sustainable working culture and simultaneously motivate and encourage employees, which could help to influence employees to become more committed to their jobs (Chan and Hawkins, 2010). To identify the relationship between employee connectedness and the intention to adopt sustainability practices, the following hypothesis has been developed.

H4: Employee connectedness is positively related to sustainability adoption in Malaysian hotel restaurants.

3.4.2 Environmental Characteristics

Given that the primary issue highlighted in this study is sustainability adoption, environmental characteristics are considered to be a further factor in the adoption of these practices. Government laws and regulations are considered to be part of influencing or motivating hotels to change their operations to become more sustainable (Bohdanowicz, 2006; Burler, 2007; Gu et al., 2013; Tzschentke et al. 2008a). In the study conducted by Kasim and Ismail (2012), it was found that government laws and regulations are one of the important elements of environmental characteristics. Having operations that comply with the legislation and by-laws is an important issue in the hotel industry. In fact, hotels must obey any laws and regulations related to their business regarding sustainability issues such as planning and development guidelines, permissible levels of green house gas emissions, land-use planning and development restrictions.

On the other hand, the lack of government regulations in enforcing environmentally friendly practices has led to the slow implementation in the tourism and hotel industry of said practices (Anguera et al., 2000; Pryce, 2001).

The hotel industry greatly relies on government laws and regulations to implement environmental practices within their entire operation (Kasim, 2007). Therefore, the government should enforce the laws and regulations to ensure that all industry players operate and move towards the adoption of sustainability practices. Even though it is challenging and difficult for hotels to change their current operations, they should commit and abide by the laws.

Hotel managers were found to be aware of and conversant with the laws and regulations regarding the Environmental Act given these laws and regulations restrict and constrain their operations. However, the laws are not being strictly enforced, and so instead, hotel managers are volunteering to adopt said practices. These findings are consistent with those of Post and Altman (1994), Gallarotti (1995), Banerjee (1998), Lusser and Riglar (1999), Vercalsteren (2001), Rhee and Lee (2003), Emery and Watson (2004), Stone et al. (2004), and Watson and Emery (2003). The local authorities and federal government where hotels operate also appear to be concerned about the environment. Indeed, it has reached the point where enforcement of the regulations and laws should be mandatory (Post and Altman, 1994; Gallorotti, 1995; Porter and Van der Linde, 1995; Banerjee, 1998; Lusser and Riglar, 1999; Vercalsteren, 2001; Rhee and Lee, 2003;; Watson and Emery, 2003; Emery and Watson, 2004; Stone et al., 2004).

Therefore, hotel managers should introduce an initiative to conduct an Environmental Impact Assessment and consequently, report to the local authorities on the outcomes of the assessment (Middleton and Hawkins, 1998). Other research conducted in the lodging sector applied environmental management practices such as energy and water conservation, waste management and environmental education to test environmental performance (Buckley and Araujo, 1997; Erdogan and Tosun, 2009; Rivera and de Leon, 2004; Rivera and de Leon, 2005). Accordingly, the following hypothesis has been developed to indicate the relationship with the adoption of sustainability practices in MHRs.

H5: Government laws and regulation are positively related to sustainability adoption in Malaysian hotel restaurants.

'Green Supply Chain Management' (GSCM) is defined by Sarkis, Zhu, and Lai (2001) as *"integrating the environmental concerns into the inter-organisational practices of supply chain management including reverse logistics".* The need for supply chains to be more sustainable and cost-effective has been triggered by the current economic crisis that impacted the global economy (Malik, Abdullah and Hussain, 2016). Government legislation and stakeholder pressure have influenced organisations to be more sustainable in their daily operations. The main aims of GSCM are to reduce waste and control environmental impacts, while at the same time to maintain the effectiveness and profitability of operations (Hussain and Malik, 2016).

Accordingly, the hotel industry should take the lead in minimising the environmental impacts and proactively participate towards implementing sustainability practices in its operations for the betterment of society (Chou et al., 2012). For a hotel to have sustainable restaurant operations, the managers should consider supply chains that are ecologically friendly and which utilise an array of green products from manufacturers, suppliers, customers and reverse logistics (Zhu and Sarkis, 2004). Furthermore, managers should only implement green supply chains when there has been a decision to adopt them. Likewise, the flow within the supply chain, practice green management and share information by educating all parties concerning the importance of adopting green practices. Indeed, the study by Kasim and Ismail (2012) highlighted many of these elements that should be present in a green supply chain. According to Wang et al. (2013), hotel restaurants should also comply with the restaurant management standard by focusing on three facets; green foods, green environment and equipment, and green management and social responsibility. Therefore, the following hypothesis has been developed to identify the relationship between green supply chains and sustainability adoption in hotel restaurants.

> *H6:* *Green supply chains are positively related to sustainability adoption in Malaysian hotel restaurants.*

Investing in green innovation, especially in hotel restaurants, will bring about a positive change for the hotel business (Bharadwaj, Varadarajan and Fahy, 1993; Chen, Lai and Wen, 2006; Leonidou et al., 2013; Fraj, Matute and Melero, 2015; Leonidou et al., 2015; Molina-Azorin et al., 2015). However, hotels that do not promote an innovative culture in their operations are more likely not to succeed in developing new products and services (Fraj, Matute and Melero, 2015). Therefore, managers should proactively make known the innovation by adopting sustainability practices in restaurant operations as this will likely provide more benefits and advantages (Hart, 1997). Notwithstanding, it is also hoped that by adopting sustainability practices in hotel restaurants, environmental impacts that are caused by this industry will be reduced (Starik and Marcus, 2000).

Being green will also provide the hotel restaurant with a competitive advantage (Kasim and Ismail, 2012). Recognition as an environmentally friendly hotel in this industry is important (Chavan, 2005). Notably, given the magnitude of the impacts caused by this sector on the environment, there is a need to be a green innovator in the hotel restaurant. Furthermore, hotel restaurants can increase the profit earned when adopting sustainability practices in their operations (Porter and van der Linde, 1995, pp98). The following hypothesis was developed to identify the relationship between trade pressure and the intention to adopt the practices.

> *H7:* *Competitive advantage (trade pressure) is positively related to sustainability adoption in Malaysian hotel restaurants.*

It is acknowledged that adopting sustainability practices can improve stakeholder relationships (Sarkis, Gonzalez-Torre and Alonso-Diaz, 2010), increase the hotel's reputation and image (Sheldon and Park, 2011), improve relationships with customers and employees (Cvelbar and Dwyer, 2013) and increase profitability (Aragon-Correa et al., 2008; Bird et al., 2007; Bragdon and

Marlin, 1972; Grave and Waddock, 1994; Hart and Ahuja, 1996; Nicolau, 2008; Orlitzky et al., 2003; Pava and Krusz, 1996; Preston and O'Bannon, 1997; Russo and Fouts, 1997; Studivant and Ginter, 1997; Waddock and Grave, 1997).

Accordingly, any form of business needs to satisfy and meet at least the lowest expectations of its stakeholders (Kotler, Bowen, and Makens, 2006). Freeman (1984, p.46) defines a stakeholder as *"any group or individual who can affect or is affected by the achievement of an organisation's objectives"*. Notwithstanding, four stakeholders were identified that are involved in environmental activities in the accommodation industry; consumers, companies, governmental organisations and trade organisations (Fry and Polonsky, 2004). These stakeholders are believed to play a significant role in sustainability adoption in creating, communicating and delivering green value (Polonsky, 2011). However, for this study, two stakeholders were identified as the primary factors for the adoption of sustainability practices in Malaysian hotel restaurants, namely; consumers and the community (Kasim and Ismail, 2012). This is due to the consumer playing a vital part in creating value in the restaurants by actively participating in the initiatives. As a result, the community directly experiencesthe impacts in terms of benefits and the value associated with the hotel operations (Kulkarni, 2000). However, for this study, two stakeholders were identified as the primary factors for the adoption of sustainability practices in MHRs, namely; consumers and the community. These two stakeholders are important to study which of the two, demand the adoption of sustainability practices in the hotel industry (Stainer and Stainer, 1997).

Customers who are concerned about the environment play a significant role in influencing sustainability adoption in the operations of a hotel (Rahman et al. 2012; Bohdanowicz, 2005) and will often choose to stay and revisit a green hotel (Fineman and Clarke, 1996; Manaktola and Jauhari, 2007; Rahman et al., 2014b; Chan and Wong, 2006; Han and Kim, 2010; Han et al., 2011). Likewise, environmentally concerned customers are willing to pay extra to spend a night in a green hotel (Lee et al., 2010). The hotel industry should pay close attention to this consumer type to gain additional revenue resulting from the benefits of

sustainability practices (Myung et al., 2012). This is due to the willingness of this group of customers to spend more to demonstrate their opinions about environmental concerns (Stern, 2000).

Moreover, this type of customer group is actively interested in reducing threats to the environment (Davies et al., 2011; Coy et al., 2013; Rahman and Reynolds, 2016). Additionally, they are willing to expend effort and outlay more, sometimes even through cash donations to protect the surrounding environment (Davies et al., 2011). Previous studies from Stern et al. (1993), Stern and Dietz (1994) and Stern (2000) have revealed that these customers are willing to accept and make an economic sacrifice for the sake of the eco-system. Also, this customer will be apprehensive and will go the extra mile by committing to ensuring the environment is well looked after (Van Lange et al., 1997). With such behaviour, there is no doubt that this particular type of customer would prefer to stay or dine in a hotel that promotes sustainable business operations (Rahman and Reynolds, 2016). They will also participate in environmental programme and practices implemented by hotels such as reusing linen instead of changing it on a daily basis and ordering from a local produce menu.

However, some customers perceive a green hotel as having less service quality and even presume that green hotels will not satisfy their needs for comfort, convenience and will cost them more compared to other non-green hotels (Han and Chan, 2013). This type of customer also believes that they will receive better service and quality, with a lower-priced traditional hotelcompared to a green hotel (Kuminoff et al., 2010). Sadly, this may also occur when the hotel becomes more environmentally friendly, as the hotel will need to make a substantial adjustment to overcome this issue. For instance, sustainable restaurant operations may purchase only from green suppliers and use local foods, and in such cases customers may assume that local food would mean less quality compared to buying imported goods.

Besides that, it is evident that the local community as external stakeholders play a vital role in influencing how business is conducted in today's environment (Sharma and Henriques, 2005). To some extent, the community can persuade

and manipulate the public by urging businesses to implement environmentally friendly practices (Freeman, 1984). Also, aside from the local community, the operations of the business are pressured by non-government organisations (Eesley and Lenox, 2006). Indeed, pressure has been found to come from various groups, for example, environmental groups, neighbourhood groups, the media and labour unions (Hoffman, 2000).

Likewise, it has also been found that business entities that are not fulfilling stakeholder requests to become more sustainable in their practices may face public complaints and verbal criticism (Hoffman, 2000). Also, hotel operations can be influenced by the community through encouraging customers to opt for a particular product or business that is environmentally friendly. Interestingly, these stakeholders become prominent agents in providing "social licence", in effect, for the hotel restaurants to adopt sustainability practices (Gunningham et al., 2004). Another important factor is that the majority of hotel businesses are located near tourist destinations, major cities and towns. Indeed, knowing that the hotel operates all year round could have a significant impact on the community, either positively or negatively (Charter for Sustainable Tourism, 1995). Therefore, the following hypothesis has been developed to determine the relationships between the demands of stakeholders' and sustainability adoption.

> **H8:** *Stakeholders' demands (consumer and community) are positively related to sustainability adoption in Malaysian hotel restaurants.*

The year-round operations and hotel occupancy rate during peak seasons could indirectly disrupt the community's quality of life and wellbeing (Pizam, 1978). Then again, this industry can provide significant benefits to the local community, such as employment opportunities, rising property value, enhanced city image and reputation, improved city infrastructure and facilities and improved pride of residents (Chandralal, 2010). Therefore, adopting sustainability practices should be considered as a win-win situation, providing tremendous benefits to hotel performance and at the same time protecting the local community's quality of life (Chandralal, 2010).

3.4.3 Perceived Innovation Characteristics

Rogers (2003) defines relative advantage as *"the level to which an innovation is perceived as better than the idea it supersedes or replaces"* (pp229). The relative advantages received when adopting such environmental innovations are cost savings and improvement of the firm's reputation, and sales volume or market share (Karagozoglu and Lindell, 2000). Additionally, applying innovation in a hotel restaurant is believed to provide greater operational control by improving the service quality and improving productivity (Zolkepli et al., 2015; Lin, 2013; Hsiu et al., 2008). Further, it has also been shown to increase operational efficiency by accomplishing tasks more efficiently and improving the quality as well as enhancing the effectiveness of green practices in restaurants (Hsiu and Hsi, 2008).

Notwithstanding, the advantages obtained will also result in a dramatic increase in the profit margin, market share and improvement in the overall financial performance of the restaurant (Karagozoglu and Lindell, 2000). Indeed, advantages obtained from sustainability practices has been found to also make a significant change in the cost position relative to key competitors; and can results in a much stronger reputation with customers and the ability to compete internationally (Karagozoglu and Lindell, 2000). Therefore, the following hypothesis has been developed to determine whether the relative advantages are positively related to sustainability adoption in Malaysian hotel restaurants.

> *H9: Relative advantage is positively related to sustainability adoption in Malaysian hotel restaurants.*

The next attribute is complexity, defined by Rogers (2003) as *"the degree to which innovation was perceived as difficult to understand and use"* (p.15). Conducting or applying innovation in the operations of a hotel appears to have difficulties coupled with complexity which may influence the adoption decision made by hotel managers. The more complex an innovation, the less likely it will be adopted (Rogers, 1995). McCabe (1987) found that the managers or the hotel might consider differentiating their services and products from their

competitors. However, implementing green practices is technically complex even though the practices are relatively straightforward to adopt. The process requires significant investment, long-term commitment and a sizeable consequential adjustment in the business with a potentially large effect on profitability. To test the relationships with the intention to adopt sustainability practices, the following hypothesis has been developed.

> **H10:** *Complexity is positively related to sustainability adoption in Malaysian hotel restaurants.*

The compatibility issue is also a factor if the innovation is in place. Compatibility is defined as *"the degree to which an innovation is perceived as being consistent with existing values, experience, and the needs of potential adopters"* (Rogers, 2003). Also, innovation has been found to influence teachers' opinions, beliefs, values, and views about teaching (Hoerup, 2001). Accordingly, the hotel would need to consider if the innovation fits with all the operational aspects in the restaurant, namely; routines, equipment and technology (Zolkepli and Kamarulzaman, 2015; Hsiu and Hsi, 2008). Therefore, the following hypothesis has been developed.

> **H11:** *Compatibility is positively related to sustainability adoption in Malaysian hotel restaurants.*

With regards to trialability, Rogers (2003) defines this as, *"the degree to which an innovation may be experimented with on a limited basis" (pp15).* Further, trialability has been found to be strongly correlated with the rate of adoption (Sahin, 2006). Some hotels like to conduct a trial or pilot before implementing the innovation. These hotels might want to adopt sustainability practices on a trial basis for a certain period to observe the benefits (Zolkepli and Kamarulzaman, 2015; Hsiu and His, 2008). Therefore, the following hypothesis was developed to observe the relationships.

> **H12:** *Trialability is positively related to sustainability adoption in Malaysian hotel restaurants.*

The last attribute, observability, is defined as *"the degree to which the result of innovation is visible to others"* (Rogers, 2003, p.16). Organisations will carefully observe how well and to what extent the innovation will provide benefits when applied (Le et al., 2006). Observability is generally understood as the ability to foresee the overall effect of adopting the innovation. Hence, the hypothesis for observability was developed to observe the relationship with sustainability adoption in hotel restaurants.

> **H13:** *Observability is positively related to sustainability adoption in Malaysian hotel restaurants.*

At this stage, it appears that the five attributes: relative advantage, complexity, compatibility, trialability and observability strongly affect the chances of adopting innovation. Nevertheless, the easier it is for managers to see evidence of the results of an innovation, the more likely it will be adopted (Rogers 1995). Accordingly, sustainability adoption in hotel restaurants in this study is considered to be part of innovation. The intention to adopt sustainability practices in hotel owned restaurants especially in the Malaysian hotel industry would be a further supported by highlighting Rogers' innovation theory in the context of hotel businesses. Besides this theory, there are also two independent categories of variables that measure sustainability adoption; organisational characteristics and environmental characteristics. The following sections discuss the variables in more detail.

3.4.4 Hotel Organisational Performances

For a certain period, the hotel operations may plateau or even decline. It is believed that if managers make an effort and take initiatives to improvise traditional management and operational processes, this may consistently result in a rise in hotel occupancy and profitability. According to Ottenbacher (2007), for the hotel industry, innovation should be created to achieve different performance objectives and outcomes as it successfully accomplishes each form of innovation. Consequently, it is the responsibility of managers to change the way in which they operate the business by trying to become more innovative. Nicalau and Santa Maria (2013) contended that adopting sustainability practices can improve organisational productivity, increase competitiveness and, in turn, be more profitable. In lodging operations, the topic of innovation could be considered as novel given the limited knowledge and comprehension regarding the effect of innovation on business performance (Hjalager, 2010; Aldebert et al., 2011; Nagy 2012).

More recently, the concept of innovation has noticeably become an increasingly common practice in organisations. According to Ottenbacher and Gnoth (2005), the hospitality sector, in particular, applies the innovation to measure financial performance, customer satisfaction and employee feedback. However, Storey and Easingwood (1998) argued that it is necessary to classify what represents success from the service operation's view point rather than assuming the factors that influence the innovations are effective. Surprisingly, no study has been conducted on hotel innovation to assess whether the operations of the hotel need to have different styles of innovation management (Mattsson and Orfila-Sintes, 2014).

In the study conducted by Agarwal et al. (2003), it was found that innovation is a moderating variable of the relationship between market orientation and business performance. The results also indicated that hotel managers' perceptions including the objective data regarding the hotel chain's performance, were positive and significantly influenced by innovation. Furthermore, Victorino et al. (2005) also confirmed that innovative hotels gain a

competitive edge and consumer preference. Moreover, in the studies conducted by Grawe et al. (2009), Sengupta and Dev (2011), Ordanini and Parasuraman (2011) and Rubera and Kirca (2012), innovation was found to have a direct impact on marketing performance, and as Kirca et al. (2005), Gunday et al. (2008) and Cheng and Krumwiede (2010) state, this contributes to higher economic and financial performance.

Due to this improvement, some firms have invested in innovation in order to improve their businesses productivity and growth. Nowadays, due to growing competition and environmental uncertainty, technological, organisational and/or commercial innovation has acquired greater relevance in the hotel industry. As stated by Nicalau and Santa Maria (2013), innovation is a key factor to improve productivity, competitive positioning and profit

In addition, Le, Hollenhorst, Harris, McLaughlin, and Shook (2006) studied the factors affecting the adoption of green practices. Their study was conducted with 190 Vietnamese hotel managers to examine their intentions towards the adoption of environmentally friendly practices, and innovation characteristics (e.g. complexity and observability) were found to be highly correlated with the intention to adopt environmental practices. However, external environmental characteristic variables such as perceived competition were also found to be highly correlated with the likelihood of adoption. Conversely, organisational characteristics (e.g. hotel size, location and level of risk-taking) were identified as having a weaker influence. In a separate study, this theory was also tested by Smerecnik and Andersen (2011) in 49 medium to large hotels and ski resorts throughout North America. The innovative features and the level of opinion leadership were revealed to have a significant impact on the adoption of green practices, followed by the perceived relative advantage of the strategy and the general innovativeness of the property.

On the other hand, in the study conducted by Campo et al. (2014), the main findings indicated that the percentage of hotels intending to innovate does not contribute directly and positively to short-term performance. The result suggests that innovation introduced by hotels does not immediately confirm its relative

importance towards improving hotel performance in the medium to long-term.In fact, there is limited if not confirmed evidence about the effect of innovation on business performance (Hjalager, 2010; Aldebert et al., 2011; Nagy 2012). Nonetheless, applying innovation in the service sector will help to measure the impact on performance over a shorter period compared to the industrial sector. This is perhaps the main reason for the non-significant and/or negative results found in the literature (Han et al., 1998). Also, it was found that there are no significant differences between manufacturing firms and service organisations (Loof and Heshmati, 2006).

Despite all of the research findings, many researchers have, in fact, shown that there is a positive relationship between innovation and business performance (Han et al., 1998; Li and Atuahene-Gima, 2001; Matsuno et al., 2002; Hult et al., 2004; Panayides, 2006; Gunday et al., 2008; Rosenbusch et al., 2011; Stock and Zacharias, 2011; Rubera and Kirca, 2012; Lin, 2013). Furthermore, Agarwal et al. (2003) revealed that managers' perceptions of hotel results, as well as the objective data about a hotel chain's performance, are positive and significantly influenced by innovation. Likewise, Victorino et al. (2005) also suggested that innovative hotels obtain a competitive edge and influence consumer preference.

A further point made in accordance with Grawe et al. (2009), Sengupta and Dev (2011), Ordanini and Parasuraman (2011) and Rubera and Kirca (2012), is that innovation has been found to have a direct impact on marketing performance. As indicated by Kirca et al. (2005), Gunday et al. (2008) and Cheng and Krumwiede (2010), this contributes to higher economic and financial performance. Indeed, there are reasonable explanations for this finding. For example, in the short-term, innovation allows a company to reach higher levels of customer satisfaction loyalty and perceived quality, thereby, obtaining better economic results through, for example, increased sales or market share. However, in the longer term, innovation has an indirect effect on financial results by improving economic and marketing results. Therefore, hotel managers should consider adopting sustainability practices in their restaurant operations. Furthermore, it is believed that this study will increase the reliability

of these findings and extend the relative advantages for hotels if adopting innovation in their business (Lin, 2013). Therefore, the following hypothesis has been developed to identify the relationship between organisational performance and the intention to adopt the practices.

H14: *Organisational performances are positively related to sustainability adoption in Malaysian hotel restaurants.*

Figure 3.3 below illustrates the proposed conceptual framework to be employed in this study. Five constructs were adopted from perceived innovation characteristics (Rogers, 2003), namely; relative advantages, complexity, compatibility, trialability and observability. Four were adopted from organisational characteristics (Nicholls and Kang, 2012; Kasim and Ismail, 2012); attitude towards change, top management, cost consideration and employee connectedness and four constructs were taken from environmental characteristics (Kasim and Ismail, 2012); governmental laws and regulations, green supply chains, competitive advantage and stakeholders' demands.
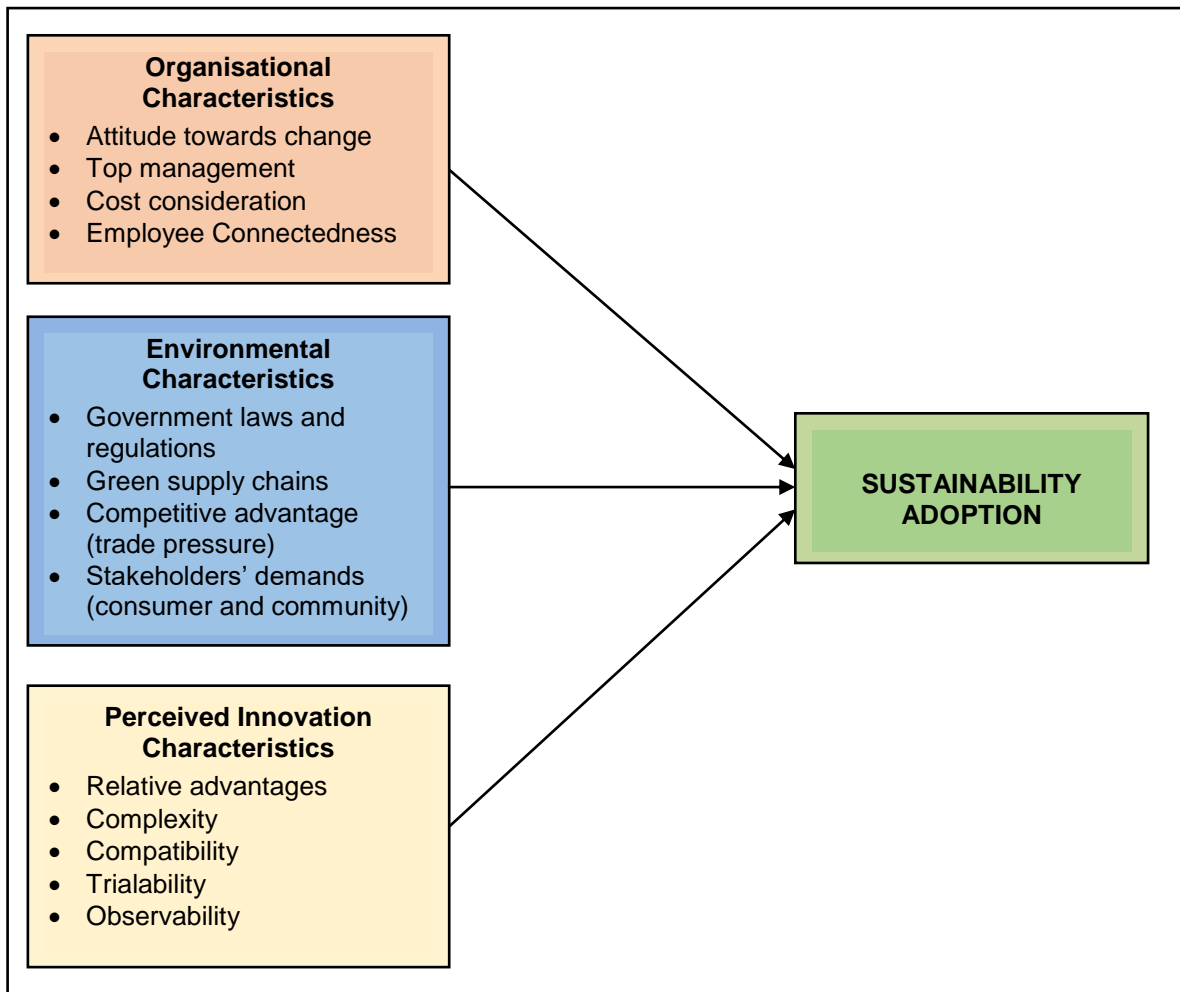
Figure 3.3: Conceptual framework of sustainability adoption in hotel restaurants.
Source: Author

Fourteen (14) hypotheses were constructed from the four variables used in this study. Five hypotheses were developed from perceived innovation characteristics, four from organisational characteristics, four hypotheses were also developed from environmental characteristics to identify the relationship between the intentions to adopt sustainability practices in Malaysian hotel restaurants and one hypothesis were developed to see the relationship between sustainability adoption and organisational performance. A summary of the hypotheses is shown in Table 3.1 below.

Table 3.1: Summary of the hypotheses of this study.

Characteristics	Hypotheses
Organisational Characteristics	**H1:** *Attitude towards change is positively related to sustainability adoption in Malaysian hotel restaurants.* **H2: Top management** *is positively related to sustainability adoption in Malaysian hotel restaurants.* **H3: Cost consideration** *is positively related to sustainability adoption in Malaysian hotel restaurants.* **H4: Employee connectedness** *is positively related to sustainability adoption in Malaysian hotel restaurants.*
Environmental Characteristics	**H5: Government laws and regulation** *are positively related to sustainability adoption in Malaysian hotel restaurants.* **H6: Green supply chains** *are positively related to sustainability adoption in Malaysian hotel restaurants.* **H7: Competitive advantage** *(trade pressure) is positively related to sustainability adoption in Malaysian hotel restaurants.* **H8: Stakeholders' demands** *(consumer and community) are positively related to sustainability adoption in Malaysian hotel restaurants.*
Perceived Innovation Characteristics	**H9: Complexity** *is positively related to sustainability adoption in Malaysian hotel restaurants.* **H10: Compatibility** *is positively related to sustainability adoption in Malaysian hotel restaurants.* **H11: Trialability** *is positively related to sustainability adoption in Malaysian hotel restaurants.* **H12: Observability** *is positively related to sustainability adoption in Malaysian hotel restaurants.* **H13: Relative advantage** *is positively related to sustainability adoption in Malaysian hotel restaurants.*
Organisational Performances	**H14: Organisational performance**s *are positively related to sustainability adoption in Malaysian hotel restaurants.*

Source: Author

3.5   Summary

This chapter reviewed and discussed the literature relating to innovation and the hotel industry in Malaysia. The growth in the economy has influenced the operations of many businesses to adopt innovation to gain a competitive advantage in the market. A model of hotel innovation behaviour was introduced and developed by Orfila-Sintes and Mattsson (2009), in which they identified four types of innovations that have emerged in the hotel industry: (1) management, (2) external communication, (3) service scope and (4) the back-office of an organisation.

Further, the adoption theories employed in the tourism and hospitality context have been discussed in detail. Three common theories are used in this industry, namely Theory of Planned Behaviour (Ajzen, 1991), Theory of Reasoned Action (Fishbein and Ajzen, 1980) and Diffusion of Innovation Theory (Rogers, 1962). Diffusion of Innoation Theory (DIT) was highlighted and discussed as the background theory for this study. DIT was proven to be a good model due to the sophistication and robustness of the core constructs and therefore was chosen to underpin this study. The chapter further elaborated and reviewed how perceived innovation, organisational and environmental characteristics can influence the adoption of sustainability practices in hotel firms. Accordingly, thirteen hypotheses were developed to predict the positive relationship between the intentions to adopt sustainability practices in Malaysian hotel restaurants. Also, one further hypothesis was developed to identify the association of adopting the practices with organisational performance.

Having explained the implications of the literature findings for the present research, the following chapter explains the methodology of the empirical study.

Chapter 4

4.1 Research Methodology

The previous two chapters reviewed relevant literature and developed a preliminary framework for the study. In this chapter, the study plan outlines the methodology used to collect and analyse data for testing the theoretical framework.

This chapter explains the ontological and epistemological stance of the present study, in which philosophical pragmatism was found to be appropriate for the context of the current research. Then, it discusses the mixed method research design which was chosen because it provides the researcher with the possibility of deriving the best understanding about both the research problem and research questions. Next, the unit of analysis, population, and sampling frame are explained after the discussion of the research designs. Further, the chapter discusses the two-phase data collection method whereby phase one involves the questionnaire survey, while phase two refers to in-depth semi-structured interview. The questionnaire structure and designs, questionnaire distribution, data analysis and the data validity, reliability and trustworthiness are also discussed in this chapter. The final section of this chapter presents the research ethic applied in the current research, while providing a conclusion that leads to the results and findings presented in Chapter Five and Chapter Six.

4.2 Research Philosophy

According to Onwuegbuzie and Teddlie (2003), some individuals have debated the qualitative paradigm over quantitative, and this has misled the logic of justification by research methods. Researchers are more likely to consider epistemology and methodology as synonyms (Bryman, 1984; Howe, 1992). It is unlikely because the epistemological aspects are not capable of specifying the specific data collection as well as the data analytical methods that must be adopted by researchers. As argued

by Johnson et al. (2004), epistemology is rarely entailed to the methodology. For example, the difference in understanding of epistemology should not prevent qualitative researchers from using data collection methods that often associated with quantitative research and vice versa.

Onwuegbuzie (2002), claims that positivists are involved in validation and counterfeiting, where these methods and procedures are to be carried out objectively. However, most human decisions (i.e., subjective) have been disregard in the research process. Some examples of subjectivism and intersubjectivism in quantitative investigations include deciding what needs to be studied, developing instruments, choosing specifics tests and items for measurement, making score interpretations, selecting alpha levels (e.g., .05), drawing conclusions and deciding what findings are practically significant. Even though some presume this is a mere myth, but the regulatory ideal of objectivity can be a useful one.

On the further notes, qualitative researchers are not immune to constructive criticism, where some qualitative researchers (e.g., Guba, 1990) admit practising an unqualified relativism, logically in its strong form denying themselves and hindering the use of the systematic standard to assess the quality of research. Most researchers are soft relativists (e.g., respect the opinions and views of others). Soft relativism is often used to conduct human research where it refers to respect and interest in understanding and depicting different individuals' perspectives and respect to a group of opinions as well as value selection for democratic approaches. There are many contradictory in relativistic or constructivist ontologies where it will create some potential problems. Heron and Reason (1997) argued constructivist paradigm is unclear about the relationship between constructed realities and the original giveness of the cosmos.

While participative paradigm has articulated as an epistemological and political principle (Heron, 1996; Tarnas, 1991; Varela et al., 1993), Skolimowski (1994) has described this paradigm as the participatory mind. Abram (1996) has also explained

that our subjectivity feels the participation of what is there and is illuminated by it. The participatory worldview allows us to join with fellow humans in collaborative forms of inquiry. Although participatory methods can enhance responsibility and contribute to empowerment development, it should not be taken for granted. It is not just about 'hearing the voice of the poor but rather 'listen' and take action (Mayoux and Chambers, 2005).

Pragmatism paradigm introduced how research approaches can be mixed fruitfully (Hoshmand, 2003); the bottom line is that research approaches should be mixed in ways that offer the best opportunities for answering important research questions. The research is adopting this paradigm to conduct the current study. This paradigm was discussed further in the following Section 4.3.

4.3   Methodology and Research Design

The current research applied the philosophical pragmatism views because it is able to provide epistemological justification and logic for using the mixed approaches and methods (Johnson et al., 2007; Onwuegbuzie et al., 2009). In this case, it is believed that the pragmatism worldview arises from the actions, situations, and consequences rather than focusing on the antecedent conditions. Patton (1990) further added that it is very much involved with the applications that can solve problem. Meanwhile, the philosophical approach emphasizes the research problem and utilizes all approaches available in order to understand the problem (Rossman and Wilson, 1985). As a philosophical underpinning for the mixed methods studies, its importance has been identified which is to focus on the research problem in social science research, followed by the use of pluralistic approaches with the aim of deriving knowledge about the problem (Morgan, 2007; Patton, 1990; Tashakkori and Teddlie, 2010). Therefore, it can be concluded that the use of the mixed quantitative and qualitative data is *'not only legitimate, but in some cases necessary'* (Gray, 2013, pp29). The research paradigm for this thesis is highlighted in Table 4.1 together with other approaches involved.

Table 4.1: The main research paradigms.

Post Positivism	Constructivism
• Determination • Reductionism • Empirical observation and measurement • Theory verification	• Understanding • Multiple participant meanings • Social and historical construction • Theory generation
Advocacy/ Participatory	Pragmatism
• Political • Empowerment issue-oriented • Collaborative • Change-oriented	• Consequences of actions • Problem-centered • Plurastic • Real-world practice oriented

Source: Adopted from Creswell (2009, p.6).

According to Barbie (2012), social research can be identified based on three common goals, namely exploring, describing, and explaining. On a similar note, exploration approach is deemed very useful to examine new research interest with the aim of understanding the subject better as well as to determine whether a more comprehensive research can be undertaken or to prepare for any upcoming study (Babbie, 2012). In particular, there has been a paucity of research related to sustainability practices in the Malaysian hotel industry. Moreover, Kasim and Ismail (2012) stated that sustainability practices have appeared to be limited and it was recently considered as a recent phenomenon in Malaysia. As a result, a review of sustainability practices and innovation process requires a more flexible approach in order to describe the situation in detail (Babbie, 2012). However, it is argued that most qualitative research rarely stopped at simple description because it normally goes deeper to explain and answer *'why'* (Neuman, 2002). Furthermore, Babbie (2012) highlighted that *'descriptive studies answer questions of what, where, and how; explanatory questions, of why'*. Therefore, the present study applied all the three designs of phases of studies.

4.3.1   *Mixed Methods Research Designs*

In regard to this matter, it is important to understand that all research methods have been given a stigma whereby each of them has bias and weaknesses. However, the existing mixed method has justified and neutralized the weaknesses of each form of data. Nevertheless, the triangulation data sources were utilized to seek the convergence between qualitative and quantitative methods (Jick, 1979). Moreover, it should be noted that mixed method turned towards the systematic convergence of quantitative and qualitative databases in the early 1990s, which led to the idea of integration in numerous types of research design. Furthermore, these types of designs were extensively discussed in a major handbook addressing the field in 2003 (Tashakkori and Teddlie, 2010). Onwuegbuzie et al. (2009) argued that *'the mixed methods research paradigm offers an important approach for generating important research questions and providing warranted answer to those questions'*, which is dependent on the research questions whereby *'mixed methods research is likely to provide superior research findings and outcomes'* (pp129). However, Johnson et al. (2007) defines mixed method research as '*an intellectual and practical synthesis based on qualitative and quantitative research; it is the third methodological or research paradigm (along with qualitative and quantitative research). It recognizes the importance of traditional quantitative and qualitative research but also offers a powerful third paradigm choice that often will provide the most informative, complete, balanced, and useful research results'* (pp129).

In contrast to other methods used, the mixed methods research design provides the researcher with the possibility of deriving the maximum understanding about both the research problem and research questions. Hence, in the case of the present study, two phases of data collection were arranged which were phase one involving the pilot study and main quantitative survey, while phase two refers to the qualitative study conducted through interviews. Furthermore, it is crucial to understand that the rationale of applying the mixed method approach in this study was for development purposes, particularly referring to the quantitative research which acted as the major approach for the current research. Moreover, the human behaviour and attitudes were deemed appropriate to be investigated using various data collection methods (Patton, 1990).

The quantitative data in the present study emphasises the testing and verification, while the qualitative method emphasises the understanding (Neuman, 2002; Ghauri and Gronhaug, 2005). As suggested by Driscoll et al. (2007), the qualitative method in this study serves as supporting information where it offers a deep understanding on the quantitative findings.

Meanwhile, mixed methods approach enables the researcher to get richer, more reliable, and more rigorous results compared to any single method of data collection (Mingers, 2001; Ghauri and Gronhaug, 2005). Jick (1979) further supported this statement by mentioning that *'weaknesses in each single method will be compensated by the counter-balancing strengths of another'* (pp604). According to Neuman (2002, pp17), the weaknesses of each method can be managed and overcome by multimethod research. However, there is a difficulty in conducting this method where considering that multimethod studies are time consuming and complicated (Neuman, 2002).

Recent evidence identified that there has been a total of 56 mixed method studies from tourism and hospitality areas between 2005 until 2014 which have been published in Journal of Sustainable Tourism (Molina-Azorin and Font, 2015). In addition, it was argued that mixed methods provide sustainable tourism academics with more opportunities for pragmatic transformative research for societal change as well as able to increase research reliability related to social desirability bias, stakeholder comparisons, and transdicisplinarity. Molina-Azorin and Font (2015) also stated that mixed methods approach in sustainable tourism areas is able to lead to the followings: (1) promote societal change, (2) manage social desirability, (3) data robustness through stakeholder triangulation, and (4) achieve sustainability through inter-disciplinary cooperation.

Mixed methods approach can promote societal change from the perspectives of critical realism (Downward andd Mearman, 2004), feminism (Heimtun and Morgan 2012), and pragmatism (Pansiri, 2006). According to Mertens (2007; 2011), the principles of transformative paradigm reflects the intention behind a considerable

amount of sustainable tourism research that inform societal change (Bramwell and Lane, 2013; Liu, 2003). Apart from that, mixed methods in sustainable tourism acts as an assistance in managing social desirability. However, bias can be found towards social desirability in ethics research, which calls for a more sophisticated method and triangulation of findings (Auger and Devinney, 2007; Carrington, Neville, and Whitwell, 2010). As a result, the use of mixed methods approach offers the checks and balances that are needed to critically understand the 'green gap' issues (Molina-Azorin and Font, 2015). Meanwhile, mixed methods research also allows data robustness through stakeholder triangulation. Hence, this indicates that stakeholder-comparative analyses can be conducted and able to link the causes and consequences in a way that would not be possible in single method of study (Molina-Azorin and Font, 2015). Finally, it should be noted that this approach also allows the advancement of the concept of sustainability through inter-disciplinary cooperation. According to Buckley (2012), changes in tourism behaviour require a particular research to focus on technological, behavioural, and political means towards a sustainability goal. Mixed methods approach has lent themselves to the inter-disciplinary of tourism (Beeton, 2005; Oppermann, 2000; Tribe, 1997).

On a more important note, the present study managed to obtain remarkable findings by looking into the intention to adopt sustainable practices in MHRs considering the contribution of the mixed methods approach to the present study where the sustainable issue in hotel industry was highlighted. There are about forty mixed-methods research designs reported in the literature (Tashakkori and Teddlie, 2003). Creswell et al., (2003) identified three basic designs of mixed-methods include (1) exploratory sequential; (2) explanatory sequential; and (3) convergent designs. In an exploratory sequential design, the researcher starts with collect and analyse qualitative data, and following the findings received will be used for quantitative data collection (Onwuegbuzie et al., 2010). Furthermore, in an explanatory sequential design, the quantitative data were collected first and analysed, then the findings were used for the qualitative data collection and analysis (Ivankova et al., 2006). Meanwhile, convergent design or concurrent design, the qualitative and quantitative data are collected and analysed during a similar time frame.

On regards to the appropriate mixed-methods designs, the explanatory sequential mixed methods design was identified to be viable in conducting the current research considering the research questions of the present study. The mixed methods were applied in sequence because the result from previous approach would be utilized by the next approach (Mingers and Gill, 1997; Tashakkori and Teddlie, 1998). In the context of the present study, a quantitative method was chosen as the first phase for the data collection process because the data analysis from the quantitative findings will be re-used for in-depth qualitative interviews to gain a much better understanding on the issues. In other words, the quantitative method contributes to its qualitative counterpart (Onwuegbuzie et al., 2009).

4.4   Unit of Analysis

Unit of analysis refers to a group of people, events, or things of interest that have been the target of researcher in investigating (Babbie, 2012). In the present study of sustainable adoption in Malaysian hotel restaurants (MHRs), 3-5 star rated hotels was identified as the unit of analysis where the hotel general managers were chosen as the source of information. These respondents have met the predetermined criteria in justifying the research objectives (Guest, Bunce, and Johnson 2006) and able to provide reliable answers to the research questions. The hotel managers shared their view on the following areas:

1. The perception towards the innovative characteristics regarding the adoption of environmental practices among Malaysian's hotel restaurant.
2. The level of familiarity as well as the perceptions on the benefits of sustainability issues, particularly in regard to sustainability adoption.
3. The current level of sustainable adoption of various green strategies and initiatives within their hotel restaurant.
4. The implications of stakeholders' demand (consumer and community) and the competitive advantage (trade pressure) for organisational sustainability and for the managers of Malaysian hotels.
5. The implications of the decision to adopt sustainability practices on organisational performance.

4.5   Population and Sampling

It is important to note that there are 629 hotels built across 14 states in Malaysia. The population was retrieved from the Malaysia Ministry of Tourism and Cultural (MOTAC) in 2017. As previously justified, the current research only focused on the 3-5 star rated hotels across Malaysia because this sample frame is able to achieve the aims of the present study by identifying investigating the performances of hotels that adopt the sustainability practices in their food and beverage departments. Furthermore, it has been widely known that only 3-5 star rated hotels have food and beverage outlets in their premises. Therefore, the population from these 3-5 star rated hotels was deemed as the best option to be regarded as the sample of this study context. Table 4.2 presents the number of 3-5 star rated hotels across Malaysia.

Table 4.2: Total 3-5 star rated hotels in Malaysia

Location	5 stars	4 stars	3 stars	Total
Labuan	1	2	3	6
Sabah	7	16	45	68
Sarawak	7	18	39	64
Johor	2	13	54	69
Melaka	3	15	30	48
Neg. Sembilan	4	8	13	25
Putrajaya	3	3	-	6
Kuala Lumpur	29	25	34	88
Selangor	18	16	18	52
Perak	3	8	15	26
Penang	11	23	16	50
Kedah	11	13	13	37
Perlis	-	-	2	2
Kelantan	2	4	9	15
Terengganu	4	6	14	24
Pahang	6	14	29	49
TOTAL	110	184	335	629

Source: Malaysia Ministry of Tourism and Culture, 2017 (MOTAC)

The initial planning for the process of data collection sample was to be conducted in the east part of Malaysia, namely Sabah and Sarawak. However, the number of 3-5 star rated hotels was not sufficient, which required the sample to be expanded to peninsular Malaysia. As a result, all 14 states across Malaysia, namely Johor, Melaka, Negeri Sembilan, Kuala Lumpur, Selangor, Perak, Pulau Pinang, Perlis, Kelantan, Terenganu, Pahang, Sabah, Sarawak and Labuan were identified as the location for the samples of the present study. There is a total of 629 3-5 star rated hotels in those states which can be further categorized as follows: 5-star (n=110), 4-star (n=184), and 3-star (n=335). The main target of this sample size was hotels that have a restaurant or food and beverage outlets at their property. Accordingly, the 3-5 star rated hotel properties managed to meet the predetermined criteria that can justify the research objectives (Guest, Bunce, and Johnson 2006). Apart from that, the aim of the current research was to investigate the factors influencing the adoption of sustainability practices in Malaysian hotel restaurants (MHRs). Figure 4.1 presents the Malaysia hotel map with the numbers of hotels in each state.
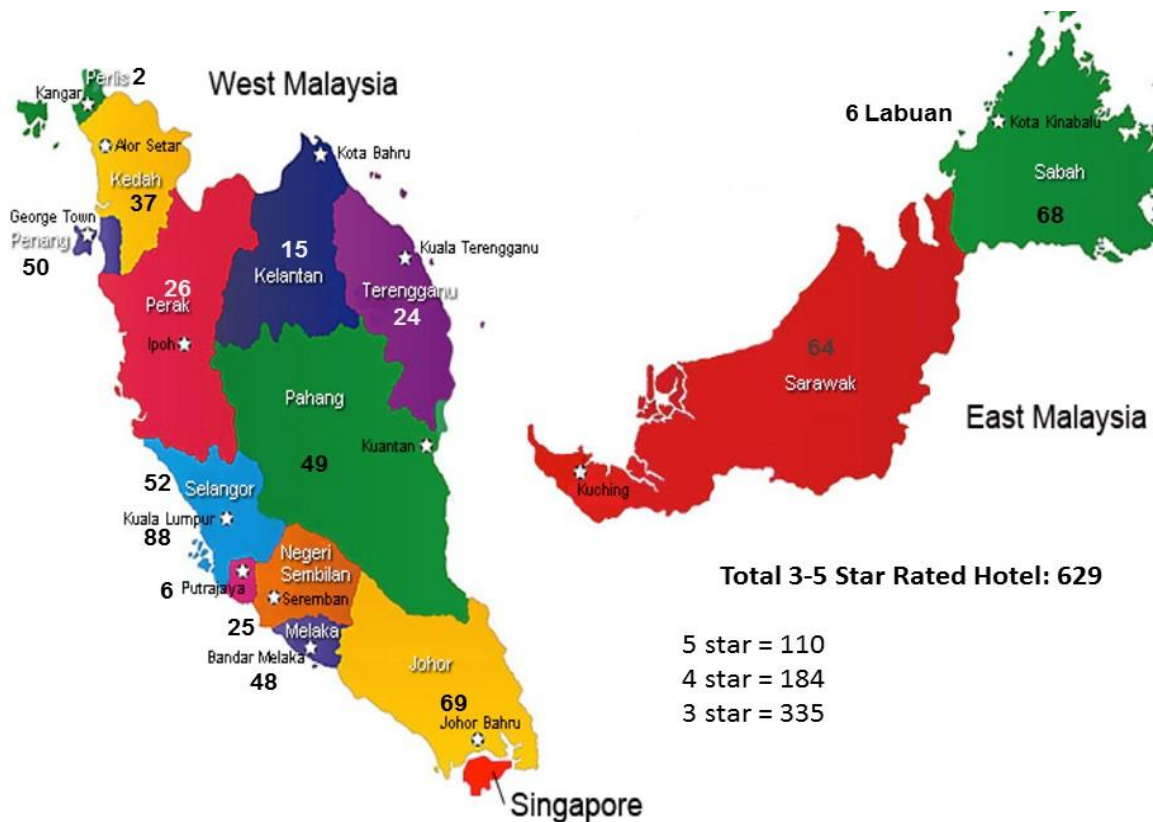
Figure 4.1: Numbers of 3-5 star rated hotels in Malaysia.
Source: Author

A convenience sampling technique was used to establish the targeted population whereby the respondents have to meet the predetermined criteria in order to justify the research objectives (Guest, Bunce, and Johnson 2006) as well as the ability to provide reliable answers to the research questions. According to Sekaran and Bougie (2009), *'convenience sampling is most often used during the exploratory phase of a research project and is perhaps the best way of getting some basic information quickly and efficiently'* (pp276). Therefore, the hotel managers of 3-5 star rated hotels were identified to be able to provide the necessary information about the issues of sustainability adoption in MHRs.

In the case of the present study, the respondents had to participate twice in the data collection process. The respondents were approached to take part voluntarily in the next phase involving the interview process as stated on the last page of the survey questionnaire; hence, this indicated that the respondents were not forced to participate in the next phase of data collection process. The qualitative approach in the form of interview was conducted in the second phase of data collection process whereby the managers who gave their consent to participate in the interview process were taken as the samples. The data obtained from the mixed methods strategy could provide some very useful and rigours findings for the adoption of sustainable practices in Malaysian hotel restaurants (Ghauri and Gronhaug, 2005).

4.6   Phase One: Survey Questionnaire

As explained earlier, the present study conducted the two-phase data collection method whereby phase one involved the quantitative approach and phase two involved the qualitative approach. Data from previous research showed that there has been limited number of studies on the sustainability practices in Malaysia hospitality, which caused the present study to be considered as an exploratory study. An exploratory study is undertaken when not much is known about the situation at hand (Sekaran, 2003), or no information is available on how similar problems or research have been solved in the past. Therefore, extensive preliminary work for the present study was conducted through semi-structured questions among the hotel

managers of 3-5 star rated hotels. Therefore, the researcher will gain an in-depth understanding on the phenomena of sustainability practices in the Malaysian hotel industry.

4.6.1 Pilot Study

A pilot study was conducted to identify the sample size, test the survey instrument, and check the reliability and validity of the trial results prior to the main survey (van Teijlingen and Hundley, 2002). The instrument was developed in English language because the respondents were hotel managers; hence, they were considered to be well-educated. In this case, the pilot study was conducted on the managerial level in hotel industry in Sabah. The purpose of conducting the pilot study on the managerial level was due to the fact that the sample size for the managers' population in hotel industry is small and may affect the actual research sample size. In addition, it was also to avoid the interference of results (Baker 1994; van Teijlingen and Hundley, 2002). Therefore, the purpose of the pilot study was to determine the understanding on the structures of the survey as well as the language used before the actual survey took place. The pilot study was conducted for duration of two weeks in Sabah whereby most of the respondents were identified through personal contact. A total of 30 responses were collected and most of the issue identified in the pilot study were related the format of the instrument as well as spelling errors. The changes were amended accordingly to ensure the relevancy of the survey.

4.6.2 Data Collection

Questionnaire data can be collected using various methods which include personally administered questionnaire, mail questionnaires, and electronic questionnaires (Tashakkori and Teddie, 1998). The first phase of data collection for the present study was conducted using survey questionnaire through a self-administered approach considering that survey questionnaire is able to cover many information and easy to be administered and analysed after the data collected (Tashakkori and Teddie, 1998). The hotels were approached through email to the manager's secretary and the human resource department during the first stage of the data collection. A set of survey instruments and a consent form were enclosed together to

allow the organizations to verify each of the questions in order to prevent any confidential information from being leaked through the data gathering process. The survey questionnaire was collected from the hotel reception counter once the agreement was obtained and the questionnaire was completed. Furthermore, an appointment was scheduled based on both respondent's and researcher's availability if the manager wanted to meet the researcher in person.

4.6.3 Questionnaire Structure and Design

The structure of the questionnaire utilized the same approach for both the paper version and online. The purpose was to make the work of the researcher easier if there were any possible mistakes made during the data collection period. The present study employed the Likert-scale to measure the subject of interest. The structure of the questionnaire is explained in Table 4.3.

Table 4.3: The structure of the questionnaire

SECTIONS	MEASUREMENT	SCALE
SECTION A	Property Profile	Norminal Scale "Tick" Choose One
SECTION B	Organisational Characteristics	5-point Likert Scale "1" Strongly Disagree – "5" Strongly Agree
SECTION C	Environmental Characteristics	"1" Strongly Disagree – "5" Strongly Agree
SECTION D	Perceived Innovation Characteristics	"1" Strongly Disagree – "5" Strongly Agree
SECTION E	Overall Sustainability Performance	"1" Strongly Disagree – "5" Strongly Agree
SECTION F	Sustainability Environment Indicators	"1" Not at all Important – "5" Very Important

Source: Author

The Likert-scale has been widely used to measure the respondents' perception about each statement. A considerable amount of studies has used either 7-point or 5-point rating scales to measure the responses. In relation to the number of points used as a rating scale, there is an argument that it will influence the reliability of the

measurement considering that the reliability scales will increase if the number of scale points increases (Matell and Jacoby, 1971). However, Lissitz and Green (1975) opposed by stating that no specific point should be used for the measurement because the number of scale points used is dependent on the researcher's interest and objectives.

According to Likert (1932), 5-points Likert scales were appropriate to measure the attitude and opinions of respondents about a topic of interest. Therefore, this present study was using 5-points Likert scales to measure the intention to adopt the sustainability practices in Malaysian hotel restaurants. Hence, 5-points Likert ranging from "1" with "Strongly Disagree" to "5" with "Strongly Agree" were used to measure the three characteristics as well as the overall sustainability performance. Next, 5-points Likert ranging from "1" with "Not at all important" to "5" with "Very important" were adopted to measure the sustainable environment indicators. The data were then keyed in and analysed into the Statistical Package for Social Science (SPSS). The results were interpreted to tailor the research questions and then utilized to verify and update the proposed sustainable framework for hotel restaurants.

Furthermore, the research design enabled the researcher to understand more about the variables proposed in the framework, while the numerical data has made it easy to be interpreted in the SPSS. The study was conducted in 14 states across Malaysia, which took the researcher four months to complete the survey. The data collection managed to be completed within this time frame with the assistance of the personal contact who was the researcher's university students that reside in all 14 states across Malaysia.

The variables used in the instruments were adopted from other researchers which include organisational characteristic (Nicholls and Kang; Kasim and Ismail, 2012), environmental characteristics (Kasim and Ismail, 2012), perceived innovation characteristics (Rogers, 1962), and sustainability performance indicators (Mensah and Blankson, 2013). These variables were deemed appropriate in answering the

objectives of the present study. The complete set of the survey instrument is attached in the appendix.

The constructs and items used in the present study were adapted from Nicholls and Kang (2012) and Kasim and Ismail (2012). In this case, four constructs were used to measure the organisational characteristics. In particular, the attitude towards change was adapted from Nicholls and Kang (2012), while top management, cost consideration, and employee connectedness was adapted from Kasim and Ismail (2012). These constructs were found to be capable of measuring the intention to adopt sustainable practices in MHRs. These characteristics were used to measure the extent of managers' perception and level of agreement that will influence their decision to adopt sustainable practices in hotel restaurants. Table 4.4 shows the constructs and items used to measure organisational characteristics.

Table 4.4: Organisational characteristics

No.	Item
	Attitude towards change (Level of risk taking)
1	Top managers in this hotel believe that higher financial risks are worth taking for higher rewards.
2	Top managers in this hotel accept occasional new product failure as being normal.
3	Top managers in this hotel like to take big financial risks.
4	Top managers in this hotel have encouraged the development of innovative strategies, knowing well that some will fail.
5	Top managers in this hotel like to "play it safe."
6	Top managers in this hotel like to implement plans only if they are very certain that they will work.
	Top Management
7	Concerned about the preservation of the environment.
8	Consider environment preservation to be an important aspect in our life.
9	Consider myself educated about environmental issues.
10	Aware of a programme called Pollution Prevention.
11	Would consider establishing an environmental management system (EMS) at our premise.
12	Would consider implementation of environmentally friendly practices to be in the top-three priority list in our company policy.
	Cost Consideration
13	Would consider investing in an environmental management system (EMS) at this restaurant.
14	Would consider purchasing higher-priced organic product as ingredients or items at this restaurant.
15	Would consider implementing EMS even if I find it too expensive for this restaurant.
16	Believe implementing EMS would be beneficial economically in the long run.
17	Would only consider implementing EMS when defiance would cost me a penalty.
18	Would consider spending on advertising to promote the restaurant if I decide to be environmentally friendly.
	Employee Connectedness
19	The training at this establishment includes environmental awareness.
20	Include environmental awareness in the training programme.
21	Would reward employees of they contribute ideas that elevate the practices of friendly practices.
22	Would reward employees who are committed to elevate the practices of environmentally acts.
23	Would encourage employees' involvement in the process of establishing EMS.

Source: Nicholls and Kang (2012); Kasim and Ismail (2012)

The second variable used in the present study is environmental characteristics which were adapted from Kasim and Ismail (2012). This scale was able to measure the intention to adopt sustainable practices in MHRs. In this case, a total of four constructs were used to measure the characteristics which include government law and regulations, green supply chains, competitive advantage (trade pressure), and stakeholder's demands (consumer and community). Meanwhile, a total of 18 items were used to measure the extent of managers' level of agreement that will influence

their intention to adopt sustainability practices in hotel restaurant operations. Table 4.5 presents the constructs and items used to measure environmental characteristics.

Table 4.5: Environmental characteristics

No.	Item
	Government law and regulations
1	Aware of the laws and regulations of the Environment Act.
2	Feel restricted by the laws and regulations of the Environment Act.
3	Feel that there is enforcement of the laws and regulations of the Environment Act.
4	Feel that the local authorities are concerned about the environment.
5	Feel that the federal law is concerned about the environment.
6	Feel that the media is reflects a government that is concerned about the environment.
	Green supply chains
7	Select suppliers that practice green management.
8	Would consider changing my 'non-green' suppliers to green suppliers.
9	Would educate my suppliers on the importance of being green.
10	There is an abundance of green suppliers to choose them.
	Competitive Advantage (Trade pressure)
11	Feel that being a green restaurant will give an added advantage over our competitors.
12	Feel that there is a need to be green innovator in the restaurant industry.
13	Feel that being a green restaurant will increase the revenue of this restaurant.
14	Being environmentally friendly is important in this industry.
	Stakeholder's demands (Consumer and community)
15	Our guest demands that we run an environmentally friendly restaurant.
16	The community that we are based in demands that we run an environmentally friendly restaurant.
17	I feel that the community that we are in is generally an environmentally aware community.
18	Our guest demands that we run an environmentally friendly restaurant.

Source: Kasim and Ismail, 2012

The third variable used to measure the intention to adopt sustainable practices was perceived innovation characteristics that were adapted from Rogers (2003). Perceived innovation characteristics were developed from the diffusion of innovation theory (Rogers, 1962) that was deemed suitable to measure the innovation intention to implement in implementing the sustainability practices in hotel restaurants. In this case, five constructs, namely relative advantages, complexity, compatibility, trialability, and observability were used to measure the characteristics. Table 4.6

displays the constructs and items used to measure perceived innovation characteristic.

Table 4.6: Perceived innovation characteristics

No.	Item
	Relative Advantages
1	It gives greater control in hotel restaurant operations.
2	It improves the service quality in hotel restaurant operations.
3	It improves the productivity in hotel restaurant operations.
4	It easier to do the operation in the hotel restaurant.
5	It would help to accomplish tasks more quickly the hotel restaurant.
6	It would improve the quality of the operation the hotel restaurant.
7	It would enhance the effectiveness of the green practices in the hotel restaurant.
8	It resulted in dramatic increase in profit margin.
9	It resulted in dramatic increases in market share.
10	It resulted in dramatic improvement in overall financial performance.
11	It resulted in very extensive positive change in the cost position relative to key competitors
12	It resulted in much stronger reputation with customers.
13	It resulted in very extensive improvements in the ability to compete in international markets
	Complexity
14	It would differentiate our service and product from competitors.
15	It is technically complex.
16	It is easy to adopt.
17	It needs high investment.
18	It require long-term commitment
19	It require large consequential adjustment
20	It has large potential effect on profitability
	Compatibility
21	It fits with all aspects of our restaurant operation.
22	It fits into our restaurant operation routine.
23	It fits with the equipment and technologies that we have in restaurant operation.
	Trialability
24	I would adopt the sustainability practices on a trial basis long enough to see what it would benefits to.
25	Before deciding to adopt sustainability, I would be able to properly try it out.
	Observability
26	The usefulness of the adopting sustainability is highly observable.
27	The advantages of adopting sustainability can be noticed by others.
28	The excitement of adopting sustainability can be noticed by others.

Source: Rogers, 2003

Apart from the characteristics used to measure the intention to adopt the sustainable practices, the present study also assessed the sustainable performance indicators for environment (Meansah and Blankson, 2013). Table 4.7 exhibits the indicators from environmental, whereas the other two are attached as appendices.

Table 4.7: Sustainable Environmental Indicators

No.	Item
	Environmental education
1	Guests' education on eco-friendly practices.
2	Staff educations on eco-friendly practices.
3	Guests' information about hotel's environmental activities/policies.
4	Enforcement of no-smoking in public areas.
5	Provision of accurate information to guests.
6	Use of ozone-friendly detergents and equipment.
7	Measures to ensure sanitation and food safety.
8	Production of brochures and publicity material using recycled paper.
9	Modification of operations to reduce environmental impacts.
	Support for host community
10	Employment of people from the local community.
11	Use of local materials.
12	Promotion of the local traditional culture.
13	Purchases from local sources.
14	Improvement of lives of local residents by ploughing back profit.
	Conservation projects
15	Use of energy-efficient equipment and products.
16	Installation of water-efficient devices and equipment.
17	Prescription of environmental standards for suppliers.
18	Purchase of eco-friendly materials and/or detergents.
19	Cash or kind of contribution towards conservation project.
20	Purchase in bulk.
	Compliance with legislation and bye-laws
21	Submission of environmental impact statement (EIS) to the EPA.
22	Acquisition of environmental permit from the EPA.
23	Submission of environmental management programme (EMO) to the EPA.
24	Acquisition of health permits from the AMA.
25	Implementation of a linen and towel-reuse programme.
	Waste management

26	Composting of waste.
27	Implementation of recycling program.
28	Sorting of waste into paper, glass, plastic, etc.
29	Reuse of papers, cans, bottles and plastic.

Source: Mensah and Blankson, 2013

4.6.4 Questionnaire Distribution

The distribution of the questionnaire was carried out after identifying the gatekeepers in the numbers of star rated hotel in all the states across Malaysia. It is important for the researcher to identify the gatekeepers because these individuals are the ones who will provide access to the hotel and allow the study to be conducted (Creswell, 2014, pp188). Next, the gatekeepers were briefed about the questionnaire as well as the approach to conduct the distribution. In this case, the gatekeepers and the researcher dropped the envelope sealed questionnaire at the hotel front office counter for the attention of the hotel manager. The envelope was attached with a cover letter that explained the purpose of the research and the time frame to complete the questionnaire before they are collected. Meanwhile, the contact number was also included in the letter to enable the respondents to call the gatekeepers and the researcher to inform that the survey had been answered.

The time frame given to complete the questionnaire was four days before it was collected from the hotel front office counter. A total of 242 questionnaires had to be collected after the sample size was calculated (Krejcie and Morgan, 1970). The distributions started in Sabah and Sarawak, which are the two states located in the Borneo regions. A total of 98 of 3-5 star rated hotels were found in Sabah, while 65 of 3-5 star rated hotels were identified in Sarawak. A total of 40 sets of questionnaires were distributed in both regions for the first attempt. However, only 8 questionnaires were returned with 1 from Sarawak and 7 from Sabah after a week duration. In this case, most of the hotels pointed out during the follow up that they were busy with the operations and some of the hotels mentioned that they were not able to disclose the hotel information to another party. In addition, some of the hotels lost track of the whereabouts of the envelope after the staff shift changed because

the staff who was responsible to pass the envelope failed to send the form to the General Manager's office. As a result, the researcher took note and made a follow up call to the hotels after three days for the questionnaires that were not returned to the gatekeepers.

The same approach was also applied to Peninsular Malaysia. A total of 35 sets of questionnaires were distributed in the 11 states of peninsular regions which accounted a total of 385 set of questionnaires that were distributed. The response rate was also very disappointing with the same reasons given by the hotels in Sarawak and Sabah. Unfortunately, only 10 questionnaires managed to be collected during the first attempt of the questionnaire distribution.

The first attempt was continued for a month before another approach was selected. Accordingly, the researcher decided to have a plan to conduct the survey due to the busy schedule of the respondents. The online survey version was chosen to conduct this research along with the paper distribution. In this case, two methods were carried out at the same time to maximise the numbers of questionnaire collected. As a result, a total of 18 questionnaires managed to be collected from first distribution of the questionnaire in July 2017. The proportion of the first distribution is presented in Figure 4.2.

Questionnaire Distribution in July 2017

- Sarawak
- Sabah
- Peninsular Malaysia
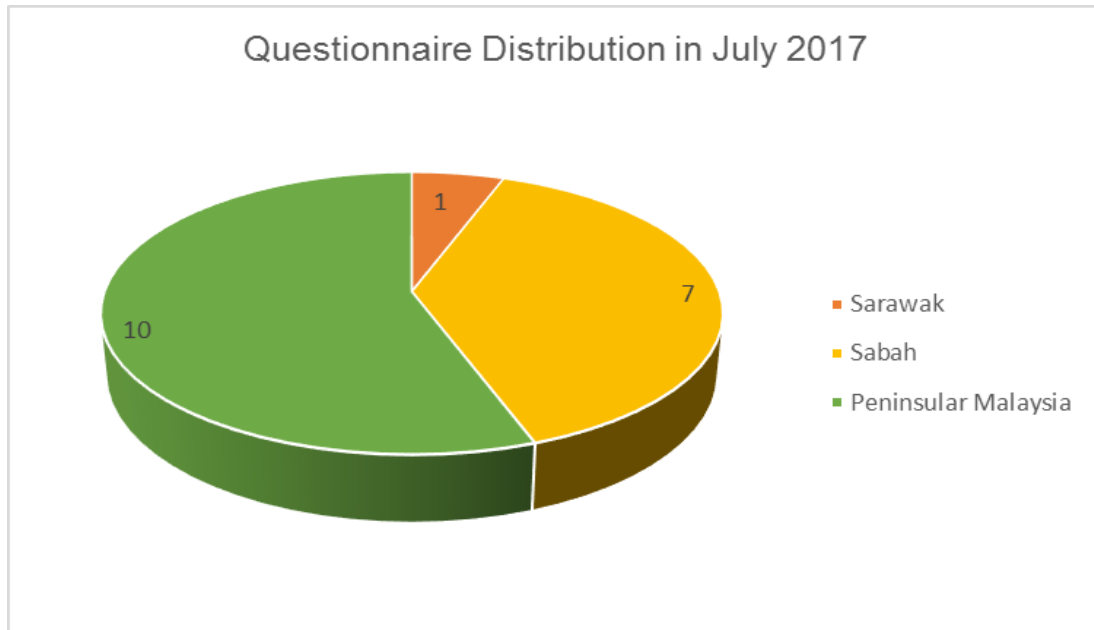
Figure 4.2: Numbers of questionnaire collected in first distribution
Source: Author's fieldwork

4.6.4.1 Online Survey Questionnaire

The research design in the form of online survey questionnaire was implemented impromptu during the data collection period due to the slow response rate obtained when distributing the survey at the hotels. The number of returned surveys was really low, with only one survey received within a week. Hence, an online survey form was developed using the Google form because it was free and can be used until the milestone is reached. This approach was carried out after considering the benefits that can be obtained despite some arguments about its limitation (Wright, 2005). The followings are the advantages of using the online survey for the current research:

1. Wide coverage and saves time. Malaysia is huge country which comprises of the peninsular region as well as the Borneo regions referring to Sabah and Sarawak. These two regions are separated by the South China Sea. Hence, the online method reduces the need for the researcher to travel. As a result, it was identified as a method that saves time, thus allowing the researcher to immediately obtain the feedback once the respondent answers the survey

(Bachmann and Elfrink, 1996; Garton et al., 2003; Taylor, 2000; Yun and Trumbo, 2000; Fan and Yan, 2010).

2. It is more flexible. The respondents can answer the survey according to his/her flexibility, especially when they are free (Zikmund, 2003). The respondents for this research were the hotel managers who are known to have a hectic and busy schedule. Therefore, this method suits the characteristics of the respondents.

3. Minimum budget and less cost. The online survey was found to be more cost saving. The researcher only needed a high-speed internet connection to monitor the process of the online survey. Therefore, the process of collecting the questionnaire involved minimal cost and time in disseminating the questionnaire online to the respondents (Bachmann and Elfrink, 1996; Couper, 2000; Llieva et al., 2012; Yun and Trumbo, 2000; Fox et al., 2001; Nie et al., 2002; Fan and Yan, 2010).

4. New method of data collection. In 2017, the usage of high technology has dramatically increased. In this case, most smart-phone and tablet are equipped with internet connection; hence, the use of online survey fits the current lifestyle of the society. Hence, it can be observed that the present trends in the research world have chosen to conduct their survey online which allows the respondents to answer it through the computer or via smart phone. Overall, it is more practical to have an approach that suits the need of a particular generation (Flaherty et al., 1998; Flanagin and Metzger, 2001; Ahuja and Carley, 1998; Rice and Katz, 2001; Wright, 2005; Horrigan, 2001; Wellman, 1997; Welmman and Haythornthwaite, 2002; Parks and Floyd, 1996; Tidwell and Walther, 2002).

5. More sustainable and environmental friendly. No printing was involved, and no papers were used when using the online survey. Therefore, it did not harm the environment and society's health.

The researcher and the assistant called the hotels and spoke to the manager's secretary to ask for the email address before the online survey link was emailed. Once it was received, the email was sent out together with the cover letter, a soft copy of the questionnaire, and the link of the online survey base platform. For the first few weeks, the responses received were quite impressive. However, the number of respondents giving feedback became slow after a month. A total of 26 surveys were collected through online survey. The list of the survey collected via online is presented in Table 4.8.

Table 4.8: Survey received via online Google Form

Date	State	Property Type	Business Types	Average Customer Mix
12/7/2017	Selangor	4-star rated hotel/resort	Independently owned/operated	Business
24/7/2017	Sabah	4-star rated hotel/resort	Independently owned/operated	Leisure
31/7/2017	Sabah	4-star rated hotel/resort	Independently owned/operated	Business
1/8/2017	Penang	4-star rated hotel/resort	Chain affiliated	Leisure
2/8/2017	Perak	5-star rated hotel/resort	Independently owned/operated	Leisure
3/8/2017	Negeri Sembilan	4-star rated hotel/resort	Independently owned/operated	Leisure
7/8/2017	Sabah	5-star rated hotel/resort	Chain affiliated	Business
7/8/2017	Kuala Lumpur	5-star rated hotel/resort	Chain affiliated	Business
9/8/2017	Selangor	3-star rated hotel/resort	Independently owned/operated	Business
9/8/2017	Selangor	5-star rated hotel/resort	Chain affiliated	Business
9/8/2017	Sarawak	4-star rated hotel/resort	Independently owned/operated	Business
11/8/2017	Negeri Sembilan	4-star rated hotel/resort	Independently owned/operated	Business
13/8/2017	Kelantan	5-star rated hotel/resort	Chain affiliated	Business
14/8/2017	Sabah	3-star rated hotel/resort	Independently owned/operated	Business
17/8/2017	Kuala Lumpur	4-star rated hotel/resort	Independently owned/operated	Leisure
18/8/2017	Negeri Sembilan	3-star rated hotel/resort	Independently owned/operated	Business
21/8/2017	Selangor	3-star rated hotel/resort	Independently owned/operated	Business

30/8/2017	Sabah	5-star rated hotel/resort	Independently owned/operated	Business
4/9/2017	Melaka	3-star rated hotel/resort	Independently owned/operated	Leisure
5/9/2017	Melaka	3-star rated hotel/resort	Chain affiliated	Business
8/9/2017	Johor	4-star rated hotel/resort	Chain affiliated	Leisure
12/9/2017	Sabah	3-star rated hotel/resort	Independently owned/operated	Leisure
14/9/2017	Selangor	5-star rated hotel/resort	Independently owned/operated	Business
25/9/2017	Selangor	5-star rated hotel/resort	Independently owned/operated	Business

Source: Author's fieldwork

The distribution of the paper questionnaire still continued, and the number of survey collected increased slowly despite the decrease in the response rate. After some discussion, a decision was made in September 2017 for the researcher to take the initiative to go to the hotels and personally approach the hotel managers. However, some of them were reluctant to provide their assistance in answering the survey. Hence, they insisted that the researcher drop the survey off or go through the human resources department as they refused to disclose the information to another party.

A total of three full weeks were utilised by the researcher to cover the entire 3-5 star rated hotels in Malaysia. Overall, a total of 143 surveys managed to be collected via fieldwork. Moreover, it was easy for the researcher to approach the hotel managers personally to participate in the second stage of the research process. However, majority of the respondents refused to participate in the second stage of the interview. After four months of data collection process, the researcher successfully collected 169 questionnaires throughout Malaysia using Google form online and face to face survey questionnaire. On a similar note, 92 questionnaires were collected from the Peninsula states of Malaysia, while 77 questionnaires were collected from Sabah and Sarawak. The total number of questionnaire collected, and the proportions are presented in Table 4.9.

Table 4.9: Total number of questionnaire collected.

States	Total Collected	Percentage
Johor	23	13.6
Kedah	2	1.2
Kelantan	5	3.0
Kuala Lumpur	2	1.2
Melaka	22	13.0
Negeri Sembilan	3	1.8
Penang	19	11.3
Perak	1	.6
Sabah	50	29.6
Sarawak	27	16.0
Selangor	8	4.7
Terengganu	7	4.1
Total	**169**	**100.0**

Source: Author's fieldwork

The response rate was 70% from the sample sizes suggested by Krejcie and Morgan (1970); however, the numbers of respondents was appropriate and followed the rules of thumb in determining the sample size (Roscoe, 1975).

4.6.5   Data Analysis

Statistical Package for Social Sciences (SPSS) version 23 was employed to analyse the empirical data of the present study. Generally, quantitative analysis is defined as *'The numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observation reflect'* (Babbie, 2012, pp414). Most of the sustainability studies in hotel and tourism field were analysed using the quantitative analysis such as the issues and challenges of sustainable practices in hotels (e.g. El Dief and Font, 2010; Nicholls and Kang, 2012) and restaurants (Hu, Horng, Teng, and Chou, 2012; Kasim and Ismail, 2012).

A variety of tests were used to conduct the analyses in order to provide substantial findings of the present study with the aim of meeting the research objectives (Babbie, 2012, pp390). The main objective of the present study was to develop a new and improved sustainability framework model to facilitate MHRs. Hence, logistic regression was determined to be able to produce a significant result. The logistics regression was chosen due to the binary element of its dependent variable. According to Hair et al. (1998), *'logistic regression is the preferred method for two-group (binary) dependent variables due to its robustness, ease of interpretation, and diagnostics'*. Moreover, this analysis has been commonly employed in the technology adoption context studies (Wang et al., 2016; Awa and Ojiabo, 2016; Ramdani et al., 2009; Chau and Tam, 1997).

4.6.5.1   Logistic Regression

The dependent variable should be binary or dichotomous in order to perform a logistic regression analysis (Hosmer and Lemeshow, 2013). The quantitative data of the present study was analysed using logistic regression analyses in order to validate the MHRs sustainable model because the independent variables used in the present study are dichotomous concerning whether MHRs would adopt the sustainable practices or not. In addition, previous research highlighted the logit model developed through innovation adoption (Chau and Tam, 1997; Kuan and Chau, 2001; Zhu et al. 2003; Pan and Pang, 2008; Soares-Aguiar and Palma-dos-Reis, 2008; Ramdani et al., 2009).

Furthermore, all of the predictors in the present study are considered as input into the equation simultaneously because there is no specific requirement that states the hypotheses need to be placed in a correct order (Tabachnick and Fidell, 2007). Therefore, the equation of the logistic model is specified as follows:

$$\text{Logit}(p) = \ln\left(P_i / 1-P_i\right) = \beta_0 + \beta_1 \times ATC_i + \beta_2 \times TM_i + \beta_3 \times CC_i + \beta_4 \times EC_i + \beta_5 \times GLR_i + \beta_6 \times GSC_i + \beta_7 \times CA_i + \beta_8 \times SD_i + \beta_9 \times RA_i + \beta_{10} \times CPX_i + \beta_{11} \times COM_i + \beta_{12} \times TRIAL_i + \beta_{13} \times OBSV_i + \varepsilon_i$$

The symbols used for the equation are described below:

P the probability sustainable adoption

- p/(1-p) the Odds

- ε_i refers to the error term with the mean 0 and varian 1/N. (P_i / 1-P_i) ε_i = N [0, 1/N. (P_i / 1-P_i).

- βs denotes the coefficients which imply that one-unit change in independent variable.

- X results in β units' change in the dependent variable, the likelihood of sustainable adoption in Malaysian hotel restaurants (MHRs).

The predictors for sustainability adoption for MHRs are coded as follows:

ATC Attitude towards Change
TM Top Management
CC Cost Consideration
EC Employee Connectedness
GLR Government Law and Regulations
GSC Green Supply Chain
CA Competitive Advantage
SD Stakeholder's Demands
RA Relative Advantages
CPX Complexity
COM Compatibility
TRIAL Trialability
OBSV Observation

4.6.6 Validity and Reliability

The model had to undergo the process of validity and reliability to ensure the accuracy as well as the fitness of the measurement. As stated by Babbie (2012), validity is *'a term describing a measure that accurately reflects the concept it is intended to measure'*, while reliability refers to *'a matter of whether a particular technique, applied repeatedly to the same object, yields the same result each time'* (pp191). Generally, the validity can be judged based on face validity, criterion-related validity (or predictive validity), construct validity, and content validity (Babbie, 2012).

Several types of validity test can be performed to measure the instruments (Sekaran and Bougie, 2009). The construct validity has to be ensured because the measure employed in the present study was taken and adapted from the previous study of the same field. The present study also adopted the content validity and face validity by conducting a pilot study among 30 managers from managerial level in hotels in order to test and rectify the constructs and questionnaire items before conducting the actual survey.

Factor analysis was also tested to further strengthen the validity of the model (Hair et al., 2010). An exploration type of factor analysis was conducted to investigate the variable relationships with the intention to adopt the sustainability practice in MHRs. There is a total of 68 items where 23 items from organizational, 17 items from environmental and 28 items from perceived innovation characteristics were used to test the relationships. Moreover, Pett et al. (2003) suggested using principal components analysis (PCA) in establishing preliminary solutions in exploratory factor analysis. Therefore, PCA was used to investigate the dominant modes of variation in the data after subtracting the mean from each observation. These analyses were presented further in Section 5.3 in Chapter 5.

Furthermore, the reliability of the survey instrument was also tested. In the case of the current research, it should be noted that the variables used in the theoretical model were adopted; however, the reliability test needed still had to be performed to observe how well the instrument can be utilized in the Malaysian contextual setting. Apart from that, the most important consideration was that the instruments could produce reliable data (Osborne and Waters, 2002). In most cases, the common way of assessing the reliability of the data is using Cronbach's Alpha value. In addition, the data cannot be fully trusted and is not scientifically convincing if the reliability of measures cannot be ensured (Straub et al., 2004). According to some experts, it is suggested that Cronbach's Alpha value above 0.7 is considered satisfactory (Nunnally and Bernstein, 1994; Gefen, Straub, and Boudreau, 2000). Five sections in the survey instruments were found acceptable with a value above 0.70, while

some of the sections were found to have a value of more than 0.90 and these scales were preferable. Table 4.10 presents the Cronbach alpha values.

Table 4.10: Cronbach alpha values for the instrument

Section	Cronbach Alpha
Section B: Organisational Characteristics	0.77
Section C: Environmental Characteristics	0.90
Section D: Perceived Innovation Characteristics	0.89
Section E: Overall Sustainability Performance	0.94
Section F: Sustainability Environment Indicators	0.95

Source: Author

4.7   Phase Two: In-Depth Semi-Structured Interview

The second phase of the present study was conducted using an in-depth semi structured interview. The in-depth semi-structured interview was designed to answer why certain factors was found significant and insignificant in influencing the adoption of sustainable practices in MHRs.

4.7.1 Data Collection

The interview phase was conducted following the quantitative survey with the aim of further clarifying the reasons behind the significant and insignificant factors that influenced the adoption of sustainable practices in MHRs. The interviews were conducted with ten hotel managers of 3-5 star rated hotels in Malaysia. Generally, in-depth interview has been known as a popular technique for exploratory research (Sekaran and Bougie, 2009). However, Gubrium and Holstein (2001) argued that in-depth interviews are seldom being conducted on its own but are usually combined with data collected through other methods.

In the case of the present study, all ten interviews were conducted face-to-face. The face interviews allowed the researcher to *'adapt the questions as necessary, clarify doubts, and ensure that the responses are properly understood, by repeating or*

rephrasing the questions' (Sekaran and Bougie, 2009). However, one of the disadvantages experienced by the research in using this technique was the high expenses involved when conducting the interview. The same disadvantage is also mentioned by Sekaran and Bougie (2009) in their Research Method for Business Book.

4.7.2 Informants

As clarified earlier (Section 4.2), the hotel general managers of 3-5 star rated hotels were chosen as the key respondents of the present study because they are able to justify the research objectives and able to provide the most reliable answers (Guest, Bunce, and Johnson 2006). Table 4.11 shows the in-depth interview informants.

Table 4.11: In-Depth Interview Informants

Informants	State	Property Type
HM1	Sabah	4-star rated hotel/resort
HM2	Sabah	4-star rated hotel/resort
HM3	Selangor	4-star rated hotel/resort
HM4	Negeri Sembilan	4-star rated hotel/resort
HM5	Kelantan	5-star rated hotel/resort
HM6	Johor	5-star rated hotel/resort
HM7	Sarawak	4-star rated hotel/resort
HM8	Sarawak	5-star rated hotel/resort
HM9	Sabah	3-star rated hotel/resort
HM10	Sabah	4-star rated hotel/resort

Source: Author

The interview participants who are hotel managers were approached during the first stage of the survey questionnaire data collection process. In this case, they were asked to voluntarily participate in the interview process on the last page of the questionnaire which led an appointment to be set for the interview. The researcher

took the lead and asked impromptu questions and new questions to the respondents during the interview sessions. The interview sessions were recorded with a voice recorder whereby the participants had been given a brief explanation about the interview and the recording. Apart from that, they were asked to sign the consent form and made aware that they could withdraw from the session anytime. The interviews ended when the researcher managed to conduct a sufficient number of interviews as well as obtained adequate information and identified the important factors operating for the issues.

Overall, the researcher managed to conduct ten interviews during the period of four months data collection. The numbers of interviews were identified sufficient according to Guest, Bunce, and Johnson (2006) based on their suggestion that six interviews would be sufficient for high level, overarching themes development of key data provided with meaningful interpretations.

4.7.3   Key Informant Interview Discussion Guide

During the interview sessions, the researcher has taken the lead and asked impromptu questions and new questions to the respondents. The questions were developed based on the key findings found in the quantitative data in order to answer the 'why'. The researcher also prepared the key informant interview discussion guide as a reference during the interview sessions. Table 4.12 shows the key informant interview discussion guide list.

Table 4.12: Key informant interview discussion guide

Introduction
- Thank the informant for their cooperation, introduce self, and explain the research aim, objectives and expected outcomes.
- Ask the interviewee to sign the consent form.
- Gain general background of key informant; name, post, and duration of working in food and beverage/hotel line.

Question 1: Current Sustainability Practices
- What do you think about the current sustainability practices in Malaysia hotel industry?

Question 2: Information on Sustainability Practices in Own Hotel
- Does your restaurants/FandB department practice the sustainability/green practices?
- If your hotel does not utilise these practices, will your hotel consider adopting the sustainability practices? OR
- If your hotel has started the practices, what are the practices you have implemented?
- What makes the management adopt the sustainability/green practices?

Question 2 and 4: Organisational Characteristics
- Is it a risk to adopt the practices in your restaurant?
- Will you perform better if you adopt the sustainability practices?
- Do the practices fit your restaurant's operation and routine?
- Do you think employees should be trained and involved in the green practices?
- What types of training should be conducted?

Question 3 and 7: Environmental Characteristics
- Is costing the main issue in adopting the green practices?
- Will you invest/have you invested in the environmental management system? If YES/NO, Why?
- Will you purchased/have you purchased organic and local products/produces or green supply?
- Do you think your stakeholder' (consumer and community) care if your restaurant adopts the practices?
- Is your stakeholder' really concerned about the environmental issue?
- What has been their feedback if you have adopted the sustainability practices?
- Will you give it a try first before you really adopt the practices?

Question 5: Government Support and Association
- To what extent does the Malaysian Government enforce the sustainability practices in Malaysia?
- Are there any bodies monitoring the sustainability practices?
- Are they easy to practice?
- What has been the support received from the government and Malaysian Association of Hotel (MAH)?

Question 6 and 8: Perceived Innovation Characteristics
- Do you think that the adoption of the sustainability practices in your restaurant will give a competitive advantage for your hotel?
- What advantages do you think you will gain when you adopt the practices in your restaurant?
- Will it increase your restaurant operation revenue and the hotel revenue?
- Is adopting sustainability practices a part of the innovation process for your hotel restaurant?
- What do you think about the relative advantages in applying innovation such as adopting the green practices in your restaurant?
- What difficulties will you face when you adopt the sustainability practices?
- Do you think it is compatible with your hotel operation?
- Or will you try and observe the practices first before deciding to adopt the practices in your restaurant?

Question 9: Overall Sustainability Performance
- What do you think will be the restaurant's performance if you adopt the sustainability practices?

To end
- Thank the informant.

Source: Author

4.7.4 Data Analysis

The reasons why the factors were found significant and insignificant are reflected in the second phase of the present study. The data analyses provided better insights and understanding on the adoption of sustainable practices in MHRs (Ghauri and Gronhaug, 2005). The causality failed to demonstrate the statistical analysis even though the quantitative data managed to reveal the relationship between the variables (Tabachnick and Fidell, 2007).

4.7.4.1   Coding of Qualitative Data

The gathered data were transcribed and coded in order to gain a better understanding of the results. Babbie (2012) suggested that *'the key process in the analysis of qualitative social research data is coding – classifying or categorising individual pieces of data'* (pp396). The data of the present study was analysed using three stages of the coding method in qualitative data analysis as follows: (1) open coding, (2) axial coding, and (3) selective coding (Strauss, 1987; Neuman, 2002). The purpose of open coding was to prepare the data as a *'preliminary analytic categories or codes'* (pp481), whereby the data was organised, and the codes were linked in order to disclose the major analytic categories. Meanwhile, the final stages were performed by selective coding in order to examine the codes in ensuring that the data support the coding categories (Neuman, 2002). The coding method can be referred to in Chapter 6 where the coding process is performed according to the predefined theme.

Each code was put under pre-developed categories according to its suitability to be in a theme, for example, for the theme of 'what are the current sustainability practices in their hotel restaurants?', statements which mentioned "not many hotels practising" and "not ready to practice" were coded under categories of level of sustainable practices, while statements which mentioned "using local suppliers" and energy savings were coded under the types of sustainable practices. Several categories were also pre-developed beforehand based on the literature. Then, each code together with the number of the interviewees was coded into a thematic table

for comparative analysis purposes, to see the pattern or associations of the data (See Chapter 6: Qualitative data analysis). Analysis of data was then written up in text form based on underlying research objectives, supported by verbatim quotes from interviewees' statements. The significant and insignificant of predictors in quantitative findings revealed through the coded qualitative data which can provide a clear picture of sustainable adoption in MHRs.

4.7.4.2   Trustworthiness

The samples sized used for the qualitative phase were determined using the saturation approach as suggested by Glaser and Strauss (1967). The saturation point was identified when there is limited information gathered after the new data is collected. Moreover, the researcher adopted the four aspects of trustworthiness introduced by Guba (1981), namely credibility, transferability, dependability, and confirmability to ensure the trustworthiness of the data.

The credibility was ensured considering that the research method was well established involving the interview questions and data analysis method that were derived from previous innovation adoption studies as well as the sampling methods used to ensure the honesty of the informants (Shenton, 2004). Meanwhile, the transferability was ensured through the brief disclosed information in the present study such as the numbers of participation hotels, profiles of the property, data collection methods, and time period of data collection (Shenton, 2004). On the other hand, the dependability was also secured when the thesis provided a detailed discussion on the research design, sampling, and data collection fieldwork. As for the confirmability, it was a decision trail (Sandelowski, 1986) where the research design, sampling, data collection methods, and data analysis were left to be audited by the readers for the trustworthiness (Koch, 2006).

The position of the researcher may impact the data collection process and its analytic stance towards the hotel managers and the issues asked. There are *'no research is free of the biases, assumptions, and personality of the researcher and*

we cannot separate self from those activities in which we are intimately involved' (Sword, 1999: 277). The researcher's positioning include personal characteristics, such as gender, race, affiliation, age, sexual orientation, immigration status, personal experiences, linguistic tradition, beliefs, biases, preferences, theoretical, political and ideological stances, and emotional responses to participant (Bradbury-Jones, 2007; Finlay, 2002; Hamzeh and Oliver, 2010; Horsburgh, 2003; Kosygina, 2005; Padgett, 2008; Primeau, 2003). On that note, reflexivity was known for keeping the process of research ethical (Berger, 2015). Pillow (2003) stated that *'reflexivity is situating the researcher as non-exploitative and compassionate towards the research subject,'* thus overcome the issues of researcher-researched relationships.

Reflexivity is crucial during the research process, such as the formulation of a research question, collection, and analysis of data, and drawing conclusions (Bradbury-Jones, 2007; Guillemin and Gillam, 2004). During the interview session, self-reflective assists the researcher to become aware of his or her reactions to interviews, thoughts, emotions, and their triggers. Moreover, during the data analysis and reporting of the data, reflexivity helps to alert the 'unconscious editing' due to own sensitivities. Thus, full engagement with the data and more in-depth comprehensive analysis could be done (Valentine, 2007).

Moreover, self-reflexivity is closely intertwined with emotional reflexivity in which both should not be ignored. Spencer (2010) emphasised self-reflexivity *"is a very intricate process, and places serious demands upon the fieldworker to know themselves-not only in terms of the positions we occupy but also in terms of our bodily and psychological proclivities and the dynamics of our 'inner self'"* (pp32). During the data collection process, important findings can be obtained by simply observing one's body and also psychological proclivities. Therefore, the researcher should consider *"how field emotions affect the data we collect, frame and interpret"* (Davies and Spencer, 2010).

4.8   Research Ethics

The main objective of research ethics is to ensure that a trustworthy scientific research is conducted in a rigorous manner. In the case of the present study, it was necessary to go through the University of Exeter Business School Ethics committee prior to the data collection process. The purpose of carrying out the ethics process was to assure the safety, rights, dignity, confidentiality, and anonymity of research subjects, the welfare of animals as well as the sustainability of the environment. Furthermore, it is the role of the university to safeguard the wellbeing, rights, and academic freedoms of researchers as well as the importance of maintaining the reputation of the university as a centre that properly conduct high quality research (University of Exeter, 2016).

The ethical issues can be executed in different forms of research activities and should only be implemented when it concerns the interests and rights of others (Punch, 2005). In this case, the hotel managers were chosen as the participants of the present study, thus requiring the approval from the Ethics Committee. In the application for the ethics approval, the participants had to acknowledge that they were expressing their rights in full as stated in UK law despite the fact that the present study was conducted in a Malaysian setting. Accordingly, the participants' agreement to participate voluntary without any forces had to be obtained prior to the conduct of the research (Sarantakos, 2005) in order to ensure that the participants and/or legal guardians were fully acknowledged and able to withdraw from participating during the process of data collection.

The current research employed the *Code of Good Practice in the Conduct of Research* as a guideline provided by The Business School and set up by the University of Exeter. The approval from the Ethics Committee was received and signed within two weeks of the application. The duration of four months (from 1st July until 30th October 2017) to conduct the present study as determined by the researcher was approved by the university.

The aim of the present study was to obtain the view of the hotel managers regarding the adoption of sustainability practices in their restaurants' premises as well as to find out how the overall organisational performance can be improved. Hence, it can be clearly understood that the present study had no intention to harm the participants physically or psychologically based on the potential risks and benefits to the participants, the informed consent protocol, and the assurances for data confidentiality. More importantly, the code of ethics was reflected in two stages of data collection process to assure the present study can be conducted in a proper manner.

4.8.1   *Risks and Benefits*

The conduct of a research might give participants a feeling of discomfort and/or the feeling of inconvenience. However, it should be noted that it can also benefit both parties. Accordingly, research is ethically acceptable only when its potential benefits justify any risks identified in the research (NHMRC, 2007). In addition, researcher is not allowed to ignore the risks in obtaining the outcome that can benefit the research even though some risks are possible to be overcome if the benefits outweigh these risks. The benefits received would significantly impact the contribution of the knowledge, improve socio-economic status, and enhance the skills of the researcher or participants.

As suggested by Patton (1990), a qualitative approach has been identified as potentially leading to some social risks to the participants in the data collection process. The risks that might arise are related to the participant's feelings and emotions such as anxiety and discomfort which may happen when the participant expresses his/her views during the interview. Hence, the researcher had to come up with the following ethical solutions in order to overcome these issues: (1) attaching the information sheet with the survey instruments and the semi-structured questions, (2) briefing the participants about the research procedure, (3) welcoming the participants with a question, and (4) keeping all the information confidential (Sarantakos, 2005).

In regard to this matter, the researcher executed some strategies such as having some practice session with her colleagues to ensure that the interview sessions are free from anxiety. This was such a useful approach which allows the researcher to receive feedback prior to the actual interview day. Furthermore, the researcher also used the simplest vocabulary and language during the interview sessions, which is helpful in allowing the participants to understand more about the subject and issues discussed.

Travel risk during the data collection period might also be an issue for the researcher. However, the researcher had taken precautionary actions and made sure whom to contact if an emergency occurred. The researcher underwent the University of Exeter risks assessment prior to the ethics application. All the potential risks and the strategies to overcome the risks were all listed. Finally, the risk assessment form was verified and approved by the university safety officer.

4.8.2   Informed Consent Protocol

The participants were notified about their rights through the consent forms attached during the data collection periods (Sarantakos, 2005). The participants were given the consent form attached together with the information sheet and the survey questionnaire during the first phase of data collection process. Next, the participants had to provide their signature once they understood and agreed with the survey, which indicated that they had given their informed consent. The survey questionnaire was collected together with the consent form, and the researcher made sure the return survey instruments were enclosed together with the signed consent form from the respondents.

Furthermore, the participants were told to read the consent forms and were made aware that their voice will be recorded during the process prior to the interview sessions. The participants were notified that their voice would be recorded on the voice recorder and then labelled accordingly. The researcher also explained the research procedures on the information sheet attached.

On another note, the participants were also informed of the voluntary nature of the study for both the data collection approaches. The decision to not be involved in the study was fully respected with a 'thank you'. In addition, the participants were encouraged to ask questions and provide feedback personally to the researcher via email during the process. The researcher also assured to maintain the privacy, anonymity, and confidentiality of the participants' identity while writing the research reports (Neuman, 2009).

4.8.3 Data Storage

The data of the present study was stored on the external drive and U-drive with secured password security in ensuring that they are properly stored. In addition, both the quantitative and qualitative data were processed fairly and lawfully without any negligence and unethical behaviour. The data derived was also obtained only for one or more specified purpose; hence, it will not be further processed in any manner incompatible with that purpose or those purposes. Meanwhile, the participants who were involved in the data collection process, especially in the interviews were still able to remove the data if they chose to withdraw from the study any time (Sarantakos, 2005). However, the participants were not able to do so with the survey instrument data because it was impossible for the participants to delete the data specifically because it was conducted anonymously.

The study data was also used adequately as well as in a relevant not excessive manner. Moreover, it will also be used accurately and necessarily be updated. Moreover, the data was processed according to the rights of data subjects under the act to ensure it was viable and for any purpose or purposes shall not be kept for longer than necessary (e.g., Sieber, 1998, recommends 5 to 10 years; the APA, 5 years). Punch (2005) further added that appropriate technical and organisational measures should be taken against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data. The data also will not be transferred to a country outside the European Economic Area unless an adequate level of protection is ensured.

4.9   Summary

This chapter managed to explain the research approaches and strategies used in the present study. More specifically, the current research utilized the philosophical pragmatism stance and mixed methods approach as they were deemed appropriate for the present study. The main reason of adopting this approach was to provide the researcher with the possibility of deriving the best understanding about both the research problem and research questions. Accordingly, the mixed methods research design was identified as the most appropriate design for the present study more sources of evidence allow more accurate findings and conclusions to be drawn (Scandra and William, 2000). The survey instruments were adapted from previous studies with six sections developed and tested in the pilot study. Meanwhile, the Ethic Form to the ethical committee was submitted in order to justify the selection of the hotels, the process of gaining access to 3-5 star rated hotels, the data collection techniques appropriate for the study, issues of reliability and validity, sampling techniques, pilot testing, and ethical considerations prior to the process of data collection. The first phase of data collection was conducted in the form of questionnaire survey among hotel managers from 3-5 star rated hotels in Malaysia with a total of 169 responses returned from the fieldwork. Apart from that, logistic regression analysis was performed to analyse the data according to the research objectives. On another note, in-depth semi-structured face-to-face interviews were conducted with 10 hotel managers based on a discussion guide, in which the interviews were coded, and the emerging themes were identified. Finally, the research ethics of the present study was explained further in the last section of this chapter.

The next chapter discusses the result of quantitative data findings and the survey questionnaire.

Chapter 5

5.1   Quantitative Data Analyses

This chapter presents the results of the survey questionnaires with the hotel managers. The aim of this phase was to explore how sustainable Malaysian hotel restaurant sector is and to investigate their intention to adopt the sustainability practices to improve overall sustainability and organisational competitiveness performance.

There were four main focus areas related to why the managers were chosen to be the respondents of this research. The first aim was to evaluate their perception of the innovation characteristics in adopting environmental practices for the Malaysian hotel restaurants. Then, it was also to evaluate the managers' levels of agreement on how organisational characteristics were associated with sustainability adoption. The current level of environmental characteristics that influence the sustainable adoption within Malaysian hotel restaurants was also evaluated. Furthermore, the questionnaire aimed to evaluate and analyse the importance of sustainable performance indicator applied in Malaysian hotel restaurants. However, the most important consideration of this research was to evaluate the overall sustainability performance of Malaysian hotels.

The present chapter proceeds as follows. The property profiles of this sample are presented in terms of which states in Malaysia they are in, the location, property type and size, number of employees, years of operation, business types and also their average customer mix. The descriptive analysis was conducted to identify the mean scores and the standard deviation values. Then, to verify the fitness of the model binary logistic regression was performed. The final section in this chapter presents the discussion of the quantitative findings.

5.2   Property Profile

There are 169 hotel properties in Malaysia which participated in this research. As the first objective of this research was to critically analyse and gain insight into how sustainable Malaysian hotel restaurants are, the analysis chapter starts by reporting the findings from the descriptive analysis amongst these variables.

5.2.1 States in Malaysia

Respondents were requested to fill in which state their property was located. Table 5.1 shows that the majority of the hotels that participated in this research were from Sabah (n=50) with 29.6 percent from the overall respondents. The states with the second highest number of respondents were Sarawak (n=27) with 16 percent as well as Johor (n=23) with 13.6 percent. The reasons for the highest number of participants from these 3 states were the slow occupancy during the data collection and the managers' willingness to spend their time to answer the survey. A convenience sampling were used because it met predetermined criteria to justify the research objectives (Guest, Brunce and Johnson, 2006), and provides reliable answers to the research questions.

Table 5.1: Respondent's Origins (n=169)

State	n	%
Sabah	50	29.6
Sarawak	27	16.0
Johor	23	13.6
Melaka	22	13.0
Penang	19	11.3
Selangor	8	4.7
Terengganu	7	4.1
Kelantan	5	3.0
Neg. Sembilan	3	1.8
Kuala Lumpur	2	1.2
Kedah	2	1.2
Perak	1	.6
Total	**169**	**100.0**

5.2.2 Property Types and Location

There were n=169 properties that participated in this research. The organizations were from 3 to 5 star-rated hotels which are situated in all states of Malaysia. As the table shows, n=85 (50 percent) of 3 star hotels participated in this survey. In addition, n=61 or 36 percent of 4 rated star hotels were also involved in this research. However, only n=23 of 5 star properties, 14 percent, contributed to this data.

Table 5.2: Property types (n=169)

Star-rated	n	%
3 star	85	50.0
4 star	61	36.0
5 star	23	14.0
Total	**169**	**100.0**

Furthermore, the respondents' properties were located in three areas (Table 5.3): urban areas (n=122) with 72 percent, suburban areas (n=35) with 20.7 percent and rural areas (n=12) with 7 percent. Most tourist accommodation has been built in urban areas due to the demand for accommodation to be situated in the tourist areas.

Table 5.3: Property locations (n=169)

Location	n	%
Urban	122	72.2
Suburban	35	20.7
Rural	12	7.1
Total	**169**	**100.0**

5.2.3 Property Size

The hotel star rating was determined by the size of the property. For this research, as illustrated in Table 5.4, 80 percent of the properties had more than 51 rooms. There were also 18 percent properties which operated 11-50 rooms at their hotel. However, only 4 properties who had 1-10 rooms participated in this research.

Table 5.4: Property size (169)

Property Size	n	%
1-10 rooms (small)	4	2.4
11-50 rooms (medium)	30	17.8
51+ rooms (large)	135	79.9
Total	**169**	**100.0**

5.2.4 Number of Employees

The number of employees working in hotels is also determined by the size of its property (Table 5.5). This to make sure that the operations will run smoothly and steadily without any flaws of service that will tarnish the hotel's reputation. There were n=135 properties who paid more than 31 employees to work at their hotels. It was also found that n=28 hotels hired 11 to 30 employees to operate their business. Following this, n=9 hotels claimed that they employed a maximum of 10 employees.

Table 5.5: Numbers of employees (169)

Number of Employee	n	%
1-10 employees	9	5.3
11-30 employees	28	17.8
31+ employees	135	79.9
Total	**169**	**100.0**

5.2.5 Business Type, Average Customer Mix and Years of Operation

Table 5.6 shows the type of business operated by these (n=169) hotel firms: independently owned or operated hotels (n=117) constituted 69 percent and chain affiliated hotels (n=52) 31 percent. Apart from that, it was also found that the average customer was for business (n=109) at 64 percent and the leisure customer (n=60) constituted 35 percent.

Table 5.6: Business Type, Average Customer Mix and Years of Operation (n=169)

Business Type	n	%
Independently Owned/operated	117	69.2
Chain affiliated	52	30.8
Total	**169**	**100.0**
Average Customer Mix	**n**	**%**
Business	109	64.5
Leisure	60	35.5
Total	**169**	**100.0**
Years of Operation	**n**	**%**
31+ years	20	11.8
11-30 years	68	40.2
0-11 years	81	47.9
Total	**169**	**100.0**

Most of the hotels have successfully been in the industry for a decade. There are 20 hotels in which 12 percent of the total respondents had been established in their business for more than 31 years. Furthermore, 68 properties, 40 percent of the total properties in this research, have been in the industry around 11-30 years. Nevertheless, 48 percent of 81 firms have operated for almost 10 years.

5.2.6 *Intention to Adopt Sustainability Practices*

The most important questions to ask the hotel managers relate to their intention to adopt the sustainability practices in their restaurant outlets (Table 5.7). The majority of the respondents said their intention to adopt the practices at their premises. There are 160 properties' managers who said they have the intention to adopt the practices and nine hotels confirmed that they do not have the intention to adopt but will consider to adopt it in the future. There were only ten hotels in Malaysia that certified as Green Hotel (Tourism Malaysia, 2016) and most Malaysian hotels are aware of the industry impacts to the environment (Siti et al., 2011) that significantly influence

the need to have sustainable operations. Consequently, majority of the respondents positively agreed to adopt sustainability practices in their operations.

Table 5.7: Intention to adopt (n=169)

Intention To Adopt	n	%
No	9	5.3
Yes	160	94.7
Total	**169**	**100.0**

5.3   Factor Analyses

Three constructs were operationalised to explore how *Organisational Characteristics, Environmental Characteristics* and *Perceived Innovation Characteristics* influence a hotel's intention to adopt the sustainability practices to improve overall sustainability and organisational competitiveness performance. The Likert five-point scale ranging from "1" with "Strongly Disagree" to "5" with "Strongly Agree" was used to measure these constructs. 23 items for *Organisational Characteristics*, 17 items for *Environmental Characteristics* and 28 items for *Perceived Innovation Characteristics* were used to measure the objectives of this study. An exploration type of factor analysis was conducted on these 68 items to reduce a larger set of items or variables to a smaller set of principal components. This was done to summarize patterns of correlations among observed variables and to reduce a large number of observed variables into smaller numbers of factors (Tabachnick and Fidell, 2007, p. 608).

The researcher used Hair et al. (2006; 2010) as a reference to ensure the appropriateness of conducting factor analysis. The Kaiser-Meyer-Olkin (KMO) values had to exceed .50. The result of the Barlett's Test of Sphericity had to be at least significant at .05. It was suggested that the communalities of the variables also had to be greater than .50. Factor loadings of .30 or above for each item are considered practical. However, this study used .45 as a cut-off point as the total number of respondents for this study was 169. Then, factors with eigenvalues greater than 1

are considered significant and the percentage of variance explained will be 60% or higher. All of these assumptions were observed where unrelated or redundant items and multicollinearity were removed. Finally, 6 items were removed from the 68 items where 1 item each was from *Organisational Characteristics* and *Environmental Characteristics* and 4 items were from *Perceived Innovation Characteristics* (Table 5.8). The final construct results are as follows:

Table 5.8: The items removed in step-by-step exploratory factor analysis procedure.

No.	Items	Components	Removal Criteria
1.	CC17	Organisational Characteristics	Out of 22 correlations with other items, all were weak correlations.
2.	ELR1	Environmental Characteristics	Out of 16 correlations with other items, all were weak correlations.
3.	RA2	Perceived Innovation Characteristics	Out of 27 correlations with other items, all were weak correlations.
4.	RA3		Out of 26 correlations with other items, all were weak correlations.
5.	CPX16		Out of 25 correlations with other items, all were weak correlations.
6.	COMP23		Out of 24 correlations with other items, all were weak correlations.

5.3.1 The Principal Components – Organisational Characteristics

There were 22 items of Organisational Characteristics scale (OC) also generated from the analysis and produced the output from principal component analysis (PCA). Similar with the first factor analysis, the correlation matrix in this second analysis revealed the presence of many coefficients of .45 and above. The Kaiser-Meyer-Oklin value was .879, also exceeding the recommended value of .6 (Kaiser, 1970 and 1974) and Barlett's Test of Sphericity (Barlett, 1954). Principal components analysis revealed the presence of five components with eigenvalues ≥ 1, explaining 36.3%, 11.4%, 7.2%, 6.5% and 5.0% of the variance respectively. Using the scree test, it was decided to retain five components for additional exploration (Catell, 1966).
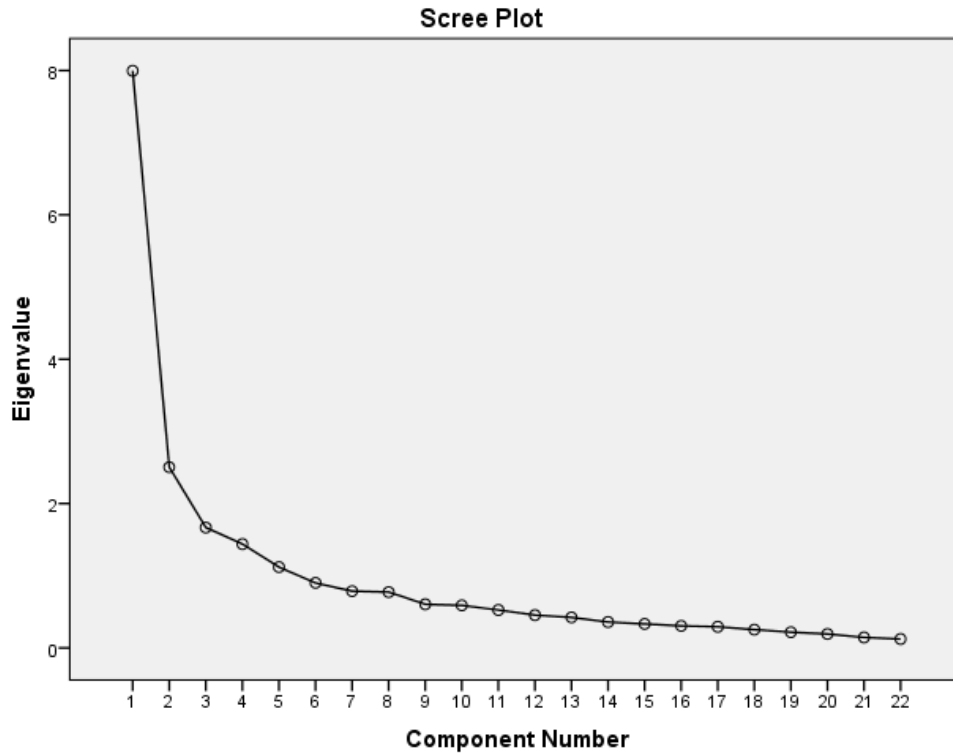
Figure 5.1: Scree plot of the second exploratory factors analysis.
Note: Small coefficients (i.e. r<0.45) were suppressed in display format.

The five-component solution explained a total of 65.3% of the variance (Component 1 = 35.26%, Component 2 = 11.45%, Component 3 = 7.25%, Components 4 = 6.12% and Components 5 = 5.26%). The oblimin rotation was performed and revealed the presence of a simple structure (Thurstone, 1947), with all components showing a number of strong loadings and all variables loading substantially on each component. In Component 1, it shows positive effect items loading strongly and negative effect items loading strongly on Component 2, 3, 4, and 5.

Table 5.9: The Principal Components Extracted With Direct Oblimin Rotation Method For OC Items.

	Pattern Coefficients					
		Component				
	Items	1	2	3	4	5
EC22	Would reward employees who are committed to elevate the practices of environmentally acts.	.944				
EC23	Would encourage employees' involvement in the process of establishing EMS.	.910				
EC21	Would reward employees of they contribute ideas that elevate the practices of friendly practices.	.904				
EC20	Include environmental awareness in the training programme.	.845				
EC19	The training at this establishment includes environmental awareness.	.679				
CC14	Would consider purchasing higher-priced organic product as ingredients or items at this restaurant.		.901			
CC15	Would consider implementing EMS even if I find it too expensive for this restaurant.		.893			
CC16	Believing implementing EMS would be beneficial economically in the long run.		.707			
CC13	Would consider investing in an environmental management system (EMS) at this restaurant.		.652			
CC18	Would consider spending on advertising to promote the restaurant if I decide to be environmentally friendly.		.474			
TM7	Concerned about the preservation of the environment.			.783		
TM8	Consider environment preservation to be an important aspect in our life.			.778		
TM10	Aware of programme called Pollution Prevention.			.728		
TM9	Consider myself educated about environmental issues.			.688		
TM12	Would consider implementation of environmentally friendly practices to be in the top three priority list in our company policy.			.557		
TM11	Would consider establishing an environmental management system (EMS) at our premises.			.541		
ATC1	Top managers in this hotel believe that higher financial risks are worth taking for higher rewards.				.727	
ATC3	Top managers in this hotel like to take big financial risks.				.649	
ATC2	Top managers in this hotel accept occasional new product failure as being normal.				.548	
ATC4	Top managers in this hotel have encourage the development of innovative strategies, knowing well that some will fail.				.513	
ATC5	Top managers in this hotel like to 'play it safe'.					.869
ATC6	Top managers in this hotel like to implement plans only if they are very certain that they will work.					.671

5.3.2 *The Principal Components – Environmental Characteristics*

For Environmental Characteristics (EC), 16 items of principal component analysis (PCA) were also produced. The correlation matrix in this analysis revealed the presence of many coefficients of .45 and above. The Kaiser-Meyer-Oklin value was .897, also exceeding the recommended value of .6 (Kaiser, 1970 and 1974) and Barlett's Test of Sphericity (Barlett 1954). Principal components analysis revealed

the presence of two components with eigenvalues ≥ 1, explaining 48.8% and 11.0% of the variance respectively (Figure 5.2). From the scree test, it was obviously shown to retain only two components for further study (Catell, 1966).
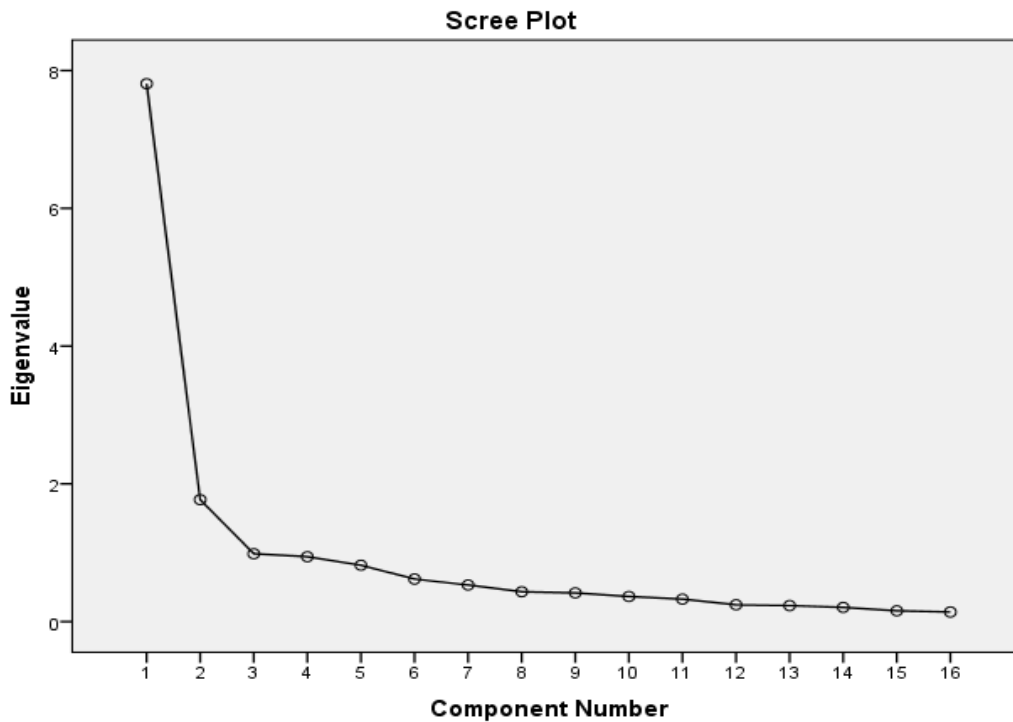
Figure 5.2: Scree plot of the second exploratory factors analysis.
Note: Small coefficients (i.e. r<0.45) were suppressed in display format.

The two-component solution explained a total of 58.2% of the variance where Component 1 contributing 47.8% and Components 2 contributing 10.42%. The oblimin rotation also being executed and discovered the presence of simple structure (Thurstone, 1947), with all components showing a number of strong loadings and all variables do not loading substantially on each component.

Table 5.10: The Principal Components Extracted With Direct Oblimin Rotation Method For EC Items.

		Component	
Pattern Coefficients			
Items		**1**	**2**
ELR4	Feel that the local authorities are concerned about the environment.	.886	
ELR5	Feel that the federal law is concerned about the environment.	.819	
SD17	I feel that the community that we are in is generally an environmentally aware community.	.814	
SD15	Our guest demand that we run an environmentally friendly restaurant.	.796	
SD16	The community that we are based in demands that we run an environmentally friendly restaurant.	.778	
ELR6	Feel that the media is reflects a government that is concerned about the environment.	.738	
ELR3	Feel that there is enforcement of the laws and regulations of the Environment Act.	.736	
ELR2	Feel restricted by the laws and regulations of the Environment Act.	.709	
GS10	There is an abundance of green suppliers to choose them.	.662	
CA14	Being environmentally friendly is important in this industry.		.867
CA12	Feel that there is a need to be green innovator in the restaurant industry		.831
CA13	Feel that being a green restaurant will increase the revenue of this restaurant		.737
GS8	Would consider changing my 'non-green' suppliers to green suppliers.		.714
CA11	Feel that being a green restaurant will give an added advantage over our competitors.		.713
GS9	Would educate my suppliers on the importance of being green.		.623
GS7	Select suppliers that practice green management.		.550

5.3.2 *The Principal Components – Perceived Innovation Characteristics*

The 24 items of Perceived Innovation Characteristics scale (PIC) were subjected to principal component analysis (PCA) using SPSS version 23. Prior to performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .45 and above. The Kaiser-Meyer-Oklin value was .909, exceeding the recommended value of .6 (Kaiser, 1970 and 1974) and Barlett's Test of Sphericity (Barlett 1954) reached statistical significance, supporting the factorability of the correlation matrix.

Principal components analysis revealed the presence of five components with eigenvalues ≥ 1, explaining 47.83%, 11.92%, 5.87% and 4.25% of the variance respectively (Figure 5.3). Using Catell's (1966) scree test, it was decided to retain two components for further investigation. This was further supported by the results of Parallel Analysis, which showed only two components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (24 variables X 169 respondents).
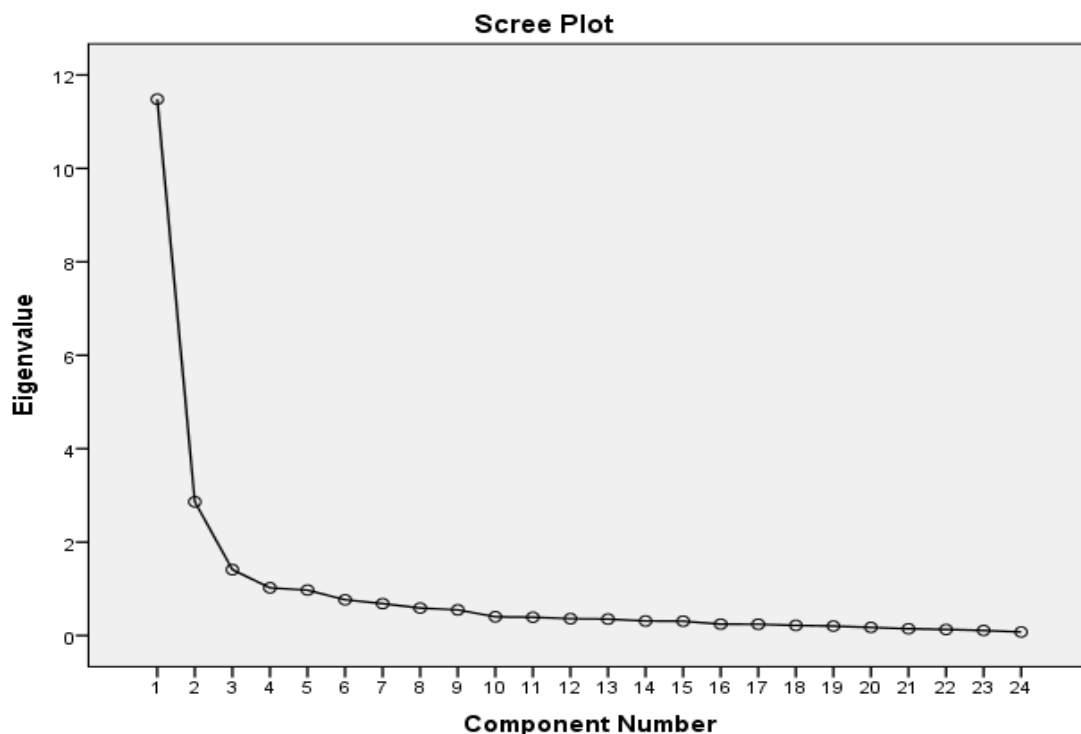
Figure 5.3: Scree plot of the second exploratory factors analysis
Note: Small coefficients (i.e. r<0.45) were suppressed in display format.

The two-component solution explained a total of 57% of the variance, with Component 1 contributing 47.83% and Component 2 contributing 11.92%. To aid in the interpretation of these two components, oblimin rotation was performed. The rotated solution revealed the presence of simple structure (Thurstone, 1947), with both components showing a number of strong loadings and all variables loading substantially on only one component. In Component 1, it shows positive effect items loading strongly and negative effect items loading strongly on Component 2.

Table 5.11: Pattern and Structure Matrix with Oblimin Rotation of Two Factor Solution of PIC Items.

	Items	Pattern Coefficients		Structure Coefficients	
		Component 1	Component 2	Component 1	Component 2
RA1	It gives greater control in hotel restaurant operations.	.768		.822	
RA7	It would enhance the effectiveness of the green practices in the hotel restaurant.	.731		.815	
RA4	It easier to do the operation in the hotel restaurant.	.721		.821	
RA5	It would help to accomplish tasks more quickly in the hotel restaurant.	.682		.814	
RA6	It would improve the quality of the operation in the hotel restaurant.	.656		.827	
CPX19	It requires large consequential adjustment.		.911		.880
CPX18	It requires long-term commitment.		.856		.858
CPX17	It needs high investment.		.769		.793
CPX20	It has large potential effect on profitability.		.754		.802
CPX14	It would differentiate our service and product from competitors.		.581		.661
CPX15	It is technically complex.		.498		.644
OB28	The excitement of adopting sustainability can be noticed by others.				.520
OB27	The advantages of adopting sustainability can be noticed by others.				.521
OB26	The usefulness of the adopting sustainability is highly observable.				.563
TRI25	Before deciding to adopt sustainability, I would be able to properly try it out.				.540
TRI24	I would adopt the sustainability practices on a trial basis long enough to see what it would benefits to.			.573	
COM22	It fits into our restaurant operation routine.			.684	
COM21	It fits will all aspects of our restaurant operation.			.663	
RA9	It resulted in dramatic increase in market share.			.566	
RA8	It resulted in dramatic increase in profit margin.			.602	
RA11	It resulted in very extensive positive change in the cost position relative to key competitors.			.557	
RA10	It resulted in dramatic improvement in overall financial performance.			.636	

| RA13 | It resulted in very extensive improvements in the ability to compete in international markets. | | .565 |
| RA12 | It resulted in much stronger reputation with customers. | | .456 |

After the factor analysis procedure was carried out, the Cronbach's alpha, α, was also computed for each sets of the components in each of the constructs to check for the items' reliability. All of the constructs showed α value above 0.90, confirming the findings of Nunnally and Bernstein (1994) who suggested that for Cronbach's alpha, α value above 0.70 is generally accepted as satisfactory.

The first component of Organisational Characteristics containing 22 items that are associated with the intention to adopt sustainability practices in hotel restaurants is shown in Table 5.12.

Table 5.12: Component 1 – Organisational characteristics.

Organisational Characteristics (OC)		Cronbach's Alpha
EC22	Would reward employees who are committed to elevate the practices of environmentally acts.	
EC23	Would encourage employees' involvement in the process of establishing EMS.	
EC21	Would reward employees of they contribute ideas that elevate the practices of friendly practices.	
EC20	Include environmental awareness in the training programme.	
EC19	The training at this establishment includes environmental awareness.	
CC14	Would consider purchasing higher-priced organic product as ingredients or items at this restaurant.	
CC15	Would consider implementing EMS even if I find it too expensive for this restaurant.	0.908
CC16	Believing implementing EMS would be beneficial economically in the long run.	
CC13	Would consider investing in an environmental management system (EMS) at this restaurant.	
CC18	Would consider spending on advertising to promote the restaurant if I decide to be environmentally friendly.	
TM7	Concerned about the preservation of the environment.	
TM8	Consider environment preservation to be an important aspect in our life.	
TM10	Aware of programme called Pollution Prevention.	
TM9	Consider myself educated about environmental issues.	

TM12	Would consider implementation of environmentally friendly practices to be in the top three priority list in our company policy.
TM11	Would consider establishing an environmental management system (EMS) at our premises.
ATC1	Top managers in this hotel believe that higher financial risks are worth taking for higher rewards.
ATC3	Top managers in this hotel like to take big financial risks.
ATC2	Top managers in this hotel accept occasional new product failure as being normal.
ATC4	Top managers in this hotel have encouraged the development of innovative strategies, knowing well that some will fail.
ATC5	Top managers in this hotel like to 'play it safe'.
ATC6	Top managers in this hotel like to implement plans only if they are very certain that they will work.

The second component of Environmental Characteristics, containing 16 items that were associated with the intention to adopt sustainability practices in hotel restaurants is shown in Table 5.13.

Table 5.13: Component 2 – Environmental characteristics.

Environmental Characteristics (EC)		**Cronbach's Alpha**
ELR4	Feel that the local authorities are concerned about the environment.	
ELR5	Feel that the federal law is concerned about the environment.	
SD17	I feel that the community that we are in is generally an environmentally aware community.	
SD15	Our guest demands that we run an environmentally friendly restaurant.	
SD16	The community that we are based in demands that we run an environmentally friendly restaurant.	
ELR6	Feel that the media is reflects a government that is concerned about the environment.	0.930
ELR3	Feel that there is enforcement of the laws and regulations of the Environment Act.	
ELR2	Feel restricted by the laws and regulations of the Environment Act.	
GS10	There is an abundance of green suppliers to choose them.	
CA14	Being environmentally friendly is important in this industry.	
CA12	Feel that there is a need to be green innovator in the restaurant industry	
CA13	Feel that being a green restaurant will increase the revenue of this restaurant	
GS8	Would consider changing my 'non-green' suppliers to green suppliers.	
CA11	Feel that being a green restaurant will give an added advantage over our competitors.	
GS9	Would educate my suppliers on the importance of being green.	
GS7	Select suppliers that practice green management.	

As shown in Table 5.14, there are 24 items contained in the third component of Perceived Innovation Characteristics that are also associated with the intention to adopt the sustainability practices.

Table 5.14: Component 3 – Perceived Innovation characteristics.

Perceived Innovation Characteristics (OC)		Cronbach's Alpha
RA1	It gives greater control in hotel restaurant operations.	
RA7	It would enhance the effectiveness of the green practices in the hotel restaurant.	
RA4	It easier to do the operation in the hotel restaurant.	
RA5	It would help to accomplish tasks more quickly in the hotel restaurant.	
RA6	It would improve the quality of the operation in the hotel restaurant.	
CPX19	It requires large consequential adjustment.	
CPX18	It requires long-term commitment.	
CPX17	It needs high investment.	
CPX20	It has large potential effect on profitability.	
CPX14	It would differentiate our service and product from competitors.	
CPX15	It is technically complex.	0.952
OB28	The excitement of adopting sustainability can be noticed by others.	
OB27	The advantages of adopting sustainability can be noticed by others.	
OB26	The usefulness of the adop ting sustainability is highly observable.	
TRI25	Before deciding to adopt sustainability, I would be able to properly try it out.	
TRI24	I would adopt the sustainability practices on a trial basis long enough to see what it would benefits to.	
COM22	It fits into our restaurant operation routine.	
COM21	It fits will all aspects of our restaurant operation.	
RA9	It resulted in dramatic increase in market share.	
RA8	It resulted in dramatic increase in profit margin.	
RA11	It resulted in very extensive positive change in the cost position relative to key competitors.	
RA10	It resulted in dramatic improvement in overall financial performance.	
RA13	It resulted in very extensive improvements in the ability to compete in international markets.	
RA12	It resulted in much stronger reputation with customers.	

5.4   Sustainability of MHRs

The quantitative section was to evaluate how perceived perceived innovation characteristics (PIC), organisational characteristics (OC) and environmental characteristics (EC) influence the decision to adopt sustainability practices in MHRs. Therefore, the descriptive analyses were performed and the subsequent sections of these analyses are presented below:-

5.4.1 Organisational Characteristics

Organisational characteristics were emphasised as one of the objectives set in this research context. The most important concern in highlighting these characteristics was to evaluate to what extent organisational characteristics influence Malaysian hotel restaurants to adopt sustainability practices in their properties. The findings of this variable are presented below:

5.4.1.1   Attitude towards Change (Level of Risk Taking)

Figure 5.4 shows very low levels of disagreement in attitude towards change with only a small proportion giving some degree of disagreement on any attitude towards change. The vast majority of respondents neither agreed nor disagreed or somewhat agreed with all the statements. The strong agreement that hotel managers showed towards taking higher financial risk was surprising, as according to Tourism Malaysia 2016, there are only a number of hotels in Malaysia certified as green hotels. The hotel managers seem to encourage innovative strategies in their hotels but it was contradicted by their attitude of only implementing plans if they are found to work. Further, a descriptive test was performed to see the mean value of the respondents' answers to each of the statements.

Attitude Towards Change

	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
■ Higher Financial Risk Worth Taking	0	4.7	27.2	49.1	18.9
■ Accept Product Failure As Normal	4.7	9.5	28.4	46.7	10.7
■ Like To Take Financial Risks	6.5	11.2	38.5	34.3	9.5
■ Encourage Innovative Strategies	3	8.3	25.4	47.9	15.4
■ "Play It Safe"	3	5.9	36.1	38.5	16.6
■ Implement Plans If Certain Work	1.2	4.1	31.4	43.8	19.5

Figure 5.4: Respondents' Perceptions on Attitude towards Change (n=169)

From the descriptive statistic Table in 5.15 below, the magnitude of mean scores indicate the majority of the respondents somewhat agreed that they like to implement plans only if they are very certain that they will work (M=3.76). The respondents also responded similarly that they encourage the development of innovative strategies, knowing well that some will fail (M=3.64) and they like to "play it safe" (M=3.59). Despite these, respondents neither agreed nor disagreed that they would accept occasional new product failure as being normal and that they would like to take big financial risks. This evidences with the mean score (M=3.49) and (M=3.28). Nevertheless, the managers do not think that higher financial risks are worth taking for higher rewards (M=2.82).

Table 5.15: Attitude towards Change (Level of risk taking. (n=169)

Items	Mean	Std. Deviation
Top managers in this hotel like to implement plans only if they are very certain that they will work.	3.76	.854
Top managers in this hotel have encouraged the development of innovative strategies, knowing well that some will fail.	3.64	.940
Top managers in this hotel like to 'play it safe'.	3.59	.934
Top managers in this hotel accept occasional new product failure as being normal.	3.49	.970
Top managers in this hotel like to take big financial risks.	3.28	1.008
Top managers in this hotel believe that higher financial risks are worth taking for higher rewards.	2.82	.789

The descriptive analysis identified that the hotel managers are concerned about any changes being made. They take into consideration the risks that will take place if they made any changes or innovate their business operations. They might be afraid that the decision made without any full consideration and judgement will cause a big loss financially. However, the binary logistic regression revealed that the attitude towards change predictor for this study context was fit to be analyzed.

5.4.1.2 Top Management

Figure 5.5 shows that the majority of the hotel managers were somewhat agreed or agreed that they are educated about the environmental issues. Therefore, the managers thought that adopting sustainability practices in hotel restaurants was one of the ways to preserve the environment and would make sure the environmental practices will be their top three priorities in their company. To support their statement, the vast majority of hotel managers agreed that they will establish an environmental management system (EMS) at their hotel restaurants. Moreover, the managers also strongly agreed that environmental preservation is an important aspect in their lives and also for the hospitality industry.

Top Management

	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
Preservation of The Environment	0	0.6	15.4	45.6	38.5
Environment Preservation Important Aspect	0.6	0.6	13.6	41.4	43.8
Educated about Environmental Issues	0.6	3.6	15.4	53.3	27.2
Aware Pollution Prevention Programme	0	1.2	23.1	42.6	33.1
Establish EMS At The Premise	0	1.2	4.7	68	26
Environmental Practices In Top Three Priority	0	2.4	20.7	45.6	31.4

Figure 5.5: Respondents' Perceptions on Top Management (n=169)

Table 5.16 below shows that the top management of the hotel business agreed about considering the environment aspect in their life (M=4.27). They were also really concerned about the preservation of the environment (M=4.21) and would consider establishing an environmental management system (EMS) at their restaurant outlets (M=4.18). In relation to that, the top management of the hotel firms are also aware of the programme called Pollution Prevention (M=4.07). In line with that, they also consider implementing the environmentally friendly practices to be one of their top three priorities in their hotel policy (M=4.05) and most of them consider themselves as educated about environmental issues (M=4.02).

Table 5.16: Top Management (n=169)

Items	Mean	Std. Deviation
Consider environment preservation to be an important aspect in our life.	154.27	.761
Concerned about the preservation of the environment.	4.21	.719
Would consider establishing an environmental management system (EMS) at this restaurant.	4.18	.566
Aware of program called Pollution Prevention.	4.07	.779
Consider implementation of environmentally friendly practices to be in the top three-priority list in our company policy.	4.05	.784
Consider myself educated about environmental issues.	4.02	.790

With that, it was identified that personally, most of the managers are concerned about how the hotel business might affect the environment. They have no obligation to not support the sustainability practices and will make sure the hotel will implement these eco-friendly practices in the hotel restaurants.

5.4.1.3   Cost Consideration

As can be seen, for all the cost considerations, between two thirds and three quarters of all respondents were somewhat agreed and strongly agreed about investing in sustainability practices. The highest percentages were interested in spending on advertising to promote their new concept if the hotel restaurants decide to go for sustainable operations. This seems to be parallel with the lower percentage shown in adopting these eco-friendly practices were given a beneficial economically in long run. Most of the respondents would invest in the environmental management system and they expect it would give them profitability in the long term.

Cost Consideration

	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
Invest In EMS	0	7.7	29	43.2	20.1
Purchase Higher-Priced Organic Ingredients	3.6	11.2	35.5	37.9	11.8
Implement EMS Even It Expensive	4.7	8.9	38.5	37.3	10.7
Beneficial Economically in Long Run	1.2	5.9	32.5	38.5	21.9
Spend On Advertising If Decide To Practice	0.6	5.3	29	46.7	18.3

Figure 5.6: Respondents' Perceptions on Cost Consideration (n=169)

From the perspective of descriptive analysis of cost consideration, the majority of the respondents would consider spending on their advertising to promote their restaurant if they have come to a decision to be more environmentally friendly (*M*=3.76). Apart from that, they also would consider investing in an environmental management system (EMS) at their restaurant outlet. This might be because they believe that it would be beneficial economically in the long run if they invest in the EMS (*M*=3.73). However, most of the managers neither agree nor disagree about considering in purchasing higher priced organic products as ingredients or items at their restaurant outlet (*M*=3.43). Moreover, they also chose to say neither agree nor disagree when it comes to implementing EMS even though they find it too expensive (*M*=3.40).

Table 5.17: Cost Consideration. (n=169)

Items	Mean	Std. Deviation
Would consider spending on advertising to promote the restaurant if I decide to be environmentally friendly.	3.76	.830
Would consider investing in an environmental management system (EMS) at this restaurant.	3.75	.862
Believe implementing EMS would be beneficial economically in the long run.	3.73	.908
Would consider purchasing higher-priced organic products as ingredients or items at this restaurant.	3.43	.959
Would consider implementing EMS even if I find it too expensive for this restaurant.	3.40	.959

When it comes to the cost, it will involve a thorough consideration before investing as it there might be implications for the operations if they do not turn out as expected. The hotel managers will make sure they have sufficient information and guidelines about the green practices and will make sure the investment will improve and enhance their business performance when they start to adopt the practices.

5.4.1.4   Employee Connectedness

This part of the questions gave a greater range of responses from the managers. The majority of the managers agreed that environmental awareness should be included in their employees training and they would encourage the employees' involvement in establishing the EMS. Besides these two statements, rewarding the employee when committed and contributing ideas to elevate the practices and including environmental awareness in the training activities also received a large proportion of managers who agreed. Surprisingly, there were a small proportion of those who strongly disagreed in connecting or giving the employees the EMS training, encouragement and rewarding their effort in elevating the practices.
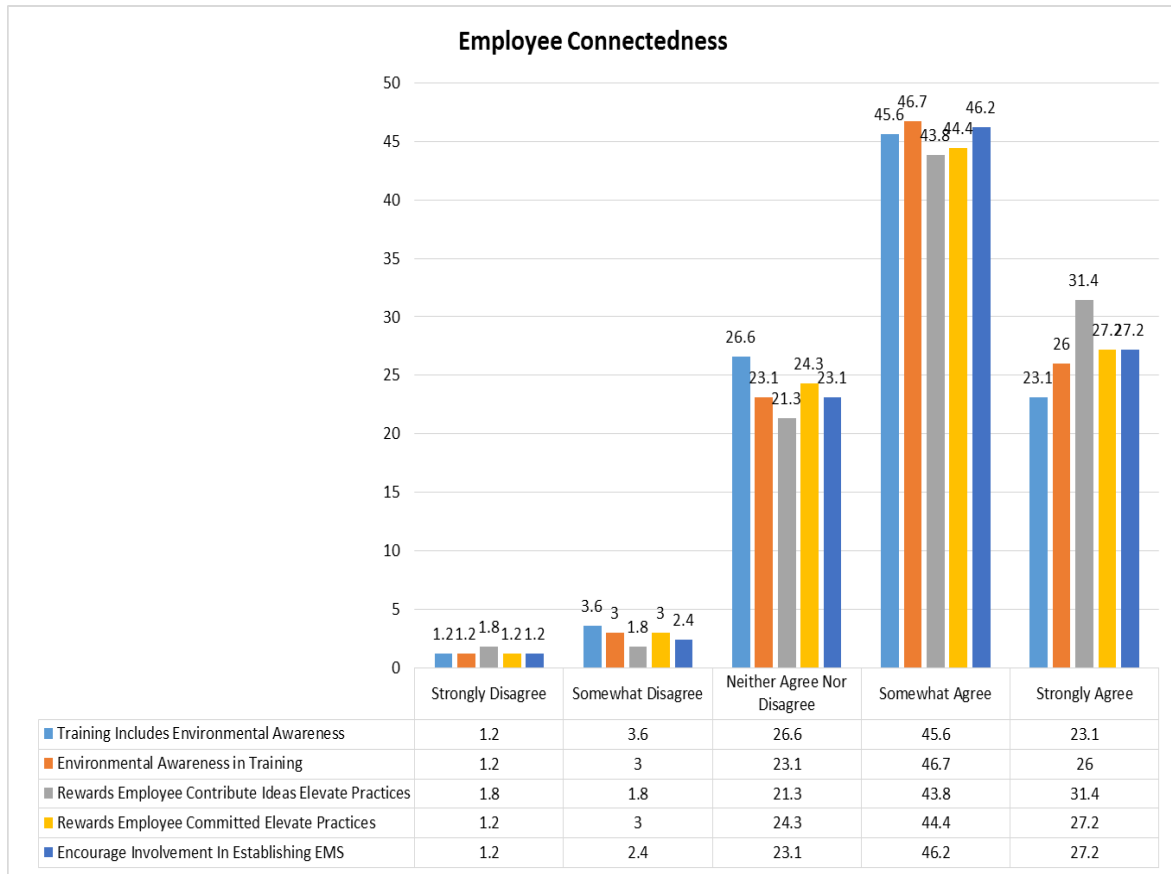
Figure 5.7: Respondents' Perceptions on Employee Connectedness (n=169)

The analysis presented in Table 5.18 shows that almost all of the managers would agree that they will reward their employees if they contribute ideas that elevate environmentally friendly practices (M=4.01). In addition, they will also encourage their employees' involvement in the process of establishing EMS (M=3.95). Again, they would also agree to reward their employees if they are committed to elevating the practices (M=3.93). Besides that, they will also include environmental awareness in the training programme when they adopt the sustainability practices (M=3.93) and said that they already included the environmental awareness in their employee training (M=3.85).

Table 5.18: Employee Connectedness. (n=169)

Items	Mean	Std. Deviation
Would reward employees if they contribute ideas that elevate environmentally friendly practices.	4.01	.872
Would encourage employees' involvement in the process of establishing EMS.	3.95	.840
Would reward employees who are committed to elevating the practice of environmentally friendly acts.	3.93	.860
Include environmental awareness in the training programme.	3.93	.846
The training at this establishment includes environmental awareness.	3.85	.854

It is notable that any organization should be equipped and make their employees aware when there are any changes made in the operations. Therefore, it will ease and smooth the operations when the employees are connected to the establishment. Following to that, hotel industry is known as a service industry where the quality of service is measured from the happy and satisfied guests. Thus, the hotel should be equipped and train the employees in order to provide a quality service for their guests when they dine in the restaurants.

5.4.2 Environmental Characteristics

Similar to organisational characteristics, environmental characteristics were also determined as one of the objectives in this research context. The most important concern in highlighting this issue was to evaluate to what extent the Malaysian hotel sector is aware of and concerned about environmental issues. With that, the findings of this variable are presented below:

5.4.2.1 Environmental Law and Regulations

Figure 5.8 shows the percentage of the hotel managers' responses on the environmental law and regulations. The biggest percentage were the managers who were somewhat agreed that they are restricted by laws and regulations and there is an enforcement of law and regulations of the Environmental Act. At first, it was

thought that these findings were found to contradict the qualitative findings where the government enforcement of environmental act was lowed. However, surprisingly the proportions of these two statements were found more or less the same in the neither agree nor disagree part. The mean descriptive analyses further revealed each of the statements answered by the managers.

Figure 5.8: Respondents' Perceptions on Environmental Law and Regulations (n=169)

	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
Restricted by Law and Regulations	4.1	6.5	28.4	42.6	18.3
There is Enforcement of Law and Regulations	3	4.1	36.1	40.2	16.6
Local Authorities Concerned About Environment	3	6.5	28.4	42	20.1
Federal Law Concerned About Environment	3.6	7.7	28.4	37.9	22.5
Media Reflect Government Concerned	2.4	5.9	27.8	39.6	24.3
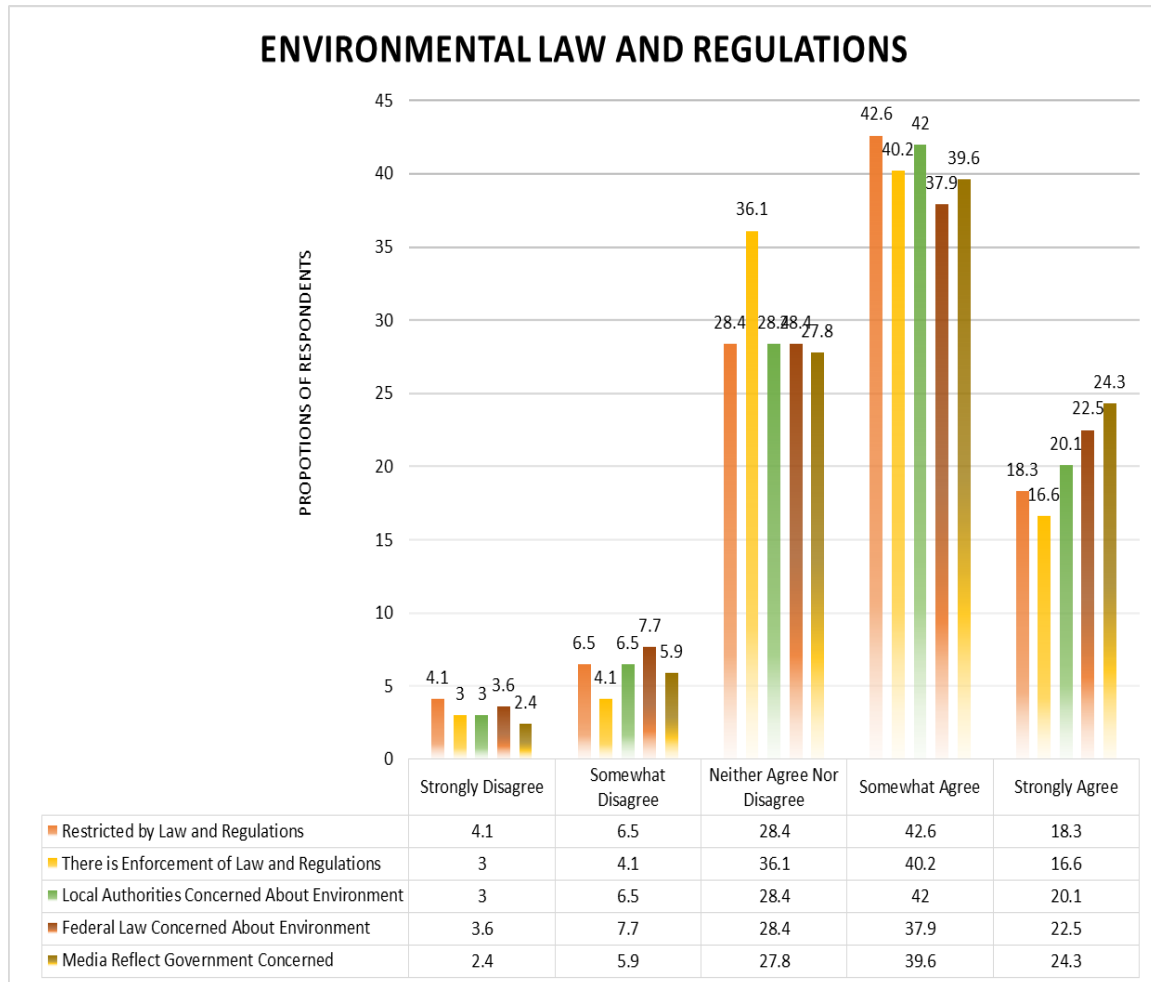
Table 5.19 below, indicates that majority of the hotel managers felt that what was put up in the media reflects the Malaysian government's concern about environmental issues (*M*=3.77). The managers also felt that the local authorities are concerned about the environment (*M*=3.69) and they are somewhat agreed that the local authorities in Malaysia are concerned about the environment (*M*=3.68) and they felt that there are enforcement of the laws and regulations of the Environmental Act.

Furthermore, these managers also said that they felt restricted by the laws and regulations of the Environment Act (*M*=3.64).

Table 5.19: Law and Regulations. (n=169)

Items	Mean	Std. Deviation
Feel that the media reflects a government that is concerned about the environment.	3.77	.961
Feel that the local authorities are concerned about the environment.	3.69	.962
Feel that the federal law is concerned about the environment.	3.68	1.019
Feel that there is enforcement of the laws and regulations of the Environment Act.	3.63	.910
Feel restricted by the laws and regulations of the Environment Act.	3.64	.990

It can be concluded that if the Malaysian government enforce the practices in the hotel restaurants and provide the guidelines, the Malaysian hotel industry would consider adopting the sustainability practices in their restaurant outlets. The local authorities also should create an initiative to introduce routine monitoring to make sure these hotels are complying with the guidelines provided and to reward any hotel that puts an effort into implementing 100 percent of the practices in their property.

5.4.2.2   *Green Supply Chains*

Figure 5.9 shows a greater range of responses than the other components. It can be seen that the answer with the highest percentage of responses was that in green supply chains they will change their "no-green" suppliers into green suppliers and would educate their suppliers of the importance of being green. The answer with the second highest percentage of responses was that they would select suppliers' practices green management and that there is an abundance of green suppliers to choose from also got a high percentage of responses from the managers. The mean descriptive analyses showed more about the managers' responses towards each of the statements given.
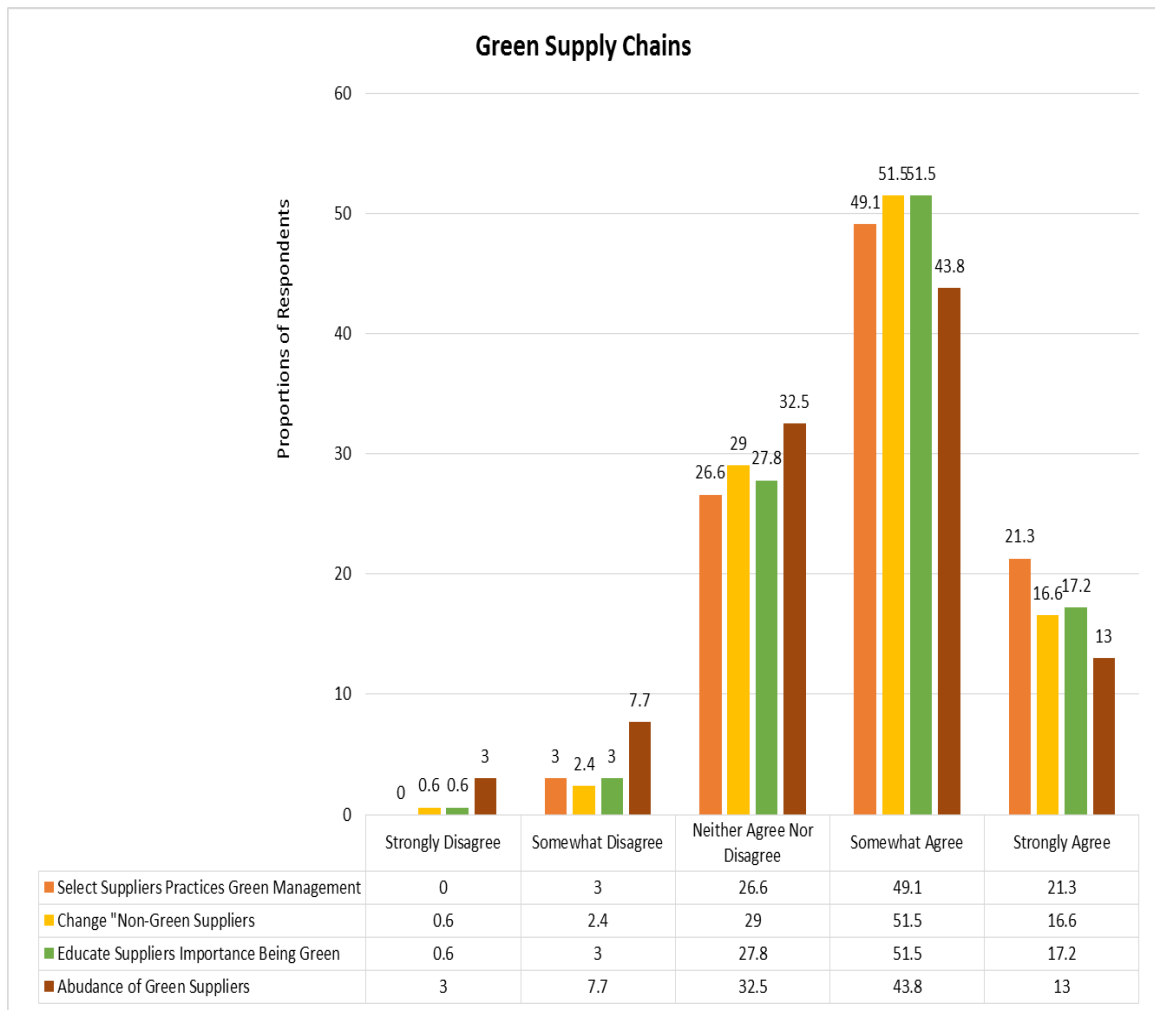
Figure 5.9: Respondents' Perceptions on Green Supply Chains (n=169)

Majority of the managers would consider having green supply chains in their operations. This can be seen in Table 5.20 below. It shows that the hotel managers will opt to use suppliers that practice green management in their business (*M*=3.88). When they have already adopted the sustainability practices, these managers will educate their suppliers about the importance of being green (*M*=3.81). They also agreed considering changing their non-green current suppliers to the green suppliers (*M*=3.81). However, most of the hotel managers neither agreed nor disagreed when it came to the abundance of green suppliers for them to choose (*M*=3.56).

Table 5.20: Green supply chains. (n=169)

Items	Mean	Std. Deviation
Select suppliers that practice green management.	3.88	.767
Would educate my suppliers on the importance of being green.	3.81	.768
Would consider changing my 'non-green' suppliers to green suppliers.	3.81	.755
There is an abundance of green suppliers to choose from.	3.56	.918

It is important for hotel restaurants to have green supply chains when they want to adopt sustainability practices in their outlets. This is because their main operation produces food and provides the services to the guests when they visit and patronise their restaurants. In other words, green supply chains are the key towards the success of the sustainability adoption.

5.4.2.3 *Competitive Advantage (Trade Pressure)*

As can be seen in Figure 5.10 below, the vast majority of the managers somewhat agreed and strongly agreed on the statements that relate to competitive advantage in adopting sustainability practices. The majority of the managers were agreed that there is a need for the hotel industry in Malaysia to be a green innovator and they also agreed that being green is extremely important for this industry. This statement has confirmed and filled the gap in the Malaysian hotel industry in terms of being more sustainable compared with its previous practices. It was also found that adopting sustainability practices would increase the hotel restaurants' revenue.

	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
Advantage Over Competitor	1.2	4.1	30.8	41.4	22.5
Need to Be Green Innovator	0	3	29	47.3	20.7
Increase Revenue	0.6	5.3	33.1	42	18.9
Important for The Industry	0	3	18.9	41.4	36.7
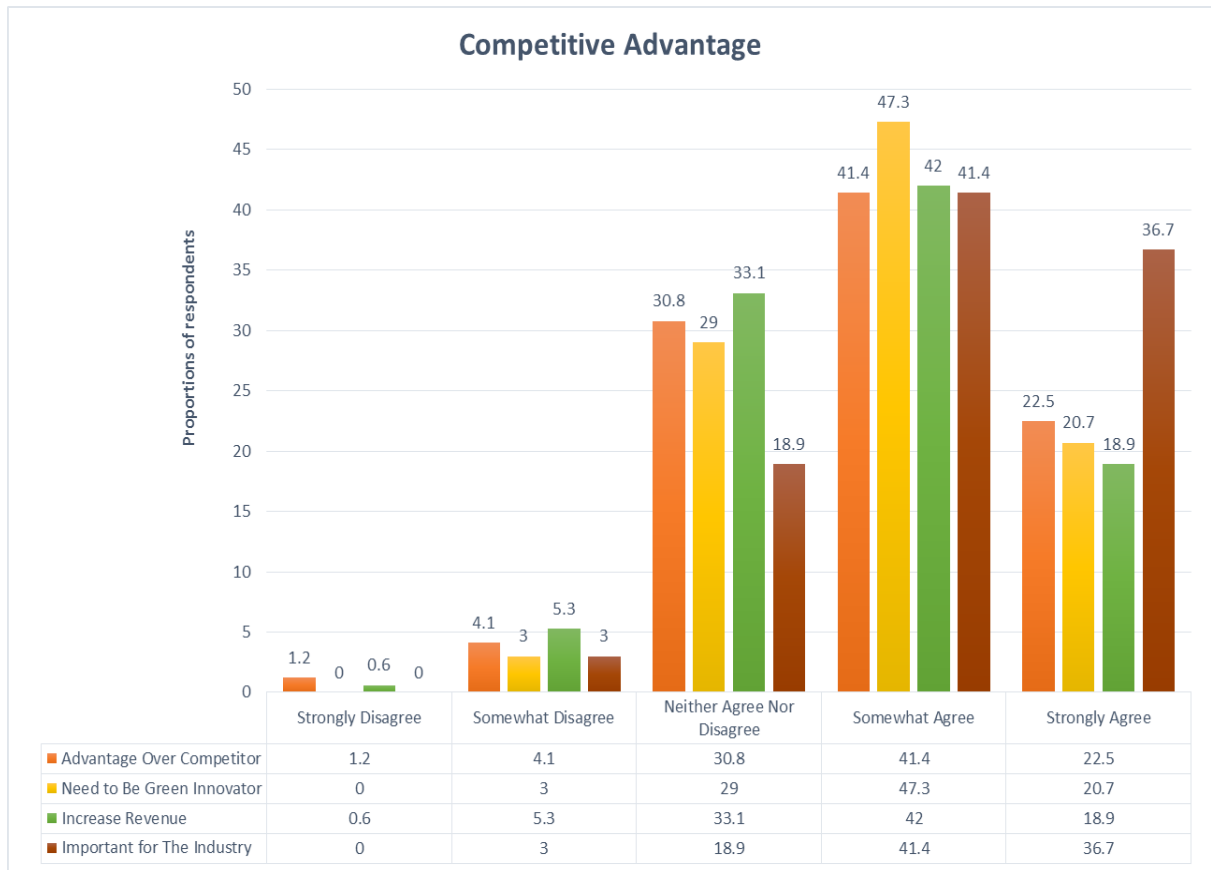
Figure 5.10: Respondents' Perceptions on Competitive Advantage (n=169)

According to Table 5.21 below, most of the Malaysian hotel managers agreed that being environmentally friendly is important in this industry (*M*=4.11). They felt that there is a need to be a green innovator in the restaurant industry (*M*=3.85). With the adaptation of the sustainability practices, they felt that it will give an added advantage over their competitors (*M*=3.79) and of course they believe that being a green restaurant will increase their revenue (*M*=3.73).

Table 5.21: Competitive Advantage (Trade Pressure). (n=169)

Items	Mean	Std. Deviation
Being environmentally friendly is important in this industry.	4.11	.815
Feel that there is a need to be green innovator in the restaurant industry.	3.85	.773
Feel that being a green restaurant will give an added advantage over our competitors.	3.79	.876
Feel that being a green restaurant will increase the revenue of this restaurant.	3.73	.848

It is evident that the hospitality industry exposed so much to the environment and directly affects the environment through its operations. Therefore, most of the hotels are considering and some have already ventured into environmental friendly operations. With that, it has put pressure on their competitors to participate in sustainability practice implementation.

5.4.2.4 Stakeholders' Demands (Consumer and Community)

Figure 5.11 shows that the highest percentage of the managers were somewhat agreed that the community where their hotels were located demanded them to operate environmental friendly restaurants. This is perhaps because the communities that they are based in were environmentally aware communities. Surprisingly, the mean descriptive revealed different findings concerning the stakeholders' demands (consumers and community).

Stakeholder's Demands

	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
Guest Demand Environmental Friendly Restaurant	1.8	9.5	33.1	39.6	16
Community Demand Environmental Friendly restaurant	2.4	8.9	30.8	44.4	13.6
Environmentally Aware Community	3.6	10.1	30.2	40.8	15.4
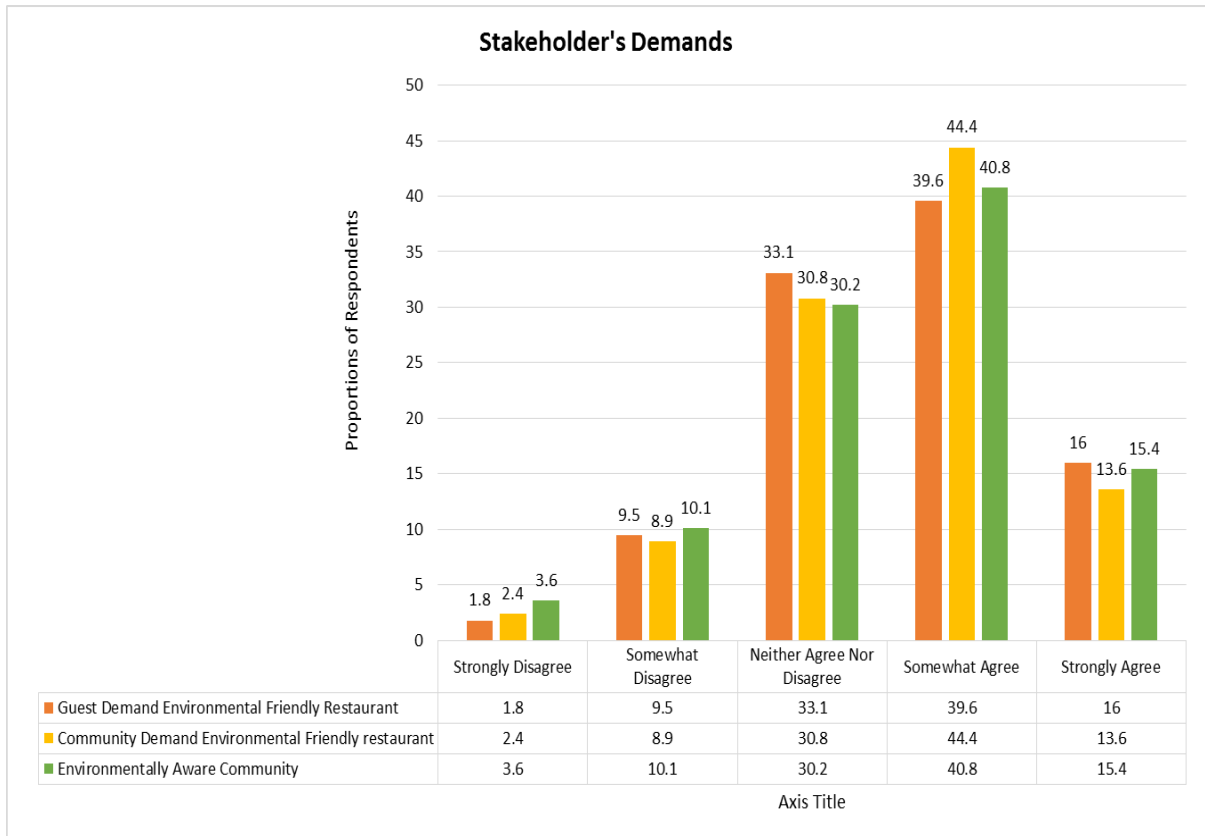
Figure 5.11: Respondents' Perceptions on Stakeholder's Demands (n=169)

Table 5.22 below presents the stakeholders' demands in implementing sustainability practices in the hotel restaurants. Most of the managers were somewhat agreed that the communities that they are situated in do not demand that they operate an environmentally friendly restaurant (*M*=3.57) and the same is true of their guests (*M*=3.58). It can be clearly seen that the community that the hotel premises are located are in are not generally environmentally aware (*M*=3.54). The means presented indicate that there is a low average of agreement between those responding 'neutral' and 'somewhat agree' about stakeholders' demands for the hotel to operate sustainably in the Malaysian hospitality context.

Table 5.22: Stakeholders Demands (Consumer and Community). (n=169)

Items	Mean	Std. Deviation
The community that we are based in demands that we run an environmentally friendly restaurant.	3.57	.916
Our guests demand that we run an environmentally friendly restaurant.	3.58	.929
I feel that the community that we are in is generally an environmentally aware community.	3.54	.987

As we know, the hospitality industry exposed so much to the environmental and directly affecting the environment through its operations. Therefore, most of the hotels are considering and some have venture into the environmental friendly operations. With that, it has become a pressure to their competitors to participate in the implementation.

5.4.3 Perceived Innovation Characteristics

Innovation theory was used as a based in this research to evaluate to what extent the managers would innovate their management practices and operations. Therefore, this variable was asked in this survey to assess how the mangers perceived innovations. Apart from that, it is also one of the objectives in this study. The dimensions for the innovations characteristic were measured and are presented below:-

5.4.3.1   Relative Advantages

Figure 5.12 shows that overall, the hotel managers gave high proportions of percentage to all the statements, and in particular a high percentage felt that adopting sustainability practices in hotel restaurants could give them greater control and could improve the quality of the operations. Apart from getting a large percentage in these two statements, there was a low percentage of managers who strongly disagreed, followed by an even lower percentage who strongly disagreed with: easier to do operations, accomplishing task quickly, enhancing effectiveness, increasing profit margin, increasing market share, improvement in financial statement, positive change in cost position, stronger reputation and able to compete in international market. This indicates that, the managers believe adopting sustainability practices could possibly give relative advantages to the hotel restaurants.
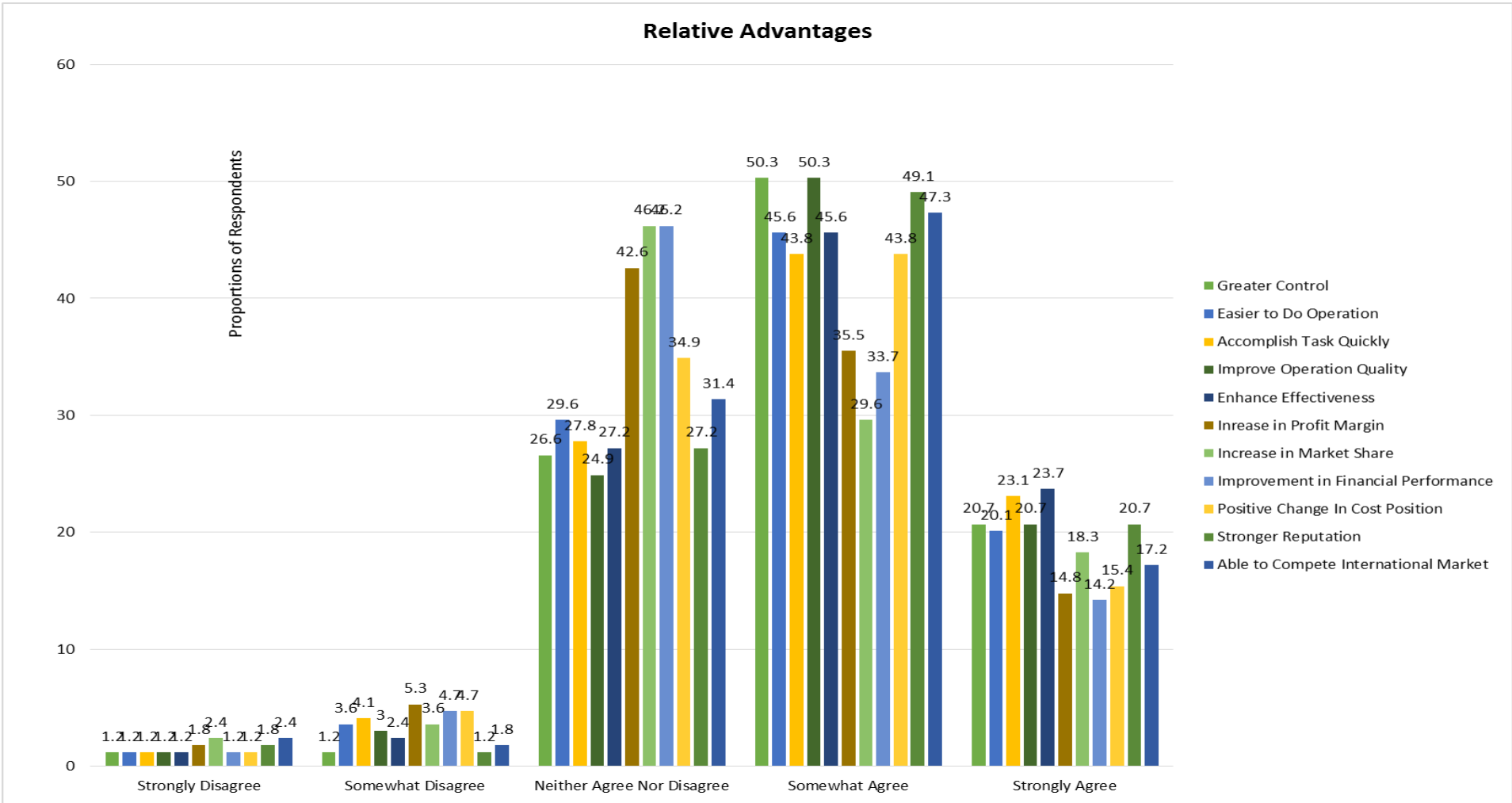
Figure 5.12: Respondents' Perceptions on Relative Advantages (n=169)

The further descriptive mean findings of relative advantages are presented in Table 5.23 below. It was agreed by all the hotel managers that adopting sustainability in their hotel would enhance the effectiveness of the green practices (*M*=3.88), give a greater control for the operations (*M*=3.88), improve the quality of the operations (*M*=3.86) and of course will result in a stronger reputation with the customers (*M*=3.85). Furthermore, the managers agreed that adopting sustainability would help them to accomplish tasks more quickly (*M*=3.83) and ease the operations (*M*=3.79). They also mentioned it would result in very extensive improvements in the ability to compete internationally (*M*=3.75) and have a positive change in the cost position relative to their key competitors (*M*=3.67). Hence, the managers also agree that by adopting the sustainability practices in hotel restaurant would result in a dramatic improvement overall financial performance (*M*=3.55).

Table 5.23: Relative Advantages. (n=169)

Items	Mean	Std. Deviation
It would enhance the effectiveness of the green practices in the hotel restaurant.	3.88	.836
It gives greater control in hotel restaurant operations.	3.88	.785
It would improve the quality of the operation the hotel restaurant.	3.86	.816
It resulted in much stronger reputation with customers.	3.85	.858
It would help to accomplish tasks more quickly the hotel restaurant.	3.83	.870
It is easier to do the operation in the hotel restaurant.	3.79	.842
It resulted in very extensive improvements in the ability to compete in international markets	3.75	.843
It resulted in very extensive positive change in the cost position relative to key competitors	3.67	.834
It resulted in dramatic increases in market share.	3.57	.910
It resulted in dramatic increase in profit margin.	3.56	.871
It resulted in dramatic improvements in overall financial performance.	3.55	.837

The hotel managers noticed the advantages of adopting the sustainability practices in the hotel operations especially in the restaurants. There might be further advantages in the long run if the hotels would like to fully implement these in their operations. They will not only ease the operations in the restaurant but also the quality of the service would be the main focus for them. As is evident, the customer purchases the product together with the services offered in those places. Because of that, no doubt innovations would give greater benefits to the hotels.

5.4.3.2   Complexity

The managers showed a very low percentage of strong disagreement with the complexity in adopting sustainability practices in hotel restaurants (Figure 5.13). The majority of the managers somewhat agreed with all the statements. As there is some complexity in adopting these green practices, the large effect on profitability somewhat contradicts the relative advantages received where adopting these practices could increase profit margins in restaurant operations. The descriptive mean findings discussed further the complexity statement in adopting these practices in hotel restaurants.
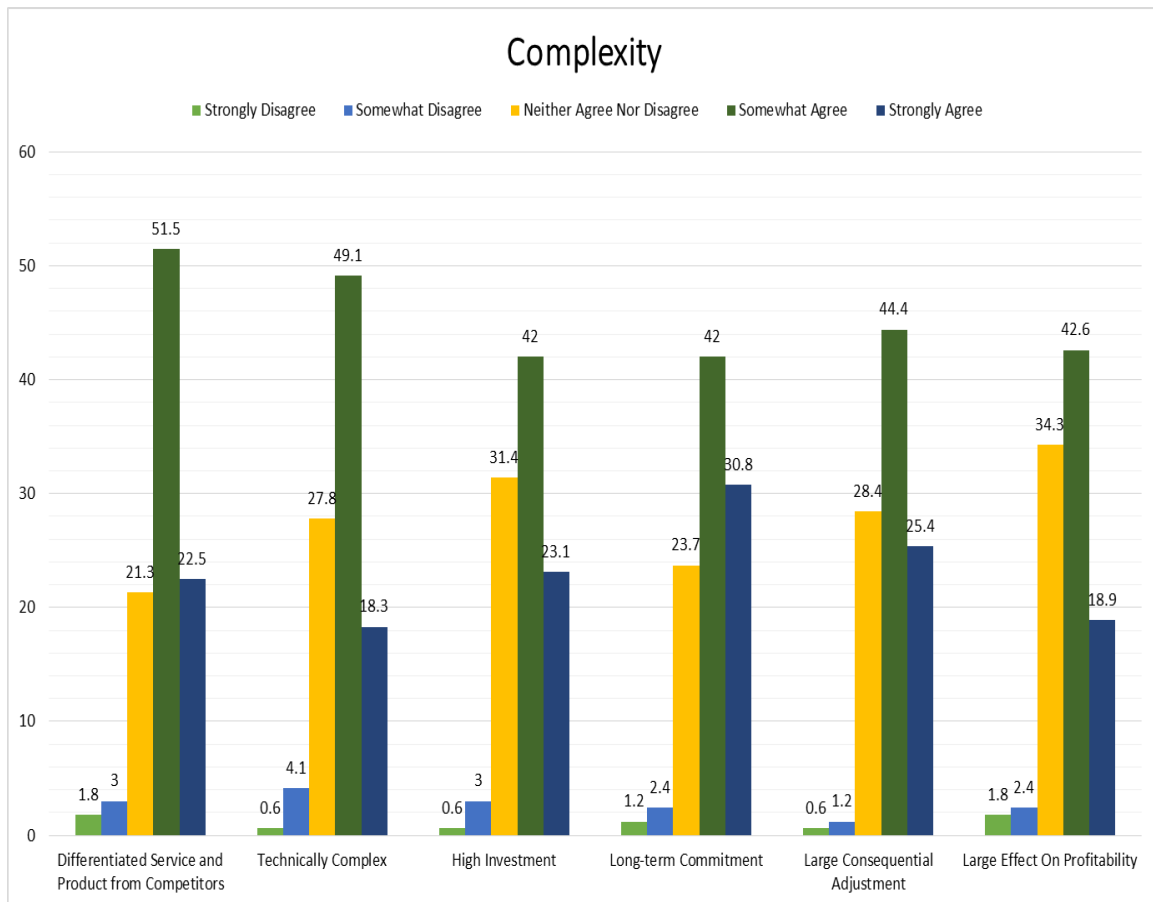
Figure 5.13: Respondents' Perceptions on Complexity (n=169)

Even though there are some advantages in adopting sustainability, but to implement it initially it is not easy. From the results presented in Table 5.24 below, most of the managers said that to really implement the practices requires long-term commitment (*M*=3.98) and a large consequential adjustment (*M*=3.92). Consequently, adopting the practices might differentiate their service and products from the competitors (*M*=3.84). However, it needs high investment (*M*=3.84) because it is technically complex (*M*=3.80). Even so, they agreed that it has a large potential effect on profitability (*M*=3.74).

Table 5.24: Complexity. (n=169)

Items	Mean	Std. Deviation
It requires long-term commitment	3.98	.865
It requires large consequential adjustment	3.92	.798
It would differentiate our service and product from competitors.	3.89	.842
It needs high investment.	3.84	.833
It is technically complex.	3.80	.803
It has a large potential effect on profitability	3.74	.852

Large consequential adjustments are needed when adopting the practices as adopting sustainability practices is not easy. More resources such as budget allocation, equipment and facilities are needed to execute the practices despite the expert assisting and guiding the hotel restaurants operations in the implementation. But, these managers believe that if there is a commitment shown, then definitely it will give them a profitable outcome in the long run.

5.4.5.3   Compatibility

Figure 5.14 shows that a high percentage of the hotel managers somewhat agreed with adopting sustainability where it fits with the restaurant operations and routines.
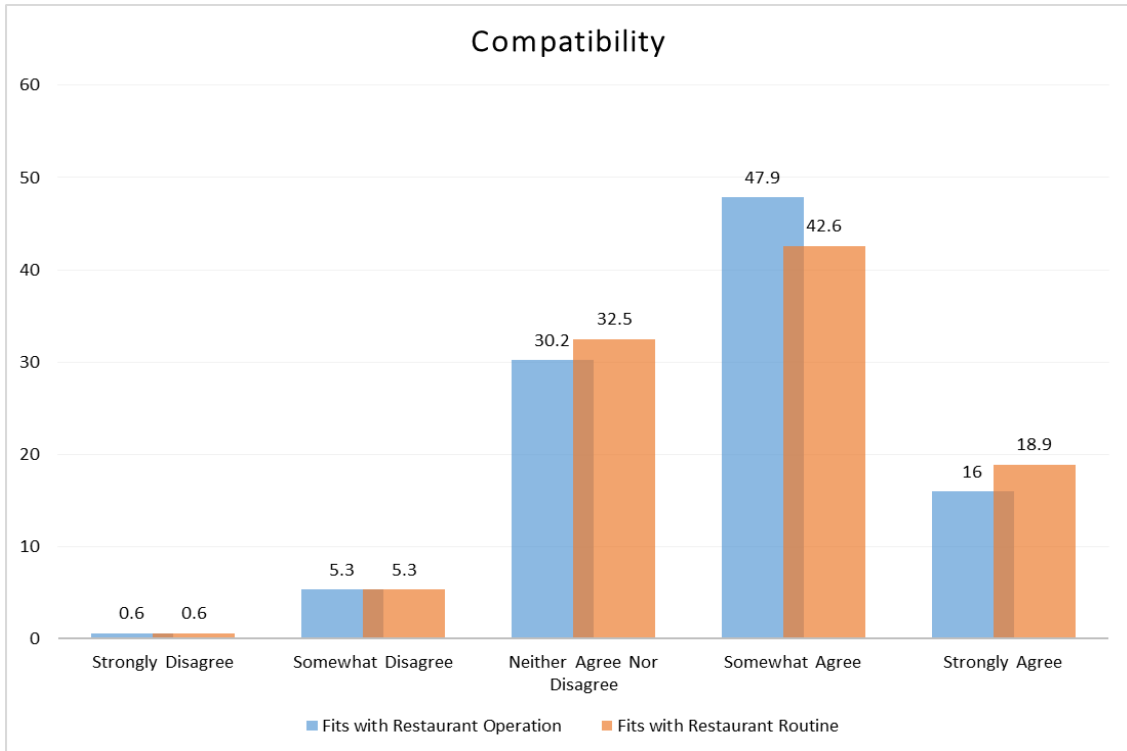
Figure 5.14: Respondents' Perceptions on Compatibility (n=169)

Table 5.25 below shows the results on the compatibility of sustainability in the current operations for the hotel businesses. Most of the hotel managers agreed that adopting the practices fits with their routine (*M*=3.73) and with all the aspects of their operations (*M*=3.73).

Table 5.25: Compatibility. (n=169)

Items	Mean	Std. Deviation
It fits into our restaurant operation routine.	3.73	.847
It fits with all aspects of our restaurant operation.	3.73	.812

The compatibility of the changes in decisions made with the current practices and situation should be the focal point as it determines the budget spent in operating those decisions. Most of the hotels were agreed that it was compatible for their restaurants to adopt the practices. This might be because their restaurant settings are changeable and can be modified for some reasons and management future decisions or in other words, innovated.

5.4.3.4   Trialability

Like the compatibility in adopting sustainability practices, a very high percentage of the hotel managers somewhat agreed with adopting the sustainable practices on a trial basis to see the benefits before deciding to confirm practice in hotel restaurants. Besides that, the hotel managers were also properly tries it out before committing to adopting the practices. These statements seem related with the relative advantages received when adopting sustainability practices. The hotel managers would like to make sure adopting these practices would: give them a greater control, easier to do operation, help accomplish tasks quickly, improve operation quality, enhance effectiveness, increase profit margin and market share, improve overall financial performance, create extensive positive change in the cost position, give a stronger reputation with customers and help them to compete in the international market.
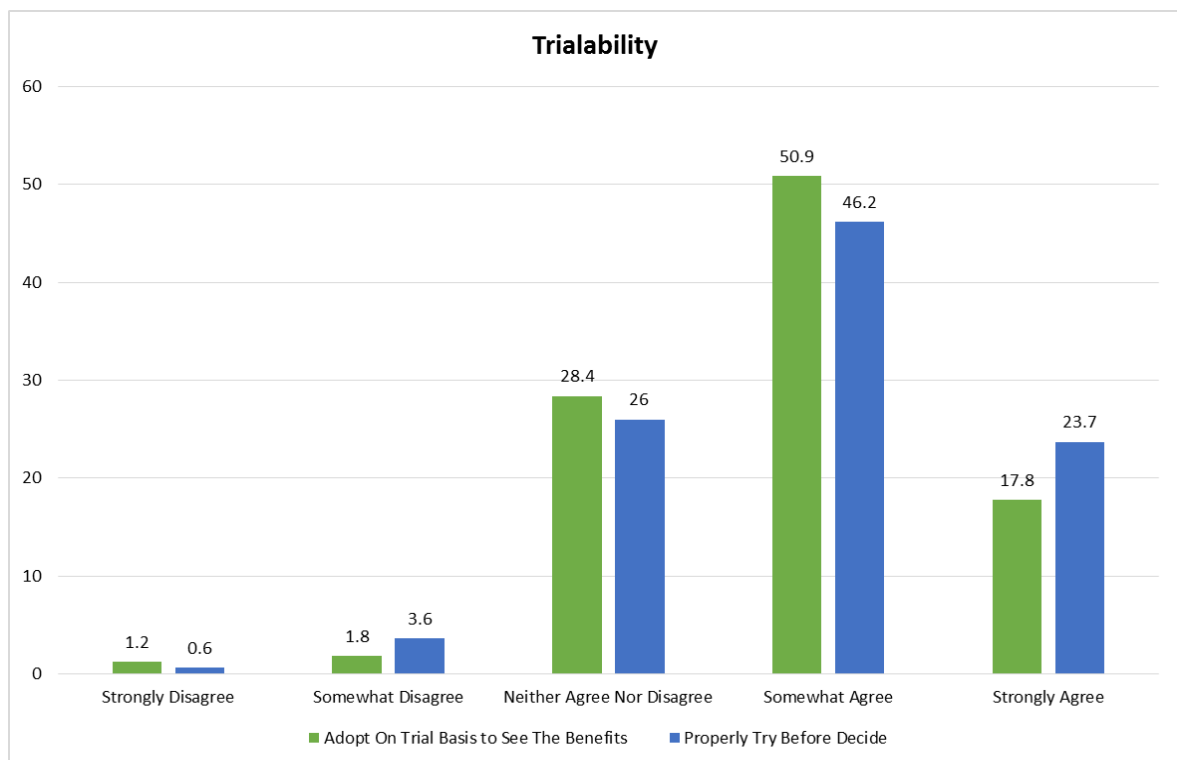
Figure 5.15: Respondents' Perceptions on Trialability (n=169)

The descriptive mean findings below (Table 5.26) show that most of the hotel managers said that before really deciding on adopting the sustainability practices, they would like to properly to try them out first (*M*=3.88). They would also adopt the practices on a trial basis long enough to really see what the advantages are in implementing them (*M*=3.82).

Table 5.26: Trialability. (n=169)

Trialability	Mean	Std. Deviation
Before deciding to adopt sustainability, I would like to be able to properly try it out.	3.88	.828
I would adopt the sustainability practices on a trial basis long enough to see what the benefits are.	3.82	.781

The practices should be tested first before full implementation is carried out to see whether they fit with their operations. These managers would foresee what might happen and how to overcome it if full adoption took place. Therefore, they would like to try the practices first before the decisions are made.

5.4.3.5   Observability

Figure 5.16 shows that a high percentage of the hotel managers somewhat agreed that they would closely observe the usefulness of the sustainability practices in hotel restaurants. They also somewhat agreed that the excitement and advantages of adopting the practices would be noticed by others. These statements seem related with other statements in other variables of perceived innovation characteristics such as relative advantages, complexity, compatibility and trialability.
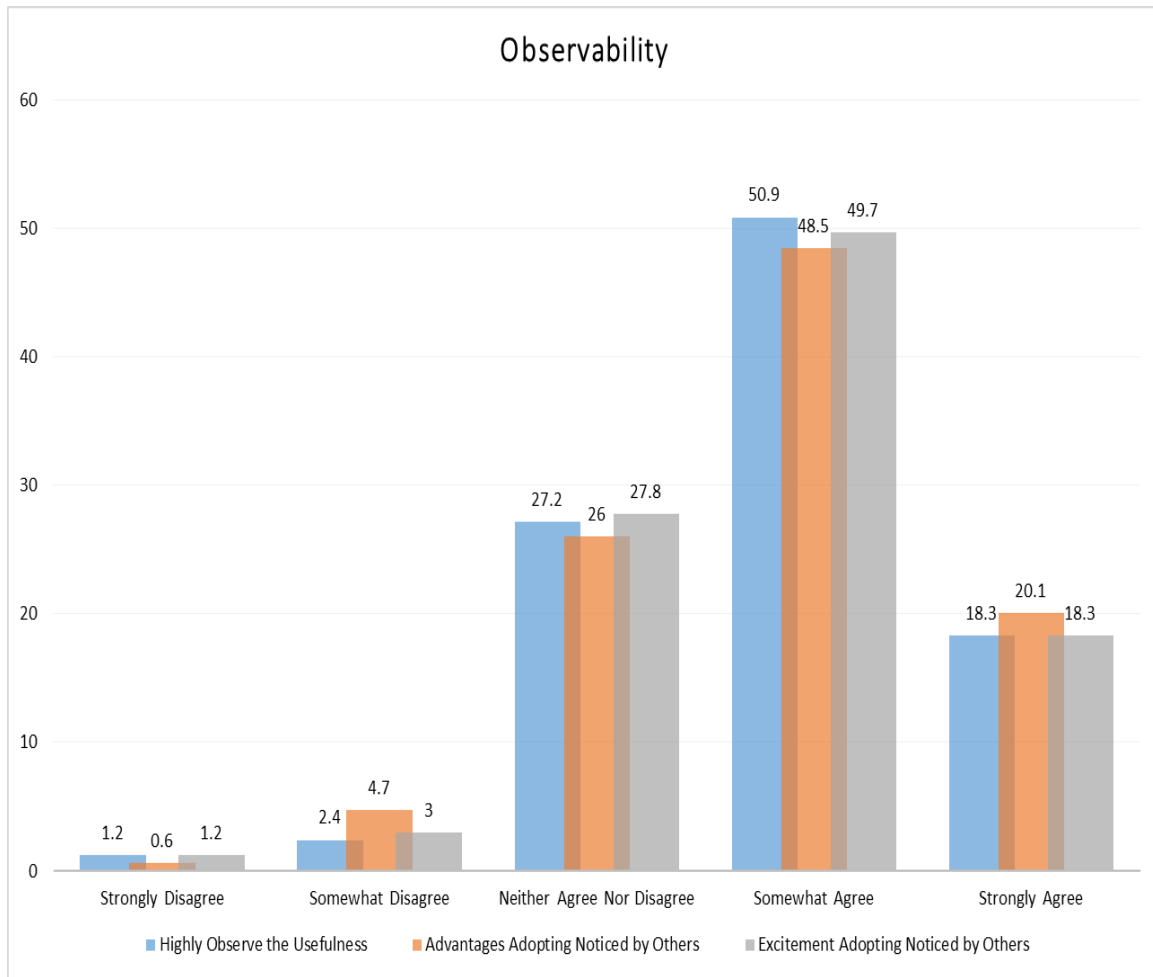
Figure 5.16: Respondents' Perceptions on Observability (n=169)

The details of the observability in the mean descriptive also show most of the managers agreed that the advantages of adopting sustainability can be noticed by others (*M*=3.82). Apart from that, the usefulness of the adoption is highly observable too (*M*=3.82). Again, the managers also stated that the excitement of adopting the practices can be noticed by others (*M*=3.81).

Table 5.27: Observability. (n=169)

Observability	Mean	Std. Deviation
The advantages of adopting sustainability can be noticed by others.	3.82	.823
The usefulness of the adopting sustainability is highly observable.	3.82	.794
The excitement of adopting sustainability can be noticed by others.	3.81	.808

Sustainability issues are the current issues that are highlighted in the hospitality industry, therefore any innovation or changes made in the current practices will be noticed by others especially the stakeholders and the competitors. The advantages, usefulness and excitement of practicing these practices will influence the other operators to adopt them in order to be competitive in the market.

5.5 MHRs Sustainable Model

This section evaluate how the predictors of PIC, OC and EC influence the intention to adopt (ITA) the sustainability practices in Malaysian hotel restaurants. Binary logistic regression analysis was conducted to see which predictors influence the adoption.

ITA, as the dependent variable, was measured in terms of binary response decision, with No intention (0) and Yes (1). Thirteen constructs were used in the sustainability adoption model, with five constructs in PIC adapted from Rogers (2003), four constructs in OC adapted from Nicholls and Kang (2012) and also Kasim and Ismail (2012) as well as four constructs in EC adapted from Kasim and Ismail (2012). 68 items were adapted from these constructs; however, after the factor analysis only 62 items remained to test the fitness of the sustainable adoption model.

5.5.1 Rate of Intention to Adopt

It was found that the majority (n=160) of the hotel managers have the intention to adopt sustainable practices in their restaurant outlets. However, 5.3% (n=9) of the managers do not have the intention to adopt the practices but they will consider to adopt them in the future. The intention to adopt the sustainable practices was higher because the hotel industry was aware about the need for this industry to take care of the environmental issues in Malaysia (e.g. Kim et al., 2017; Kucukusta et al., 2013; Hyatt, 2010; Luck and Bowcott, 2009; Goeldner and Brent Ritchie, 2006). The Malaysian hotel industry was inspired

by the hotel sustainability movement around the globe (UNWTO, 2017). Therefore, it is not surprising to see the rate of intention to adopt sustainability practices in hotel restaurants among Malaysian hotel managers (Figure 5.17).
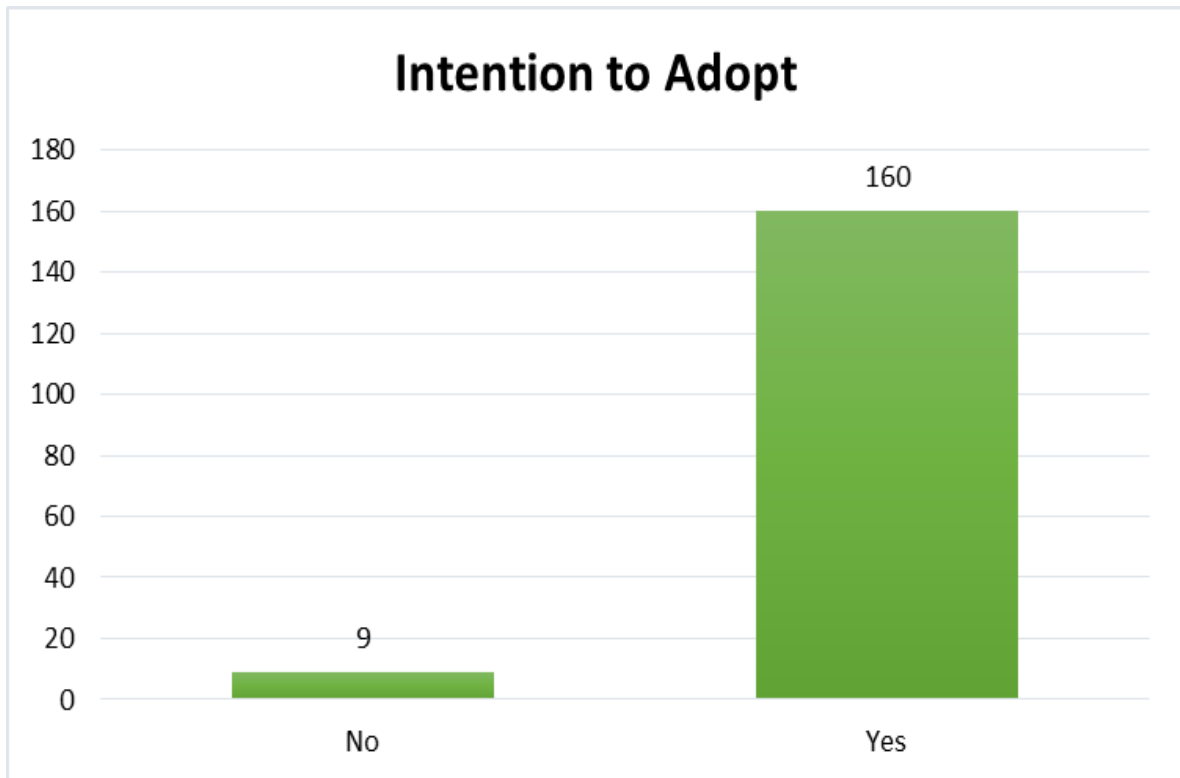
Figure 5.17: Intention to adopt (n=169)

5.5.2 Model Fitness

Table 5.28 below shows the initial model consisting of 13 predictors from 3 variables (perceived innovation characteristics, organisational characteristics and environmental characteristics).

Table 5.28: Binary Logistics Regression Predicting Sustainability Adoption (First Model)

Predictors	B	Wald	Sig.
ATC Attitude Towards Change	-1.487	.889	.346
TM Top Management	2.659	2.638	.104
CC Cost Consideration	.667	.315	.575
EC Employee Connectedness**	1.887	6.164	.013
GLR Government Law andRegulations	2.052	1.497	.221
GSC Green Supply Chain	.545	.096	.756
CA Competitive Advantage	-.598	.229	.633
SD Stakeholder's Demands	-1.637	1.885	.170
RA Relative Advantages	-.420	.115	.734
CPX Complexity	-.268	.049	.825
COM Compatibility	-.794	.447	.504
TRIAL Trialability	-.130	.011	.916
OBSV Observation	.775	.293	.588
-2 Log likelihood (Initial Model)		70.300	
-2 Log likelihood (Final Model)		36.333[a]	
Cox and Snell R Square		.182	
Nagelkerke R Square		.535	
Chi-square		33.967	

**Significant at 5 Percent Level

As the second objective of this study was to determine to what extent the predictors influence the intention to adopt the sustainable practices, with no regard to the impact of any individual benefits, therefore this analysis focused on the predictors' influences. All predictors were entered into the model simultaneously and it indicates that only one predictor significantly influenced the intention to adopt. Only employee connectedness ($p<0.05$) was found correlated with the intention to adopt sustainability practices whereas the other 12 predictors do not correlate with the intention to adopt. The model was found not to fit and this was also supported by the initial model n=169 that has reported the -2 Log Likelihood of 70.300, where the final model with n=169 has -2 Log Likelihood of 36.333. The Cox and Snell R Square revealed only 18.2 percent of the variables in the model can be explained by the model (Hair et al., 1998). Further, the Nagelkerke R Square result indicates that only 53.5 percent of the variables can be explained in the model. The Sig. value and the R Square percentage had indicated that the first model is weak and does not fit.

In order to get the most fit and robust model, Hair et al. (1998) suggested a further test where the researcher can simply drop some of the items or predictors. To get the most significant and fitting model, the research has tried and errors dropped around 23 items including 1 predictor (Competitive Advantage). The result shows the model is fit to be used and further explore (Table 5.29). The second model has a -2 Log Likelihood of 70.300 in its initial model and a -2 Log Likelihood of 14.810 in its final model. Furthermore, the Cox and Snell R Square showed only 28 percent of variables can be explained, which is a low percentage but Nagelkerke R Square showed 82.2 percent of variables can be explained by the model. Therefore, this second model was identified a fit and robust as suggested by Hair et al. (1998).

Table 5.29: Binary Logistics Regression Predicting Sustainability Adoption (Final Model)

Predictors	B	Wald	Sig.
ATC Attitude Towards Change**	-13.396	4.885	.027
TM Top Management**	33.963	4.159	.041
CC Cost Consideration	10.754	3.702	.054
EC Employee Connectedness**	15.850	5.010	.025
GLR Government Law and Regulations**	10.266	4.142	.042
GSC Green Supply Chain	16.350	3.721	.054
SD Stakeholder's Demands**	-19.968	4.607	.032
RA Relative Advantages	-4.511	2.272	.132
CPX Complexity	-6.001	2.707	.100
COM Compatibility**	-17.401	3.909	.048
TRIAL Trialability**	-16.394	4.017	.045
OBSV Observability**	25.636	4.084	.043
-2 Log likelihood (Initial Model)		70.300	
-2 Log likelihood (Final Model)		14.810[a]	
Cox and Snell R Square		.280	
Nagelkerke R Square		.822	
Chi-square		55.490	

**Significant at 5 Percent Level

Table 5.29 above shows there are 8 predictors out of 12 predictors that were found to significantly influence the intention to adopt sustainable practices in hotel restaurants. Out of 62 items used to measure the fitness of the model, only 39 items were found viable to measure each of the predictors involved in this model. Therefore, the multicollinearity test was performed to identify if the model has a multicollinearity issue (Hair et al., 1998).

5.5.3 Multicollinearity Test

The multicollinearity test was performed to identify to what extent the variable can be explained by other variables (Hair et al., 1998). The multicollinearity test indicates there is no correlation value between independent variables that are greater than 0.9. This means the model does not have a multicollinearity issue (Hair et al., 1998).

Table 5.30: Correlation

Predictors	ATC	TM	CC	EC	GLR	GSC	SD	RA	CPX	COM	TRIAL	OBSERV
ATC	1.000											
TM	.285	1.000										
CC	.405	.456	1.000									
EC	.275	.574	.465	1.000								
GLR	.362	.412	.486	.443	1.000							
GSC	.318	.468	.584	.476	.649	1.000						
SD	.254	.355	.455	.405	.636	.640	1.000					
RA	.317	.370	.480	.428	.637	.530	.536	1.000				
CPX	.348	.395	.390	.455	.325	.364	.264	.453	1.000			
COM	.275	.394	.523	.435	.576	.623	.481	.656	.474	1.000		
TRIAL	.346	.431	.489	.478	.456	.456	.317	.511	.604	.620	1.000	
OBSERV	.330	.399	.407	.412	.448	.375	.333	.492	.599	.602	.727	1.000

5.5.4 Variance Inflation Factor (VIF)

There are no variance inflation factors (VIF) with a value greater than the cut-off value of 10 (Hair et al., 1998, 2010). The VIF values less than the cut-off value of maximum 5 (Rogerson, 2001) or 4 (Pan and Jackson, 2008) indicate there is no multicollinearity issue in the model between independent variables. Table 5.31 presents the collinearity statistics:

Table 5.31: Variance Inflation Factor (VIF)

Collinearity Statistics

	Tolerance	VIF
ATC	.756	1.322
TM	.588	1.699
CC	.529	1.891
EC	.547	1.828
GLR	.396	2.523
GSC	.373	2.684
SD	.479	2.088
RA	.433	2.309
CPX	.524	1.910
COM	.371	2.699
TRIAL	.364	2.746
OBSERV	.387	2.583
Dependent Variable: Intention to Adoption		

5.5.5 Residual Test

A residual test was conducted to identify if there was any unspecified relationship between the cases or the variables (Hair et al., 1998). According to Hair et al. (1998), *"residuals can be used in diagnostic procedures to identify problems in the estimation technique or to identify unspecified relationships"* (pp38). The residual test for this model identified there is 1 case that was found not to fit the predictive model (Table 5.32).

Table 5.32: Residual Test

Case	Observed	Predicted	Predicted	Temporary Variable	
	Adoption		Group	Resid	ZResid
25	N**	.984	Y	-.984	-7.922

5.5.6 Predictive Power

An overall 88.9 percent accuracy of the model was achieved and this is a great fit model with a very high predictive accuracy. The predictive power for this model is shown in Table 5.33 below.

Table 5.33: Predictive Power

Observed		Intention to adopt		Percentage Correct
		No	Yes	88.9
Intention to Adoption	No	8	1	100.0
Overall Percentage	Yes	0	160	99.4

5.6 MHRs Sustainable Practices and Organisational Performance

This section reveals the findings to what extent the sustainability adoption in Malaysia's hotel restaurants will improve the organisational performance. This objective's findings was based on the descriptive analysed to see to what extent the hotel managers agreed on how adopting sustainability practices in hotel restaurant operations would improve organisational and operational performance.

5.6.1 Sustainability Performances

The overall sustainability performances are presented in Table 5.34 below. Most of the hotel managers are agreed that when they adopt the sustainability practices in their hotel restaurant they would improve their hotel image (M=4.34), improve the relationship with the local community (M=4.24), increase the number of customers (M=4.22) and improve customer (M=4.21) satisfaction. In addition, by adopting the sustainability practices in their hotel restaurant, it would give them a marketing advantage over their competitors (M=4.17) and better performance would increase their profitability (M=4.13).

Table 5.34: Overall Sustainability Performances. (n=169)

Items	Mean	Std. Deviation
Improve the image of the hotel.	4.34	.732
Improve relationships with the local community.	4.24	.752
Increase employee satisfaction.	4.22	.777
Increase customer satisfaction.	4.21	.741
Give marketing advantage over competitors.	4.17	.774
Increase profitability.	4.13	.775

Hence, the findings presented in this descriptive analyses show that most of the Malaysian hotel managers have a good response to adopting sustainability practices in their restaurant outlets. By analysing all the potential aspects, they have agreed that the sustainability practices would give them more prospect of improving their image and reputation amongst the stakeholders and would positively affect their finances through the profits earned.

Overall Sustainability Performance

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
Improve the image of the hotel.	0	3	17	68	81
Improve relationships with the local community.	1	2	20	78	68
Give marketing advantage over our competitors.	0	4	26	75	64
Increase profitability.	0	3	32	74	60
Increase customer satisfaction.	0	1	29	72	67
Increase employee satisfaction	0	1	1	27	70

Figure 5.18: Respondents' Perception on Overall Sustainability Performance (n=169)

5.6.2 MHRs Organisational Performance

Direct logistic regression was also performed to assess the relationships between sustainability adoption and organisational and operational performance in Malaysian hotel restaurants. The predictor of overall sustainability performance was statistically significant, X^2 (N=169) = 3.92, p <0.05, indicating that the model was able to distinguish between the hotel managers who agreed and did not agree on how sustainability adoption will improve the organisational and operational performance. The model as a whole explained between 2.3% (Cox and Snell R square) and 6.7% (Nagelkerke R square) of the variance in the intention to adopt, and correctly classified 94.7% of cases. The overall sustainability performance recording an odd ratio of 2.60 explained the fact that managers were over 2 times more agreed that adopting sustainability practices will improve the organisational and operational performance (Table 5.35).

Table 5.35: Sustainability Performances and Sustainability Adoption (n=169)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Overall Sustainability Performance	.956	.478	4.003	1	.045	2.601	1.020	6.636
Constant	-.968	1.858	.271	1	.602	.380		

5.7   Sustainable Environmental Practices

This section reveals the findings of the fourth objective in this study which is to develop a new and better sustainable framework that will assist Malaysian hotel restaurants in transforming from traditional to more sustainable practices. This objective is linked with the sustainable framework of this study. Therefore, this objective was measured with the sustainability environmental practices where the construct included environmental education, support for the host community, conservation projects, compliance with legislation and by-laws, waste management and voluntary programmes. This analysis was performed with a descriptive analysis and is linked with the sustainable model developed for the second objective. The findings of this study will be the Sustainable Framework, the variables and items of which are presented in the following table:

5.7.1 Environmental Education

Table 5.36 below presents the findings on current environmental education and activities that are carried out by Malaysian hotel restaurants. The total mean of 3.99 indicates that environmental education should be implemented in the hotel restaurant operations. The majority of the hotel managers agreed that it is important to ensure the sanitation and food safety in their restaurant (M=4.18), enforce no-smoking in public areas (M=4.08) and give accurate information to guests (M=4.05). In line with this, they also agreed that it is important for them to modify their operations in order to reduce the environmental impacts (M=4.00). The guests also need to be given the information about the hotel's environmental activities and policies (M=3.97). Despite of all that, the staff or employees should also take part in this environmental education.

Table 5.36: Environmental Education. (n=169)

Items	Mean	Std. Deviation
Measures to ensure sanitation and food safety.	4.18	.851
Enforcement of no-smoking in public areas.	4.08	.937
Provision of accurate information to guests.	4.05	.908
Modification of operations to reduce environmental impacts.	4.00	.790
Guests' information about hotel's environmental activities/policies.	3.97	.906
Staff educations on eco-friendly practices.	3.95	.854
Use of ozone-friendly detergents and equipment.	3.94	1.021
Production of brochures and publicity material using recycled paper.	3.89	.893
Guests' education on eco-friendly practices.	3.84	.845

Moreover, they should be educated with eco-friendly practices guidelines and procedures (*M*=3.95) by knowing how to handle ozone-friendly detergents and equipment (*M*=3.94). Hence, the marketing activities such as the production of brochures and publicity material should use recycled paper (*M*=3.89). Finally, the end user, who are the customers or guests should also be educated on eco-friendly practices as well (*M*=3.84). Having environmental education is important for the hotel industry because it involves their core businesses, especially when they want to adopt the practices in their restaurant outlet. Appropriate measurement and monitoring guidelines should be emphasized to make sure the education program is successful.

	Not at all Important	Slightly Important	Important	Fairly Important	Very Important
Guests' Education on Eco-friendly Practices	2	7	42	82	36
Staff Educations on Eco-friendly Practices	2	6	35	80	46
Guests' Informatiion about Hotel's Environmental Activities	2	7	38	68	54
Enforcement of no-smoking in public areas	3	4	37	56	69
Provision of accurate information to guests	2	7	32	67	61
Use of ozone friendly detergents and equipments	4	9	35	64	57
Measures to ensure sanitation and food safety	2	2	30	63	72
Production of brochures and publicity material using recycled paper	2	7	44	70	46
Modification of operations to reduce environmental impacts	0	4	40	76	49

Figure 5.19: Respondents' Perception on Environmental Education (n=169)

Figure 5.19 shows the number of respondents' responses on the environmental education criteria. It can be seen that there are a greater number of responses on the statement relating to the guests' education on eco-friendly practices and staff education on eco-friendly practices. The majority of the hotel managers thought these two criteria are fairly important to measure environmental education as the sustainability indicator.

5.7.2 Support for Host Community

Support for the host community is one of the variables used to indicate the current environment sustainability performances (Table 5.37) in Malaysia's hotel restaurants. A total mean score of 4.06 revealed that it is important to adopt the sustainability practices in hotel restaurant operations to support the local community where the hotel is located. To support the community, the hotel managers said it is important to promote the local traditional culture (M=4.15), use the local materials (M=4.09) and purchase from local sources (M=4.05).

Table 5.37: Support for Host Community. (n=169)

Items	Mean	Std. Deviation
Promotion of the local traditional culture.	4.15	.838
Use of local materials.	4.09	.788
Purchases from local sources.	4.05	.792
Employment of people from the local community.	4.03	.851
Improvement of lives of local residents by ploughing back profit.	4.00	.823

In addition, the hotel managers said they employ local people to work at their hotel properties (M=4.03), which will improve of the lives of local the local community by ploughing back the profit (M=4.00). It is a hotel's own initiative to support the community where their businesses are. Some of the organizations said it is a corporate social responsibility for any organization who run businesses in a community.

	Not at all Important	Slightly Important	Important	Fairly Important	Very Important
Employment of Local Community	1	7	31	76	54
Use of Local Materials	0	7	24	84	54
Promotion of Local Traditional Culture	0	3	29	71	66
Purchase from Local Sources	0	3	39	72	55
Improvement of Lives of Local Residents	0	7	36	76	50
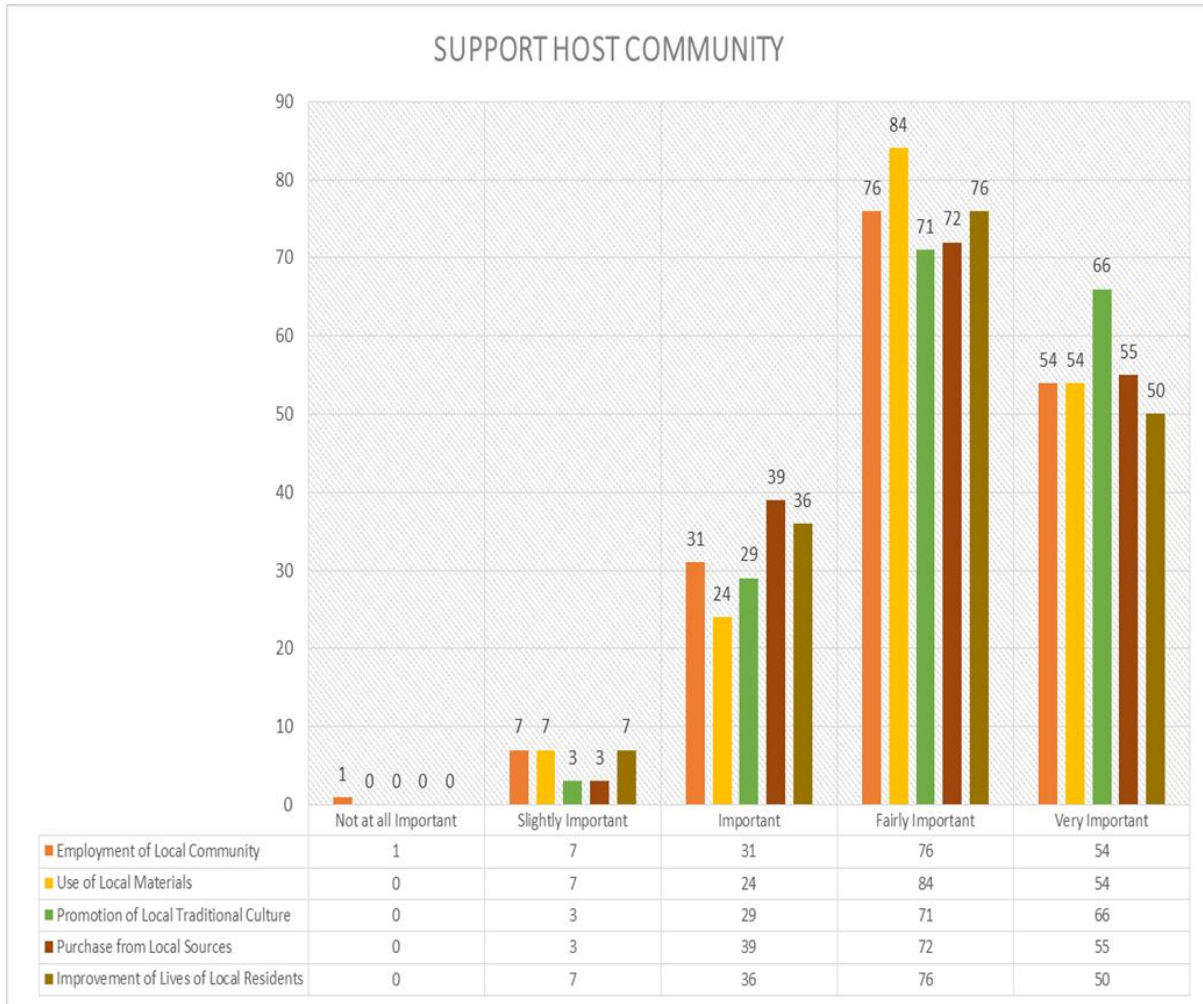
Figure 5.20: Respondents' Perception on Support to Host Community (n=169)

The highest responses given by the managers related to using local materials. The majority of the respondents indicated that it is fairly important to use the local materials or ingredients in hotel restaurant operations. In addition, the hotel managers said that it was important for the hotel to employ the local community to work in the hotel. Most of the managers responded in the greater range that it was fairly important and very important for other criteria to support the host community such as improving the lives of local residents, purchasing from local sources or suppliers and promoting local traditional culture.

5.7.3 Conservation Projects

The next Table 5.38 presents the result of the current conservation projects in Malaysia's hotel restaurants. The total mean for the conservation projects is 3.98 where it is important for the hotel operations if they would like to adopt sustainability practices. To execute the conservation projects, most of the managers agreed that it is important to purchase eco-friendly materials and detergents and said that it is one of the hotel's missions (M=4.13). Again, it was also found that Malaysia's hotel restaurants installed water-efficient devices and equipment (M=4.07) and used energy-efficient equipment and products (M=4.05). Furthermore, the suppliers were also given environmental standards (M=4.00) in order for them to work in hand for the current sustainability practices that the hotel implemented.

The managers also agreed that it is important that the employees and stakeholders be rewarded when they make a contribution towards the conservation project (M=3.83). Hence, another way to put into consideration when dealing with suppliers are that the hotel purchases in in bulk (M=3.78). This not only minimizes the workload for both parties but can also prevent pollution. With that, the environment performance indicators can be monitored by establishing conservation projects, which will also benefit all of the stakeholders.

Table 5.38: Conservation Projects. (n=169)

Items	Mean	Std. Deviation
Purchase of eco-friendly materials and/or detergents.	4.13	2.401
Installation of water-efficient devices and equipment.	4.07	.827
Use of energy-efficient equipment and products.	4.05	.843
Prescription of environmental standards for suppliers.	4.00	.869
Cash or kind of contribution towards conservation project.	3.83	.897
Purchase in bulk.	3.78	.945

Figure 5.21 shows the proportion of hotel managers' responses on conservation project as one of the sustainability indicators for the environment. The majority of the respondents agreed that it is fairly important to give cash or a kind of contribution towards conservation projects, followed by using energy-efficient equipment and products, which was considered fairly important in hotel restaurant operations. Other criteria also received a high percentage of responses and were fairly important as a sustainability indicator in conservation projects by the hotel.
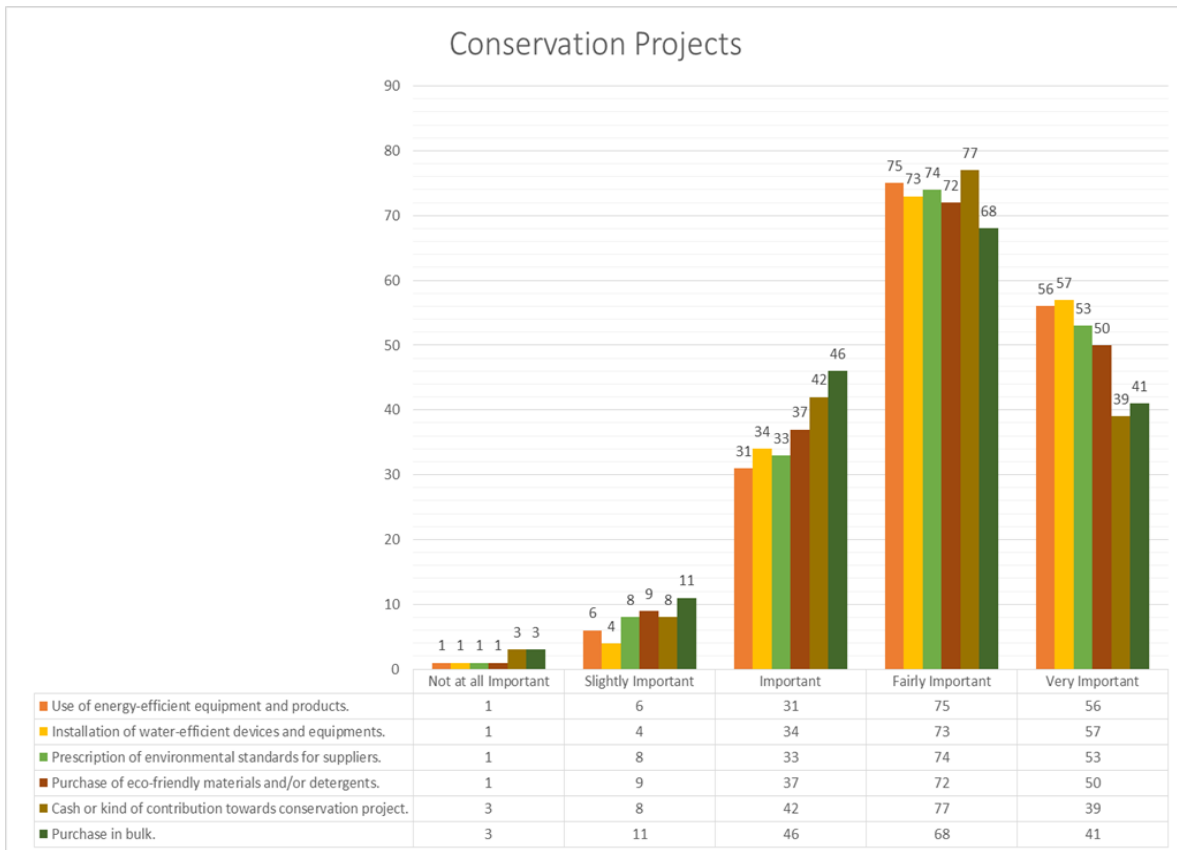
Figure 5.21: Respondents' Perception on Conservation Projects (n=169)

5.7.4 Compliance with Legislation and by-Laws

Table 5.39 presents the findings on the compliance with legislation and by-laws as one of the current sustainability performance indicators for the environment. Having a mean score of 3.58 indicates it is important for the hotel operations to comply with the legislation and by-laws accordingly. The hotel managers agreed it is important that they followed as enforced by the laws in implementing the linen and towel-reuse programme (M=3.72). Hence, they also made an acquisition of a health permit from the Malaysian Ministry of Health (MOH) (M=3.60) and Malaysian Ministry of Natural Resources and Environment (NRE) (M=3.55). When they obtain the permits, they are required to submit an environmental management programme (M=3.52) to the NRE. In addition, they said it is important for them to submit an environmental impact statement (M=3.45) to the NRE. Again, when the hotel managers decide to adopt sustainability practices in their restaurant outlets, they should comply with the legislation and laws accordingly.

Table 5.39: Compliance with legislation. (n=169)

Items	Mean	Std. Deviation
Implementation of a linen and towel-reuse programme.	3.72	1.078
Acquisition of health permits from the Malaysia Ministry of Health (MOH).	3.60	1.080
Acquisition of environmental permit from the Malaysia Ministry of Natural Resources and Environment (NRE).	3.55	1.046
Submission of environmental management programme to NRE.	3.52	1.069
Submission of environmental impact statement to the environmental protection agency such as NRE.	3.45	1.253

As can be seen in Figure 5.22, over three quarters of the managers claimed it was important and very important for them to comply with legislation and by-laws. The highest proportion of the managers stated it is fairly important and very important for them to have linen and towel-reuse programmes in their hotel restaurants.

Other criterion also seems to be important to comply with legislation and by-laws when adopting sustainability practices in hotel restaurants.

	Not at all Important	Slightly Important	Important	Fairly Important	Very Important
Submission of environmental impact statement to Malaysia Ministry of Natural Resources and Environment (NRE).	13	11	48	69	28
Acquisition of environmental permit from NRE.	12	9	48	74	26
Submission of environmental management programme to NRE.	13	8	53	67	28
Acquisition of health permit from the Malaysia Ministry of Health (MOH).	11	9	51	62	36
Implementation of a linen and towel-reuse programme.	12	7	34	78	38

Figure 5.22: Respondents' Perception on Compliance with Legislation and by-Laws   (n=169)

5.7.5 Waste Management and Voluntary Programme

The results of the waste management and voluntary programmes are presented in Table 5.40. The mean score of 3.98 for waste management and voluntary programmes shows it is important for the hotel operations to apply these practices when adopting the sustainable practices. These areas of waste management and voluntary programmes are also two of the initiatives taken by Malaysia's hotel restaurants to measure the performance indicators for the sustainability adoption. The hotel managers stated it is important to reuse papers, cans, bottles and plastic

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(*M*=4.04) and they must be sorted before being recycled (*M*=4.02). Besides that, other ways to make the waste management programmes successful are to implement the recycling program (*M*=3.98) and compost the waste (*M*=3.86).

It is also necessary to have a periodic environmental audit for the hotel operations (*M*=3.50). Again, the hotel managers agreed that it is important for their property to get the eco-labelling or certification (*M*=3.48), obtaining the ISO 14010 or environmental audits by external organizations (*M*=3.42) and acquisition of an ISO 14001 certification (*M*=3.33).

Table 5.40: Waste Management and Voluntary Programme. (n=169)

Waste Management	Mean	Std. Deviation
Reuse of papers, cans, bottles and plastic.	4.04	.908
Sorting of waste into paper, glass, plastic, etc.	4.02	.947
Implementation of recycling program.	3.98	.993
Composting of waste.	3.86	.960
Voluntary Programme		
Periodic environmental audit.	3.50	1.118
Eco-labelling or certification.	3.48	1.139
ISO 14010 or environmental audits by external organizations.	3.42	1.188
Acquisition of an ISO 14001 certification.	3.33	1.189

The waste management and the voluntary programmes can be one of the efforts that should be introduced by the hotel industry in order to determine the extent of the performances of hotels adopting the sustainability practices.

Furthermore, Figure 5.23 shows that overall, a high proportion of hotel managers responded that all the statements were important. In particular, these are the reuse of papers, cans, bottles and plastics, sorting of waste into paper, glass and plastic, implementing a recycling program and composting the waste from the operations. Overall, the hotel managers indicate waste management as one of the important components in sustainability indicator in the environment.

Waste Management

	Not at all Important	Slightly Important	Important	Fairly Important	Very Important
Composting of waste.	4	6	48	61	50
Implementation of recycling program.	5	7	33	64	60
Sorting of waste into paper, glass, plastic, etc.	4	5	34	65	61
Reuse of papers, cans, bottles and plastic.	3	5	33	69	59

Figure 5.23: Respondents' Perception on Waste Management (n=169)

Moreover, Figure 5.24 reveals that the highest proportions of the managers were agreed that it is important and fairly important to get an ISO 14001 certification, to get a hotel environmental audit by external organizations, to obtain eco-labelling or certification and a periodic environmental audit. However, there was a proportion of hotel managers that considered the voluntary programmes used as sustainable performance indicators for the environment not at all important and slightly important to implement.

	Not at all Important	Slightly Important	Important	Fairly Important	Very Important
Acquisition of an ISO 14001 certification.	20	12	56	53	28
ISO 14010 or environmental audits by eternal organisations.	17	9	58	53	32
Eco-labelling or certification.	15	9	58	53	34
Periodic environmental audit.	14	9	57	56	33
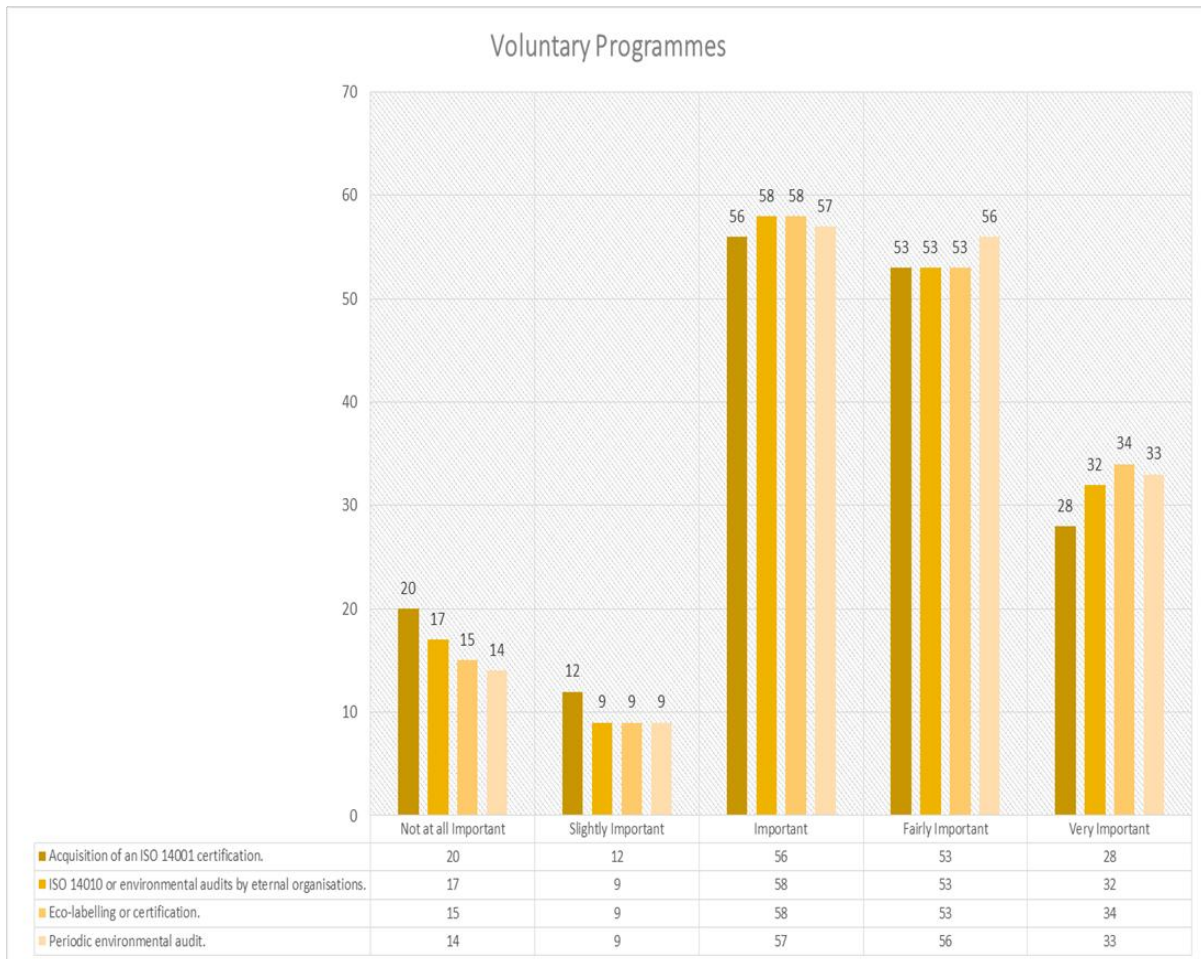
Figure 5.24: Respondents' Perception on Voluntary Programmes (n=169)

5.8   Survey Discussion

This section discusses the result of the main key findings of this study and synthesis them with literature reviewed in Chapter 1 and Chapter 2. The hypotheses outlined in Chapter 3 were tested using Binary Logistic Regression to see the relationships between how, organisational characteristics (OC), environmental characteristics (EC) and perceived innovation characteristics (PIC) influence the intention to adopt sustainable practices in Malaysian Hotel Restaurants (MHRs). The relationship of organisational performance and intention to adopt the practices was also tested. There were 14 hypotheses developed and these were discussed further. The proposed sustainability framework for MHRs is presented in the Figure 5.25 below.
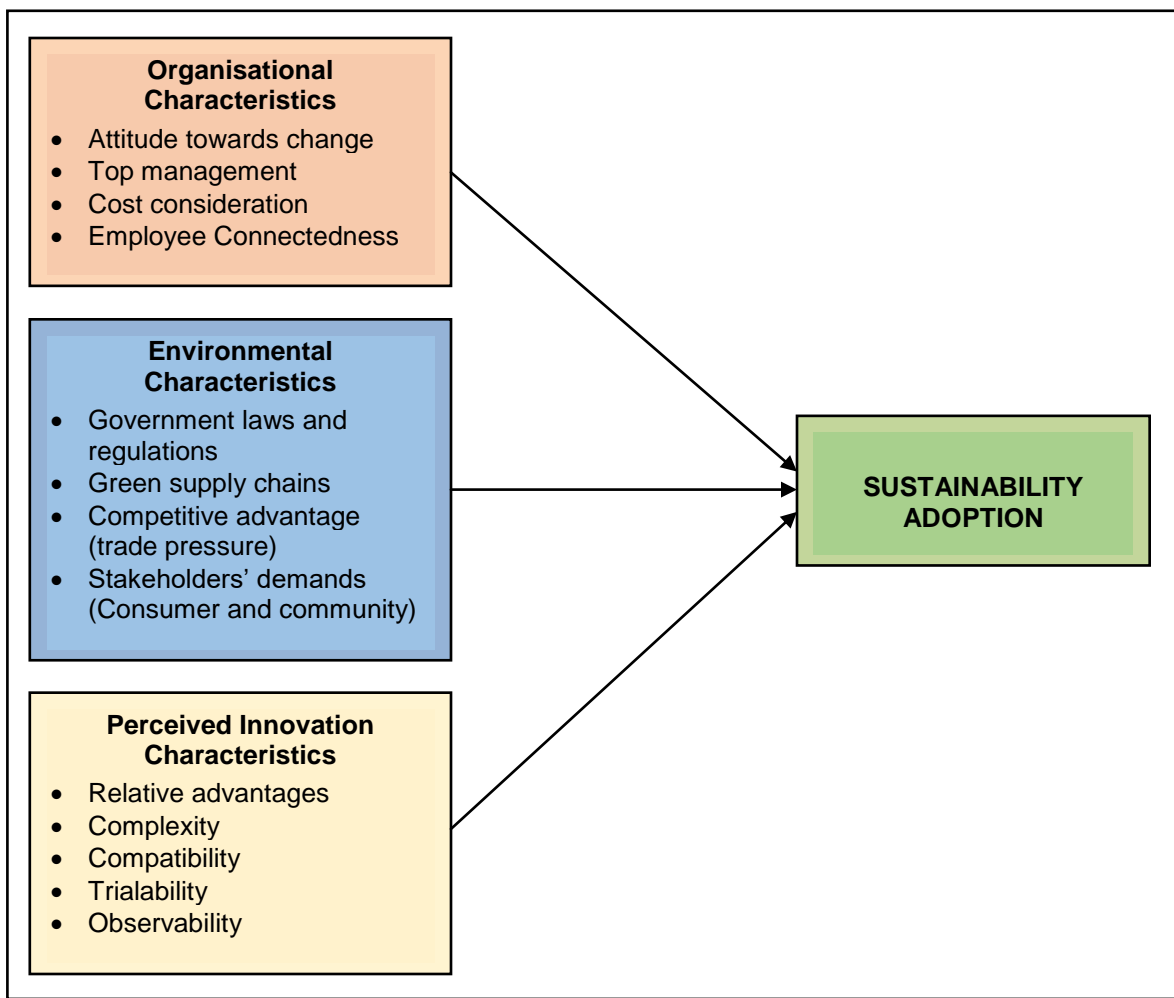
Figure 5.25: Proposed MHRs Sustainability Model.

The main intention for this analysis was to test the proposed conceptual sustainable model discussed in Chapter 3. Also, the second objective of this study is to evaluate how perceived innovation characteristics, organisational characteristics and environmental characteristics influence the decision to adopt sustainability practices in Malaysian hotel restaurants. This exploratory study identified the major findings regarding how these characteristics influence the intention to adopt sustainability practices in hotel restaurants. The survey findings have further revealed that 160 hotels would like to adopt sustainability practices in their restaurant operations and 9 hotels will adoption in the future. The intention to adopt could exist because they believed it is the right time for them to implement the practices in their operations. With that, the discussion is organised to see how the framework was developed as a final model of this study.

5.8.1 *Malaysian Hotel Managers and Sustainability Adoption*

The Malaysian hotel industry was ready to embark towards supporting sustainability operations, acknowledging the following: (1) the hotel industry has a substantial impact on the eco-system; and (2) there are significant benefits to be had from adoption and, sooner or later, the industry will adopt these practices in their operations.

Tourism Malaysia have recorded that there were only ten hotels in Malaysia certified as Green Hotels in 2016. It is surprising to see that from 629 establishments of 3-5 star rated hotels in Malaysia only 1.58 per cent have adopted the sustainability practices. Sustainability practices are not a focal point for most hotel operators and yet it has being known 'rare' (Kamalulariffin et al., 2013). The fact that the number of the hotel managers that would like to adopt the sustainability practices in Malaysian hotel restaurants (MHRs) was higher than those who do not have this intention is due to the awareness of industry impacts on the environment (e.g. Kim et al., 2017; Kucukusta et al., 2013; Hu et al., 2010; Hyatt, 2010; Luck and Bowcott, 2009; Goeldner and Brent Ritchie, 2006). Other reasons why MHRs wants to adopt the practices because MHRs were inspired by

the sustainability movement introduced by World Tourism Organization (UNWTO, 2017).

Additionally, The Eleventh Malaysia Plan (2016-2020) has announced the need for sustainability in the national agenda (MOTAC, 2017). This is a wake-up call for the Malaysian hotel industry to implement sustainability practices in their operations. Hotel operations in other countries have moved forward with sustainability practices and showed improvements in their organisational performances (eg. Bohdanowicz and Zientara, 2009; Sheldon and Park, 2011; Nicholls and Kang, 2012; Cvelbar and Dwyer, 2013; Namkung and Jang, 2017). These are the main reasons why this study has revealed the proportions of hotel managers wishing to adopt the sustainable practices was higher in hotel operations which included hotel restaurants. This study's findings show that the Malaysian hotel industry is moving towards sustainability practices. They are aware of and concerned about the impacts from the business they are operating (Siti et al., 2011). It is hoped that this study will provide guidance for future researchers examining the movement of sustainability adoption in hotel industry specifically in hotel restaurants.

5.8.2 Organisational Characteristics

The organisational characteristics were measured using four characteristics to observe the intention to adopt the sustainability practices among the Malaysian hotel managers. Three characteristics were formulated by Kasim and Ismail (2012) to measure organisational characteristics: (1) top management (Banerjee, 1998); (2) cost consideration (Florida, Atlas and Cline, 1999); (3) employee connectedness (Beard, 1996); a (4) attitude towards change, which identifies the level of risk-taking (Jawarski and Kohli, 1993). The model of sustainability adoption confirmed that there are only three characteristics that significantly influenced the adoption of sustainable practices and operations in hotel restaurants. Furthermore, these findings revealed that environmental apprehension positively influenced the hotel managers' intention to adopt environmental management systems (EMS) in

hotel operations. With that, the four hypotheses formulated from this characteristic were presented in the Table 5.41 below.

Table 5.41: Organisational Characteristics Hypotheses.

Hypotheses	Sig.	Supported
H1: Attitude towards change is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	**Yes, Negatively Significant**
H2: **Top management** is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	**Yes**
H3: **Cost consideration** is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p > .05**	**No**
H4: **Employee connectedness** is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	**Yes**

5.8.2.1 Attitude towards Change

To researcher's surprise, attitude towards change was found to have a negative impact on the adoption of sustainability practices among the hotel managers. Notably, the managers' attitude strongly influenced the intention to adopt sustainability practices (Chih, Yang and Chang, 2012). The Malaysian hotel managers believe that by adopting sustainability practices in their restaurant operations they will increase hotel operational performance (Eby, Adam, Russell and Gaby, 2000; Gilmore and Barnett, 1992; Kotter, 1996). A manager who is a risk taker would foresee positive outcomes and profitability from their decisions (Naranjo-Gil, Hartmann, and Maas, 2008; Pettigre, Woodman and Cameron, 2001). Therefore, one approach to changing the attitude of managers is through risk-taking. It is recognised that the level of risk-taking is one of the main concerns in doing business (Jawarski and Kohli, 1993). Of course, if the result of a decision proves to be a failure it could have an impact on the business operations, but with proper judgement and decision-making it gives an advantages by increasing the profitability.

5.8.2.2   Top Management

The sustainability model identified top management as significantly influencing the intention to adopt sustainability practices in restaurant operations. The majority of senior/top management is concerned about the impact of hotel operations on the surrounding environment and ecosystem. Further, they encourage the development of innovative strategies in their operations, for example, adopting new practices in their operations, when they have the utmost confidence in their effectiveness. These findings were found to be in line with previous studies (e.g., Garcia-Granero et al., 2015; Chakraborty, Sheikh and Subramanian, 2007; Colquitt et al., 2007). As hotel managers are also recognised as part of the overall management team, they are also key to operational decision-making (Alexiev, Jansen, Van den Bosch and Volberda, 2010; Elenkov, Judge and Wright, 2005). As mentioned earlier in this study, there are only 10 hotels in Malaysia certified as a green hotel (Tourism Malaysia, 2016). Most of the respondents in this study agreed that the Malaysian hotel industry should take the initiative and consider implementing sustainability practices. Indeed, a decision by top management to adopt sustainability practices would undoubtedly help to influence the overall success of the hotel's operations (Damanpour and Schneider, 2006). Top management, especially managers, are some of the most influential individuals in an organisation to change and direct organisational attitudes and motivations, particularly with regards to environmental practices (Banerjee, 1998; Griffiths and Petrick, 2001; Lusser and Riglar, 1999; Stone, Joseph, and Blodgett, 2004; Vercalsteren, 2001).

5.8.2.3   Cost Consideration

This study revealed cost as being one of the most prominent if not driving factors for hotel managers in deciding to adopt sustainability practices. The survey used a positive narrative statement to observe whether the cost is an issue in adoption of sustainability practices. For instance, hotel managers will consider investing in an EMS at a substantial cost if it is for purchasing organic products to be used in the

restaurant. By adopting said practices in their hotel restaurant, the manager would only consider the expense if they decided to move to an environmentally restaurant and promote their restaurant accordingly. The managers are fully aware of the impact to their operations (Siti et al., 2011). However, costs have always been a significant constraint and determinant for restaurants hoping to move towards the adoption of eco-friendly practices in their operations (Schubert et al., 2010). The expectation of the findings, was in line with previous study as the cost was considered to be a significant concern and determinant for the hotel managers (Florida, Atlas and Cline, 1999).

5.8.2.4   *Employee Connectedness*

Employee connectedness and the intention to adopt sustainability practices in hotel restaurants were found to correlate with the findings in the survey. This result also addressed similar findings from previous studies (Ajzen, 1991; Han and Ryu, 2006; Oliver, 1997; Chan et al., 2014). Adopting eco-friendly practices would involve the participation of employees. Given the hotel industry is a service industry where employees are the people who provide services to guests (Ottenbacher et al. 2006), when hotel restaurants plan to change to more sustainable operations, employees will need to be trained. The training department (often in the human resources department) should develop an environmental awareness program and specialised training for employees to help them to perform the new or modified practices. The employees should be equipped with sustainability-related knowledge, and the managers should also attend the training to enhance their knowledge, skills and awareness. Employees should be flexible and open-minded to adapt to the changes brought about by the introduction of the new system and operational changes in the workplace (Beard, 1996). Therefore, sustainability working culture should be highlighted to top management to motivate and encourage the hotel employees to be committed to the new changes in their jobs (Chan and Hawkins, 2010).

5.8.3 Environmental Characteristics

Four attributes were used to identify how environmental characteristics will influence the intention to adopt sustainability practices among the Malaysian hotel managers. The attributes were adopted from Kasim and Ismail (2012), initially known as external organisational characteristics which were adapted to represent the environmental characteristics for this study. The environmental characteristics are; government law and regulations (Barnejee, 1998), green supply chains (Zhu and Sarkis, 2004), competitive advantage (Chavan, 2005) and stakeholder demands (Kotler, Bowen and Makens, 2006). The model of sustainability adoption identified that there are only two attributes that significantly influence the intention to adopt sustainability practices: government law and regulations and stakeholders' demands. The hypotheses are displayed in Table 5.42.

Table 5.42: Environmental Characteristics Hypotheses.

Hypotheses	Sig.	Supported
H5: **Government laws and regulation** *are positively related to the sustainability adoption in Malaysian hotel restaurants.*	**p < .05**	**Yes**
H6: **Green supply chains** *are positively related to the sustainability adoption in Malaysian hotel restaurants.*	**p > .05**	**No**
H7: **Competitive advantage** *(Trade pressure) is positively related to the sustainability adoption in Malaysian hotel restaurants.*	**Item dropped**	
H8: **Stakeholders' demands** *(consumer and community) are positively related to the sustainability adoption in Malaysian hotel restaurants.*	**p < .05**	**Yes, Negatively Significant**

5.8.3.1   Government Law and Regulations

The model of sustainability adoption has revealed that government law and regulations significantly influenced the hotel managers towards the adoption of sustainability practices. It was found that the enforcement of the Environmental Act by the Malaysian government has been noticeably slow. Furthermore, the hotel

managers felt that the law and regulations are quite restrictive in this area (Kasim, 2007). This was demonstrated by the fact that only ten hotel properties have been certified as a green hotel, which is quite startling for others wishing to become more environmentally sustainable in their operations (Bohdanowicz, 2006; Burler, 2007; Gu et al., 2013; Tzschentke et al. 2008a). Indeed, if there are more restrictions made by the government, the Malaysian hotel industry will see that there is a need to adopt sustainable business operations (Kasim and Ismail, 2012). The government laws and regulations should instead, encourage the hotel industry to become more sustainable in their operations (Bohdanowicz, 2006; Burler, 2007; Gu et al., 2013; Tzschentke et al., 2008a).

5.8.3.2 *Green Supply Chains*

The model identified that green supply chains do not significantly influence the hotel managers to adopt sustainability practices in hotel restaurants. This finding was not surprising because sustainability practices are quite a new concept in Malaysia (Hussain and Malik, 2016). Hotel managers will not consider the notion of a green supplier as an option because of the limited number of green suppliers in the marketplace and the resultant increased costs of green produce. Educating existing suppliers regarding sustainability practices and requesting them to comply with these practices could be difficult given the hotel operators themselves need improved knowledge about sustainability practices. This finding is also supported through the number of hotels currently certified as a green hotel in Malaysia (Tourism Malaysia, 2016) and the slow initiative taken by Malaysian hotel managers (Siti et al., 2011). Therefore, to initiate and establish a green supply chain, hotels' should be encouraged to adopt sustainability practices (Kasim and Ismail, 2012). Accordingly, hotel restaurants should follow the green management standard by acquiring green foods, in an environment with proper equipment, green management and with social responsibility (Wang et al., 2013).

5.8.3.3   Competitive Advantage

With regards to competitive advantage, the binary logistic regression analysis did not indicate a significant relationship in the model and was therefore been removed. Therefore, this attribute does not associate with the intention to adopt sustainability practices in hotel restaurants. The findings have indicated that Malaysian hotels' do not feel pressured by their competitors to implement green practices in restaurant operations. Likewise, hotel managers do not feel the need to implement said practices. However, this result contradicts the findings of Kasim and Ismail (2012) that adopting green practices could offer many benefits (Bharadwaj, Varadarajan and Fahy, 1993; Chen, Lai and Wen, 2006; Leonidou et al., 2013; Fraj, Matute and Melero, 2015; Leonidou et al., 2015; Molina-Azorin et al., 2015). Again, this finding reflects the slow effort and uptake of sustainability practices within the hotel industry in Malaysia (Siti et al., 2011). No doubt the pressure to adopt sustainability practices is more likely derived from stakeholder awareness. Stakeholders that are concerned about the environment may influence hotels to adopt sustainability practices. Creating sustainability awareness in the Malaysian community could be the best and quickest way of cultivating the need to establish an environmentally green culture and society in Malaysia.

5.8.3.4   Stakeholders' Demands

The sustainability model has shown that stakeholders' demands negatively significant influence the intention to adopt sustainability practices in hotel restaurant operations. The findings from this study have identified that there is minimal demand from stakeholders, especially from consumers and the community. Notwithstanding, this result also reflects the current state of sustainability practices in the Malaysia hotel industry. However, if the demand for green hotels increases, driven by stakeholders, the number of hotels adopting sustainability practices would undoubtedly increase rapidly (Polonsky, 2011). Furthermore, increasing the level of environmental awareness more generally will positively influence sustainability adoption in hotel operations (Rahman et al.,

2012; Bohdanowicz, 2005; Sharma and Henriques, 2005). Even though these findings contended with previous studies (Fry and Polonsky, 2004; Kotler, Bowen, and Makens, 2006; Polonsky, 2011), they will help to provide new insight concerning the present scenario in Malaysia.

5.8.4 Perceived Innovation Characteristics

The diffusion of innovation theory by Rogers (1962) was used as the underpinning theory in this study. Interestingly, the findings from this study have revealed that not all hotel managers were influenced by all the PICs to adopt sustainability practices in hotel restaurant operations. Instead, the findings contradict the results from the previous study by Nicalau, and Santa Maria (2013) which suggested that adopting sustainability practices in hotel restaurants would, in fact, improve hotel performance and increase revenue. Instead, it appears that Malaysian hotel managers were not influenced by the benefits of adopting sustainability practices due to the barriers discovered in implementing said practices.

Five attributes of innovation were adopted in this study: (1) relative advantage, (2) compatibility, (3) complexity, (4) trialability and (5) observability. Notwithstanding, three of the PICs (compatibility, trialability and observability) identified significantly influenced the adoption of sustainable practices. These findings were found to be in line with a previous study, whereby some innovations in current operational practices will achieved different performance objectives (Ottenbacher, 2007). These attributes have revealed some interesting findings on how perceived innovation characteristics influence the intention to adopt sustainability practices in hotel restaurants. Five hypotheses were tested and the results are presented in Table 5.43.

Table 5.43: Perceived Innovation Characteristics Hypotheses.

Hypotheses	Sig.	Supported
H9: Relative advantage *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	**p > .05**	**No**
H10: Complexity *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	**p > .05**	**No**
H11: Compatibility *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	**p < .05**	**Yes, Negatively Significant**
H12: Trialability *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	**p < .05**	**Yes, Negatively Significant**
H13: Observability *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	**p < .05**	**Yes**

5.8.4.1   Relative Advantages

The study has found that relative advantages are not positively associated with the intention to adopt sustainability practices in hotel restaurants. The model of sustainability adoption has revealed this attributes does not influence the intention to adopt sustainability practices among the hotel managers. Adopting these practices in hotel restaurants will not make the operations any easier or straight forward to perform or accomplish the tasks any quicker. Furthermore, it was also found that the adoption of innovation and sustainability practices does not result in a dramatic increase in the hotel's profit margin and market share or in the ability to compete in the international market. Even though other studies have indicated that these advantages have strongly influenced the adoption of sustainability practice in firms (Hjalager, 2010; Aldebert et al., 2011; Nagy 2012), from a Malaysian perspective, it is quite the opposite with different findings. The hotel managers are aware of the advantages of innovation by adopting sustainability practices, but this does not influence their decision to implement said practices or innovation in hotel restaurant operations (Zolkepli and Kamarulzaman, 2015; Hsiu et al., 2008; Hsiu and Hsi, 2008; Karagozoglu and Lindell, 2000). Therefore, these findings were

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found to contradict with the previous studies (Zolkepli and Kamarulzaman, 2015; Hsiu et al., 2008; Hsiu and Hsi, 2008; Karagozoglu and Lindell, 2000).

5.8.4.2 *Complexity*

Complexity was found not positively associated with the intention to adopt sustainability practices. Adopting sustainability practices in hotel restaurants was found to be technically complicated and challenging to implement. The long-term commitment and sizeable consequential adjustment required are needed to ensure these eco-friendly practices are executed appropriately. The barriers identified were the main reasons why managers felt it was difficult to implement said practices in hotel restaurant operations. Indeed, these findings summarise what has been mentioned by Rogers (2003), in that innovation is assumed to be operationally quite demanding. Therefore, this will influence the adoption of sustainability practices by the managers. Moreover, it was also found that when the innovation is considered to be more challenging, the likelihood of adopting the innovation is lower (Rogers, 1995). Accordingly, this is why the enablers of sustainable adoption acknowledged in this study are seen to fill or narrow this gap.

5.8.4.3 *Compatibility*

The model of sustainability adoption revealed that the compatibility attribute was found to negatively significant influence the intention to adopt sustainability practices in hotel restaurants. The findings revealed that most hotel operations were compatible and able to accommodate the concept of sustainability. However, while the findings revealed that Malaysian hotel operators have initially decided to adopt eco-friendly practices, progress has been gradual (Siti et al., 2011). The majority of hotel managers also indicated that their current operations were compatible with environmentally friendly practices should they decided to adopt them. Moreover, hotel facilities were designed and built to comply with future changes, especially if the hotels decided to become more environmentally friendly. Also, hotels referred to as a 'resort' hotels initially located their properties in an

ecologically green environment, with their operations complying with standard operation procedures (SOPs). Therefore, these findings appear to be in line with the results from previous study that emphasises on the manager's consideration to innovate, if it suits all aspects of the restaurant's operations; routines, equipment and technology (Zolkepli and Kamarulzaman, 2015; Hsiu and Hsi, 2008).

5.8.4.4 *Trialability*

The model also confirmed that trialability was found negatively significant influence the intention to adopt sustainability practices in hotel restaurants. Based on the survey findings, the majority of managers would like to trial environmental practices for a certain period to observe the benefits before deciding to adopt them wholeheartedly. The hotel managers would like to understand to what extent the adoption provides advantages to their restaurant's operations before making any investment and changing their current operations to sustainability operations. These findings have indicated that trialability was strongly related to the rate of adoption (Sahin, 2006). Notably, this outcome was found to be similar to the intention to adopt innovation in an organisation (Zolkepli and Kamarulzaman, 2015; Hsiu and His, 2008). Given that adopting sustainability practices could incur significant investment, hotel managers would like to ensure that the innovation is workable. Accordingly, the managers were keen to understand to what extent the practices provide benefits before formally implementing them (Zolkepli and Kamarulzaman, 2015; Hsiu et al., 2008; Hsiu and Hsi, 2008; Karagozoglu and Lindell, 2000).

5.8.4.5 *Observability*

Observability was identified to be significant influence the intention to adopt sustainability practices in hotel restaurants. The binary logistic regression analysis confirmed this finding. The hotel managers would like to see every stage in the process in order for them to be convinced they are making the right decision. Indeed, the budget requirement necessary to implement the practices may also

help to influence the managers to monitor their expenditure carefully. In fact, as mentioned earlier, the hotel managers would like to carefully oversee how well the environmental management practices could benefit them before adopting them (Le et al., 2006). Knowing that the implementation of sustainability practices would require significant financial resources and long-term commitment, this was also a factor that they needed to consider in their understanding as to what extent such practices would provide benefit. However, in contrast, this was found to be quite the opposite regarding chain and franchise hotels or resort hotels. The hotel chain and franchise hotels were known to have SOPs when implementing eco-friendly practices. Therefore, these hotels have the distinct advantage of having experts and guidelines in adopting sustainability practices. Moreover, the resort hotel will directly adopt environmentally green practices since the construction of their property was based on the green concept, and hence forth the environmental and sustainability elements had already been incorporated into their operations.

5.8.5 MHRs Sustainable Framework

The academic contribution of this study has extended the existing knowledge of sustainability adoption in hotel restaurants. The findings demonstrate how organisational, environmental and perceived innovation characteristics influence the intention to adopt sustainability practices among hotel managers in Malaysia. Thirteen attributes were tested from these characteristics; however, only eight attributes were found to influence the intention to adopt sustainability practices significantly. Therefore, five attributes in the initially proposed conceptual framework do not significantly influence the adoption towards sustainability practices in the hotel industry. The cost consideration of the OC did not significantly influence the intention to adopt sustainability practices. The findings revealed that cost was not the major issue that would influence hotel managers to adopt sustainability practices. On the other hand, the Malaysian hotel industry was ready to embark towards supporting sustainability operations, acknowledging that (1) the hotel industry has a substantial impact on the eco-system, and (2) there are

significant benefits to be had from adoption and, sooner or later, the industry will adopt these practices in their operations.

There were two attributes from the EC that did not associate with the intention to adopt sustainability practices; green supply chains and competitive advantages (trade pressure). It was found that green supply chains do not influence adoption, as sustainability practices were also impacted by low customer demand. However, these two attributes do not clearly demonstrate how they will influence the adoption rate given the low number of certified green hotels presently in Malaysia, that have implemented said practices.

Additionally, two attributes from the PIC did not influence the adoption of sustainability practices among hotel managers in Malaysia. It was surprising to find that both relative advantage and complexity do not significantly influence the adoption of sustainability practices. This findings, in conjuction with the other characteristics that do not influence the intention to adopt, is likely to be due to the fact that sustainability practices were found to be in the initial introductory stages in the Malaysia hotel industry especially in hotel restaurants. Therefore, five attributes in the initially proposed conceptual framework do not significantly influence the adoption towards sustainability practices in the hotel industry.

The modified conceptual model illustrated in Figure 5.26 proposes that eight attributes will undoubtedly influence sustainable adoption of sustainability practices in Malaysian hotel restaurant operations. The model suggests that there are three attributes from OC which will influence the adoption comprising; the attitude towards change, top management and employee connectedness. Also, the two attributes of EC, government law and regulations and stakeholder demands will likewise influence the adoption. Finally, three characteristics of PIC also will influence the adoption: compatibility, trialability and observability.
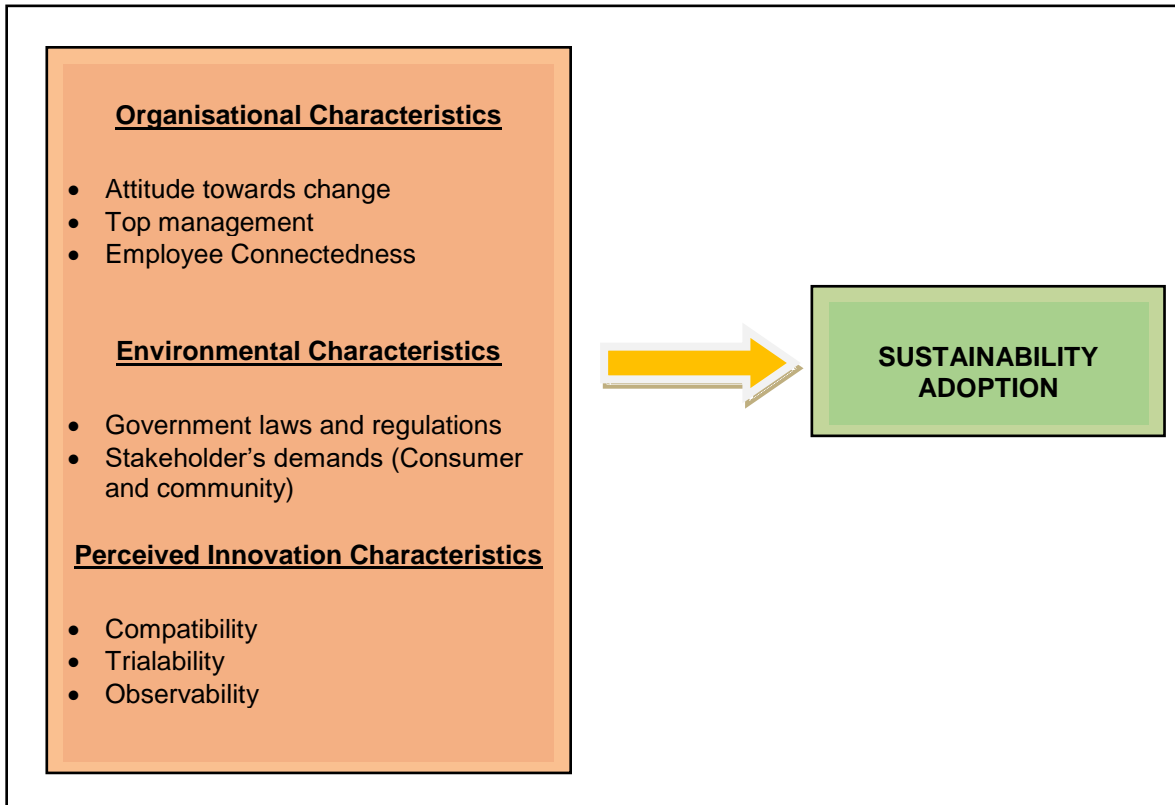
Figure 5.26: Final MHRs Sustainable Model.

This study has made a significant contribution to a specific subsection of hospitality literature, the area of hotel restaurant operations. The literature has shown that sustainability practices have always been recognised in the room division department of a hotel, while there has been limited research focus on hotel restaurant operations. It was found that research on sustainability practices in restaurants was foremost in the area of commercial restaurants, which are afforded with relatively straight-forward management systems as compared with hotel restaurants. Therefore, the conceptual model is considered chiefly appropriate to influence the adoption of sustainability practices in hotel restaurant operations. The results may contradict with some of the expectations from other developed countries which are in a mature stage of sustainability adoption.

Furthermore, this study has presented and described sustainability practices that could be used in the development of informative guidelines for Malaysian hotel operations, specifically for hotel restaurants. These guidelines were adapted from Mensah and Blankson (2013) and were tested in the context of the Malaysian setting. Importantly, the quantitative findings (Section 5.7) found that most of the hotel managers agreed that environmental education, support for the host community, conservation projects, compliance with legislation and by-laws, waste management and voluntary programmes are important and should be implemented to support the practices in hotel restaurant operations.

As is acknowledged by Yusof and Jamaludin (2013), Malaysia only started to introduce environmental practices in 1997, emphasising three main areas: energy and water savings and waste. Notably, the slow effort and uptake by hotels to implement sustainability practices (Siti et al., 2011) reflect the extent of knowledge and awareness of eco-friendly practices in Malaysia. Therefore, environmental education needs to be a key priority in order to educate and increase the level of awareness among consumers, stakeholders and society. Interestingly, one of the findings observed from conducting the interviews with the hotel managers suggested increasing customer awareness about sustainability issues in Malaysia was increasing. Some of the initiatives that have already been implemented by some of the hotels in this study included signage and programmes and activities to increase the guests' level of awareness regarding the importance of being 'green'. Clearly, environmental education is one of the practices that should be performed and championed by the hotel industry and government (Mensah, 2004; Mensah and Oduro, 2007; Mensah and Blankson, 2013).

Providing support to the local community where the hotel is located is also important in order to implement sustainability practices (Mensah and Blankson, 2013). Indeed, providing employment opportunities to the local community, using local materials, purchasing from local suppliers and promoting local culture would help to improve the income for local community households and build relationships

between industry and the community (Eber, 1992; Nicholls and Kang, 2012, Cvelbar and Dwyer, 2013, Mensah and Blankson, 2013). Therefore, one of the guidelines (and policies) for sustainability practices in hotel restaurant operations should be to support the local community. This not only establishes a good rapport with the local community but will also increase and improve the image and reputation of the hotel (Nicholls and Kang, 2012).

Imposing a requirement on hotel operations that compels that to undertake conservation projects could also be a means of encouraging sustainability in hotel restaurant operations. Undertaking conservation projects could help to reduce operational costs and overheads in areas such as; waste management, recycling, energy and water conservation as well as purchasing environmentally friendly products and supplies (Withiam, 1995, Mensah and Oduro, 2007, Mensah and Blankson, 2013). Also, compliance with government rules and regulations could be a pathway towards implementing sustainability practices in hotel restaurant operations. With government support and legislation, hotel operations will need to follow guidelines and other rules established by the government to facilitate and develop an industry-wide view and adoption of sustainable operations (Kasim, 2007; Kasim and Ismail, 2012; Mensah and Blankson, 2013). Even though the interview findings revealed that there are fewer restrictions regarding such practices enforced by the Malaysian government, the law, however, does exist. Consequently, these laws will potentially influence and encourage the hotel industry to become more sustainable in their operations (Bohdanowicz, 2006; Burler, 2007; Gu et al., 2013; Tzschentke et al., 2008a).

Moreover, several further initiatives and measures could help to drive sustainable practices in hotel operations. First, efficient waste management practices should be implemented, which could, accordingly, help to improve hotel performance in the area of sustainability (Mensah and Oduro, 2007; Mensah and Blankson, 2013). Secondly, introducing voluntary programmes in hotel restaurant operations, gaining input from hotel guests and employees could help to improve existing practices.

Thirdly, hotels could volunteer for environmental audit agencies to audit their sustainability operations in order to become certified as a green hotel. These initiatives will help to increase a hotel's image and reputation and simultaneously to gain a competitive edge over competitors (Anisimova, 2007; Barone et al., 2000; Brown and Dacin, 1997; Cornwell and Coote, 2005; McDonald and Rundle-Thiele, 2008; Nan and Heo, 2007; Salmones et al., 2005; Sen et al., 2006).

5.8.6 Adoption Performance

The survey analyses has also identified to what extent sustainability adoption in Malaysian hotel restaurants improves organisational and operational performance. Changing current management practices to further incorporate the concept of sustainability concept was not an easy task and a great deal of time to implement (Le et al., 2006; Kasim and Ismail, 2011; Cvelbar and Dwyer, 2013). However, adopting environmental practices would offer greater performance to the hotels when changing direction.

The hypothesis (Table 5.44) revealed that adopting sustainable practices in hotel restaurants would has a positive association with the overall performance of the hotel (e.g. Nicholls and Kang, 2012; Leonidou et al., 2013; Fraj, Matute and Melero, 2015; Leonidou et al., 2015; Molina-Azorin et al., 2015). The quantitative findings identified six performance types resulting from the adoption of sustainability practices in hotel restaurant operations: improving hotel image, increasing employee satisfaction, increasing customer satisfaction, increasing profitability, marketing advantage and improving relationships with the local community. The level of hotel restaurant performance derived from this study indicated a similar result as with previous studies (e.g. Nicholls and Kang, 2012; Leonidou et al., 2013; Fraj, Matute and Melero, 2015; Leonidou et al., 2015; Molina-Azorin et al., 2015).

Table 5.44: Organisational Performances Hypothesis.

Hypothesis	Sig.	Supported
*H14: **Organisational performances** are positively related to the sustainability adoption in Malaysian hotel restaurants.*	**p < .05**	*Yes*

As illustrated in Figure 5.27, the first indicator showed that the adoption of sustainability (green) practices could improve the image of the hotel (Sheldon and Park, 2011). Adopting sustainability practices in hotel restaurants could help to improve the hotel's reputation and image. Therefore, promoting eco-friendly practices in hotel restaurants could increase stakeholder confidence regarding the operations of the hotel. Indeed, this will help to attract more customers and guests to visit and stay at the hotel, leading to revisiting intentions and hotel loyalty (Anisimova, 2007; Barone et al., 2000; Brown and Dacin, 1997; Cornwell and Coote, 2005; McDonald and Rundle-Thiele, 2008; Nan and Heo, 2007; Salmones et al., 2005; Sen et al., 2006). The ten hotels certified as green hotels have become a benchmark in the Malaysian hotel industry (Tourism Malaysia, 2016). Green Hotel Certification has also enhanced the image of these hotels among their competitors.

Figure 5.27: Hotel Restaurant Performance.

It was found that eco-friendly practices could also help to increase customer satisfaction (Clemes et al., 2009; Gracia et al., 2011; Kim et al., 2008; Lee and Back, 2010; Namkung and Jang, 2017). Emphasising green practices in hotel restaurant operations will attract customers who are concerned about the environment. Accordingly, this type of customer will be more likely to revisit the restaurant and stay loyal to hotels that are equally concerned about environmental issues (Clemes et al., 2009; Gracia et al., 2011; Kim et al., 2008; Lee and Back, 2010). It was also found that adopting sustainability practices will influence employee satisfaction (Bevan et al., 2004; Sims and Keon, 1997; Viswesvaran and Ones, 2002) given that employees will be directly involved in implementing said practices in hotel restaurants. Notably, employees will be involved in delivering many of the services of the hotel to patrons and guests. Therefore, adequate training should be conducted to familiarise employees regarding the adoption and anticipated changes.

Additionally, there are many benefits and advantages gained from adopting sustainability practices in hotel restaurants (Leonidou et al., 2013; Fraj, Matute and Melero, 2015; Leonidou et al., 2015; Molina-Azorin et al., 2015), such as creating competitive advantage or providing, a marketing advantage over competitors. This can be achieved, in particular, by promoting local produce used in the restaurant and through the adoption of environmentally friendly concepts (Eber, 1992; Lee and Park, 2009). The findings also acknowledged that the adoption of sustainability practices, could help increase hotel profits (Cvelbar and Dwyer, 2013; Aragon-Correa et al., 2008; Nicolau, 2008; Bird et al., 2007; Kimes, 2000). Accordingly, the findings of this study also identified several further performance improvements resulting from the adoption of green practices even though these contradicted those of Bruns-Smith et al. (2015). In this case, performance improvement resulted in an incremental increase in the profit received from the hotel's operations.

Finally, the survey results identified that adopting sustainability practices in hotel restaurants would help to improve the hotel's relationship with the local community where the hotel is located (Cvelbar and Dwyer, 2013). Hotel operations which are inspired and committed to integrating green practices in their operations will gain trust from the community. While, the hotel industry is equally concerned about how hotel operations will impact the wellbeing of society, adopting sustainability practices in hotel restaurants will help to improve the quality of life in local communities where the hotels are located (Bohdanowicz and Zientara, 2009).

5.9   Summary

This chapter has reported on the survey data findings with 169 managers, the majority of which were hotel managers of 3-5 star rated hotels in Malaysia. In order to answer the objectives of this study, the findings were derived from substantial analyses such as descriptive, factor analysis and binary logistic regression analysis. The quantitative survey findings reveal statistically how innovation, organisational and environmental characteristics influence the intention to adopt sustainability practices in hotel restaurants. The main findings of this study have answered the objectives of this study statistically. The findings indicate there are 62 items retained from the variables constructs in factor analyses. The binary logistic regression test has revealed the model is positively related to the sustainability adoption in Malaysian hotel restaurants with 26 items and 1 predictor dropped. These analyses have answered the first and second objectives of this study.

This quantitative survey also revealed that adopting sustainability will improve the overall hotel performance. The descriptive and binary logistic regression revealed that adopting sustainability practices in hotel restaurants will (1) improve the hotel's image and reputation, (2) improve the relationships with local community, (3) increase customer satisfaction, (4) increase employee satisfaction, (5) give a marketing advantage over competitors and (6) increase profitability. These analyses have also answered the third objective of this study.

Then, this chapter proceeds with a discussion of the findings in support of the four established objectives of this study. This is followed by a discussion on how organisational characteristics (OC), environmental characteristics (EC) and perceived innovation characteristics (PIC), have influenced the intention to adopt sustainability practices. The proposed model identifies that there are only eight out of 13 attributes that significantly influence sustainability adoption, namely; attitude towards change, top management, employee connectedness, government law and regulations, stakeholder demands, compatibility, trialability and observability. The

analyses also revealed the hypotheses relationships. Indeed, the hypotheses have contributed to the development of the final sustainable framework and it has answered the fourth objectives of this study.

The next chapter will report on the in-depth semi-structured interview findings of this study and answer the objectives qualitatively.

Chapter 6

6.1 Qualitative Data Analyses

This chapter presents the results of the in-depth semi-structured interviews with the informants of 3-5 star rated hotels in Malaysia. The findings of the interviews were coded, and a technique on processing qualitative raw data was adopted. For qualitative study, coding is an *'integral part of data analysis'* (Neuman, 2002, pp480) and the coded are tags and labels that give meaning to the descriptive or inferential information (Miles and Huberman, 1994) that develop during research. This phase aims to understand in depth, about the informants' perspective on how decisions made on sustainability adoption in hotel restaurants operations, and how sustainability adoption will improve hotel performance, especially in restaurant operations - also, the quantitative findings (Chapter 5) supported by the qualitative findings.

This chapter reports on the results of in depth semi-structured interviews. The results include:

- An overview of 10 informants' properties profiles.
- Current sustainability practices in the Malaysian hotel industry and the currents practices in hotel restaurants.
- The relationships how organisational characteristics (OC), environmental characteristics (EC) and perceived innovation characteristics (PIC) influence informants' decisions to adopt sustainability practices through the developed hypotheses.
- The hotel and restaurant performance in adopting sustainability practices.

The final section of this chapter discusses the qualitative findings which highlight the final Malaysian Hotel Restaurants (MHRs) sustainable model based on the key findings of this study.

6.2   Property Profiles of the Informants

The informants' property profiles are introduced in Table 6.1. There were ten informants interviewed; four informants were from Sabah state, two were from Sarawak state, and one was from each of the states of Kelantan, Johor, Selangor and Negeri Sembilan.

Table 6.1: *Informants' Property Profiles (n=10)*

Informant	State	Location	Property Type	Property Size	Number of Employees	Years in Operation	Business Types	Average Customer Mix
HM1	Sabah	Urban	4 star hotel/resort	51+ rooms (Large)	31+ employees	11-30 years	Independently Owned	Leisure
HM2	Sabah	Urban	4 star hotel/resort	51+ rooms (Large)	31+ employees	11-30 years	Independently Owned	Leisure
HM3	Kelantan	Urban	5 star hotel/resort	51+ rooms (Large)	31+ employees	11-30 years	Chain Affiliated	Business
HM4	Johor	Suburban	4 star hotel/resort	51+ rooms (Large)	31+ employees	0-10 years	Chain Affiliated	Leisure
HM5	Negeri Sembilan	Urban	4 star hotel/resort	51+ rooms (Large)	31+ employees	11-30 years	Independently Owned	Business
HM6	Selangor	Urban	4 star hotel/resort	51+ rooms (Large)	31+ employees	0-10 years	Independently Owned	Business
HM7	Sabah	Urban	3 star hotel/resort	51+ rooms (Large)	31+ employees	0-10 years	Independently Owned	Leisure
HM8	Sarawak	Suburban	5 star hotel/resort	51+ rooms (Large)	31+ employees	11-30 years	Chain Affiliated	Leisure
HM9	Sarawak	Urban	4 star hotel/resort	51+ rooms (Large)	31+ employees	0-10 years	Independently Owned	Business
HM10	Sabah	Urban	4 star hotel/resort	51+ rooms (Large)	31+ employees	11-30 years	Independently Owned	Leisure

Furthermore, eight of the hotel properties were located in urban areas and two were from the suburbs. Apart from that, one of the informants was from a 3-star hotel/resort, six informants were from 4-star hotel/resorts and three respondents were from 5-star hotel/resorts. Most of the properties had more then 51+ rooms and employed around 31+ employees to work at the properties. The majority of the informants were from hotels that had operated for between 11 and 30 years and there were four informants from properties that had operated for not more than 10 years. There are seven informants who were involved at the managerial level of independently operated properties and three were from chain affiliated properties. In addition, six properties had leisure customers as their average customer types, whereas four properties had business type customers.

6.3   Current Sustainability Practices in Malaysia

There were 7 out of 10 informants who shared their opinions on the current sustainability practices in Malaysian hotel restaurants. Table 6.2 revealed the current situation of the sustainable practices in Malaysia.

Table 6.2: Current Sustainable Practices in Malaysia.

Informant	Current Practices
HM1	Not many hotel practicing the environmental friendly practice.
HM2	It was not really good.
HM3	Not all hotels adopt sustainability practices.
HM4	Hotels are not ready for that direction.
HM5	Not many hotels are going into that direction.
HM6	-
HM7	-
HM8	The practices are going on in Malaysia.
HM9	-
HM10	Certified as green hotel and started the practices since 2007.

Current Practices	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Less participation	X	X	X		X					
Not ready				X						
On going practices								X		
Certified Green Hotel										X

Most of the informants shared that there are less participation from the hotels in Malaysia as informed by HM1 and HM3, '*honestly not all hotels adopt these sustainability practice',* which is also added by HM4 and HM5 that '*As far as I know overall green practices now as I mentioned to you earlier, not many hotels are actually going in that direction".* It was further added by HM2 *that 'the practices is there but not really good'.* This shows that the sustainability practices or environmental friendly practices in Malaysia are still far behind and it is not the central focus for current hotel business operations. However, HM8 argued that the hotels in Malaysia are doing the practices in the operations by stating that '*in Malaysia, the practices are going on'.*

Apparently, HM10 have started implementing environmental friendly practices since 2007 and proudly informed that '*we started in 2007 in green practices. In fact we are certified locally and internationally'*.

6.3.1   Types of Practices

The informants were also asked to share about their current practices in their hotel restaurants. Table 6.3 below presented the findings of the interview.

Table 6.3: Types of Sustainable Practices in Malaysia.

Informant	Types of Practices
HM1	Using local suppliers.
HM2	Basic practices – Waste management and environmental friendly chemicals.
HM3	Energy savings – When shift ended all utilities will shut down.
HM4	Using local suppliers.
HM5	Not practising for the moment.
HM6	Waste management – Recycling.
HM7	Put a signage to remind guest in buffet counter about the food wastage.
HM8	Using local suppliers
HM9	Energy saving – switch on air conditioner before an event started and swith off an hour before the event ended.
HM10	No plastic bag, limited serviette, reuse plates and cutleries during buffet, penalty charge for food wastage.

Current Practices	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Local suppliers	X			X				X		
Waste Management		X				X	X			X
Energy Saving			X						X	
Do not practice					X					

Four informants (HM2, HM3, HM6, HM9) stated that, only basic practices were conducted such as waste management, using eco-friendly chemicals and energy saving. They started with the minimal practices in all their restaurant operations hoping that this it could reduce the operation impacts on the environment as mentioned by HM2 '*Only the basic practices such as the waste garbage and the chemicals that we are using are environmentally friendly'.* It was also added by HM3 stating that '*the only thing that we can actually practice at the moment is in terms of saving electricity. In the morning our Chinese restaurant does not open for breakfast, they only open for lunch between 12:00noon and 3:00 in the afternoon. When the shift ends all utilities will be shut down. The electricity, water and everything will be shut down. And then they start preparing for the dinner operation which will start at 5:00 in the evening and go on until 10:00 in the evening'.* This is elaborated by HM9, '*what we are thinking now is energy saving… our hotel room, for the restaurant we have a panel control for the air conditioner and the light. So, the Standard Operation Procedure is before the function started, one hour before we switch on the air conditioner'.*

HM6 also make known that they just started the practices and he stated that '*actually I just started. Coffee powder I don't throw away now, because it's able to absorb smells and so we put it in guest rooms without the guests realizing it. And also, bread that's expired that you cannot eat… but you need to sell it. So, they are using that. So one day before it expires, it lasts for another 10 days rather than us just disposing of it. So, we are going on very, very minimal program or sustainability by making our own breadcrumbs for the cooking'.* This hotel is recycling food waste as a way to overcome odour in guest rooms. This is a good way of handling food waste as well as saving the operation cost in buying air freshener for the guest rooms.

Interestingly, there were two informants (HM7 and HM 10) who said that they had involved their guests and customers in these sustainability practices in their restaurants. They would like to educate their guests and customers and share the

value in taking care of the environment. HM7 stated that '*what we did is we put a sign on the buffet counter to remind our guests to only take the food if they are able to finish it. When there is food left after the operation we put it in staff canteen. The chemicals and detergents used in the restaurant and kitchen comply with ISO standards and all are environmentally friendly'.* HM10 also added that '*we do not provide "tapau" (packaging) boxes or plastic carrier bags. We encourage guests to bring their own take-away packaging. And, we also try to limit guest serviettes used per meal; we encourage guests to use them until they are finished. We also encourage guests to use the same plate and glass until they finish. So, in terms of washing, you save your water used in washing dishes. Also, during buffet meals, we tell our guest to eat as much as they can but not to waste the food and they will get a penalty if they waste the food'.* However, only HM5 declared that their hotel restaurant did not apply any green practices and stated '*at this moment, our hotel does not really practice sustainable practices'.*

Furthermore, as the practices were conducted in the restaurant operation, the researcher was eager to ask the informants on how they manage their food waste from the operations. There were three informants (HM3, HM4 and HM9) who shared that they did the normal routine when it came to food waste and in which the waste was thrown into garbage bins. HM3 stated that '*waste at the moment is as per normal practice. There is no green waste that we actually use to manage the waste so it's still goes down the garbage bin. At the end of the day we don't actually use it as compost or things like that'.* HM4 also mentioned that '*the amount of food wasted after functions are a lot. We put in the plastic, we dispose of it and goes to the garbage area'* HM9 also highlighted that '*the leftover food normally is very minimal, but I can say that we throw leftovers into the rubbish bin'.*

HM8 informed that they have a 3-bin system to separate the waste where he clearly specified that '*we separate the waste with 3-bin system'.* This is indeed a good way to deal with the waste from the restaurant operations. It reduces the amount of waste by segregated the waste accordingly. However, only HM10 clearly

stated what they did with the food waste from the restaurant operation. The hotel came up with on initiative which working together with a company who deals with food waste and makes it into fertilizer and to be used for the farmer who supplies their vegetables by explaining that '*the other main practice we do is that any food waste from the kitchen; from the restaurant, it doesn't go to land fill. It goes to a company called Glomas ecology where we send the food waste. They will process our food waste into organic fertilizer within 24 hours… Our hotel adopts a farmer's program. We have 20 farmers from Bundu Tuhan where we adopt them. So what we tell them is "You buy the organic fertilizer with special rate. Use that organic fertilizer for your vegetables. When you harvest, we will buy from you'.*

Interestingly, HM7 also came up with an initiative by telling their guests and customers to take certain portion of food during a buffet meal in order to prevent food waste. This initiative is very practical as it involves the guests and customers to take care of the environment. The leftover food is also served to the hotel staff in the staff canteen. These approaches are indeed good practices when he stated that '*what we did is we put a sign on the buffet counter to remind our guests to only take the food if they are able to finish it. When there is food left after the operation we will put in the staff canteen'.*

Besides that, the informants were also asked about the supplies and suppliers they dealt with. Knowing that this is a very important component in the sustainability practices, it is therefore very useful to have an insight from the informants. HM1 clearly stated that '*we are using local suppliers. Around 80-90% of our products are from local suppliers'.* HM4 too added that '*we are dealing with some local suppliers for our supplies'.* HM8 also gave a strong recommendation on using local suppliers by stating that '*we are using local suppliers, most of our supplies are from local market'.*

Even though there were also informants who clearly specified that their suppliers were local. They cannot avoid using the imported supplies due to some barriers such as menu requisition. Most of the non-local items used by the informants' restaurants are the meat items. This is because the quality of imported meat is much better than the local. This shows that imported products or goods are still preferred due to some reasons. HM7 stated that '*it depends on our menu…we are using some international raw ingredients and some local. Mostly we are using imported meat. But we don't just use imported ingredients. Here, we are using local supplies because the price is cheaper and the quality is also really good. It depends on the menu. If the menu is a western concept so we will use international ingredients and all from local suppliers'.*

HM3 also claimed that '*everything is from our local suppliers; unfortunately we have to import salmon if there is a request… So of course, we will take more from local producers. For Kelantan of course we will have the authentic Kelantan cuisine. So, that is what we are doing instead of having all this lavish western cuisine or things that people are not familiar with and why must we do it because it is not going to sell anyway. So we take all the local produce, all the herbs and whatever that we can get here and we buy if from here itself'.* Then it was further added by HM2 '*we normally use local supplies for wet and dry products. But some of the products if we get the premium items, some people like those, especially those who have money. They like to spend big so we need to get them imported especially mussels. We don't grow mussels so we still need to get them imported but if there is no supply we will serve local mussels, the local mussels' flesh is small even though it is fresh'.*

Food quality issue is the main reason for not having 100 per cent of local supplies. These hotels believe that imported ingredients and products are high quality in comparison to those found locally. This is one barrier that hinders the hotels to fully implement sustainable practices in using local products especially. HM6 elaborated that '*we only get meats, I mean all of our items are local… maybe 20% because*

we actually use meat for example, Australia beef, or New Zealand lamb… Malaysia doesn't have the quality of meat or can't get good quality but we are using all local suppliers'. HM9 also added that *'mostly we get things locally… Basically we try to use local, even our food, except meat mostly is from New Zealand'.*

6.3.2 Barriers to Sustainable Practices

In order to investigate further, the informants were asked about the main barriers that hold back the hotels in Malaysia from practicing sustainability in the restaurant operations. Table 6.4 below revealed the reasons.

Table 6.4: Barriers to Sustainable Practices.

Informant	Barriers to sustainable practices
HM1	It will take 3 years to get back the profit invested; no government support but only information given; monitored by hotel association but not an instruction;
HM2	Company want to invest but might cost a lot of money; no enforcement from government;
HM3	Cost is not a problem to adopt the practice; no enforcement made from government; ministry should give guidelines; no specific person incharge; lack of education
HM4	It is because of cost; guest might not like it; no bodies monitor; no qualified person in charge; should be taught at school;
HM5	Lack of awareness from public;
HM6	Investing in this tools very costly; low enforcement; not mandatory; association should give guidelines; create public awareness;
HM7	No demand from guest; less awareness;
HM8	Big cost involve in implementing it;
HM9	Create awareness to take care for environment;
HM10	Hotel own initiative and no compliance from the government; own initiative to practice; create more awareness;

Current Practices	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
High implementation cost	X	X	X	X		X		X		
Low customer demands				X			X			
Absence of government enforcement	X	X	X	X		X				
Lack of guidelines	X		X			X				
Shortage of expertise			X	X						
Lack of public awareness			X	X	X	X	X		X	X

High implementation cost is one of the barriers why these MHRs do not practices the sustainable practices. Majority of the informants agreed that to change the current practice to environmental friendly practices involves substantial amount of expenses as they need to invest on new machineries and equipment that comply

with the environmental friendly practice. Apart of that, it also involves staff training to practice and conduct the practices. HM2 clearly stated that '*I think it is about the costing, if the company or the hotel is willing to invest because it might cost a lot of money*'. HM3 added that '*honestly not all hotels adopt these sustainability practices mainly because of costing*'. HM4 also stated that '*it is all about costing*'. Moreover, HM6 also added that '*investing in these tools is very costly…it is a disadvantage, because your cost goes up… green products are not cheap*', and HM8 also informed that '*big costs will be involved in implementing the green practices*'. Furthermore, the return profit after such investment in the practices will take some times as HM1 claimed, '*when we are doing investment, it will take 3 years to get back the profit or Return on Investment*'.

Surprisingly, it was found that having eco-friendly products and being green are not a demanded by the hotel customers. Therefore, the hotel restaurants did not insist on these practices, and then, there is no urgency in changing their operation to being more environmentally friendly. HM4 argued that '*some there is risk as well because… not every guest will like it if we implement too much*'. It was further added by HM7 that '*here, so far, we have not encountered such guest behaviour*'.

There were informants who commented that the government does not emphasize about sustainability practices and the poor enforcement. HM2 stated that '*to tell you the truth because the enforcement is not there from the government*'. Then it was also seconded by HM3 and HM4 where they stated that '*there is no enforcement made by the government*', and '*but again, low enforcement. So, it's like it does not exist*'. The enforcement made by the government is a way for such sustainable practices to be implemented in Malaysian context. Malaysian government should consider looking further into this issue in order to raise the awareness among the hotels by which it should begin with the business operators.

The informants also agreed that there are no guidelines and instructions given by the hotel association in Malaysia to implement sustainability practices in hotels or even in restaurant operations. Indeed, the hotel association plays an important role in persuading hotels in Malaysia to practice this green approach in their property. HM3 clearly stated that '*the guidelines must be there before we start training the people. So, this must come from either the ministry or the association itself before we can actually start doing our own internal training for our staff'.* Then it was also further added by HM7 where he stated that *'the association should take the lead in this initiative. They should instruct and provide guidelines to the hotels to be ready for this'.* However, HM10 argued that '*the association encourages it. The government encourages it but it's your own initiative as to whether you want to do it'.* This statement shows that even there is an encouragement from the government and association to conduct the practices; it depends on the hotels whether or not they want to do it.

On the other hand, some of the informants said that, there was no expert who could monitor the implementation of these eco-friendly practices in their hotels and because of this; the hotel management have no intention of adopting or fully adopting the practices in their restaurants. HM3 claimed that '*at the moment, when it is regarding the water, electricity that would be under engineering, in term of wastage and restaurant operation it would be under the food and beverage director'.* There is no specific person who is incharge with the sustainable or environmental friendly practices and activities in the operations as the minimal implementation that they are currently practiced is monitored by respective departments. This issue also further explained by HM5 and his suggestion was '*probably, we need to hire a few key people. At the moment, we don't have any qualified person that can take that position'.*

"Awareness" is a key word which was mentioned most by the informants. It is believed that the level of awareness in taking care of the environment among Malaysians is still low. As a result, such attitude affects how business and

services are currently conducted in Malaysia. If this awareness is instilled among Malaysian society, the issues in executing sustainability practices in the hotel operations can be resolved. This was highlighted by HM5 stating that '*the awareness is not there. I mean the association is actually organizing few activities but the response is there but the awareness is still very minimal'.* HM6 also added that '*in order to maintain certain standard or to maintain that these things are able to reach the public or where awareness is crucial. So, awareness is not there....Perception in the awareness is still lacking for this city'.* To add on, HM9 strongly agreed that '*we need to create awareness why we have to taking care of the environment'.* HM2 and HM3 argued that taking care of the environment should be taught in school starting from an early age. They added that all basic knowledge in preserving eco-system should be imparted to the society from a young age. If this is done, the future generation will know how to value the environment.

6.3.3 Enablers to Sustainable Practices

The managers were also asked the enablers to influence the sustainability practices in Malaysia. Table 6.5 below revealed the enablers.

Table 6.5: Enablers to Sustainable Practices

Informant	Enablers to sustainable practices
HM1	-
HM2	-
HM3	Ministry should give a guidelines to educate the hotel; should consider to give incentives and encourage adoption; no expert to monitor the practices;
HM4	-
HM5	The ministry have to start and initiates the practices; minimal awareness; need to have expertise to incharge;
HM6	It is challenging if there is no regulation and not enforceable; no awareness to go for the standard of environmental practices;
HM7	Association should instruct and provides guidelines; less and no awareness;
HM8	-
HM9	Need to create awareness why implement the practices;
HM10	Creating the awareness;

Current Practices	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Government support and guidelines			X		X	X	X			
Incentives			X							
Create awareness					X	X	X		X	X
Sustainability Expertise			X		X	X				

The government and the hotel association in Malaysia should consider offering full support and come out with proper guidelines and instructions on to how the sustainable practices should be carried out. Giving a standard operation procedure on how the practices should be done will make the practices run smoothly and

understood clearly by the hotel staff as well as the top management. This is supported by the statements from the informants where HM3 stated that '*for association first and foremost, it has to come with the Ministry of Environment. The ministry has to educate, the ministry has to give them a set of guidelines. From there, hotel association will have to go to hotels to educate the hotels and also give them a set of guidelines. If it is not something that required legally and therefore if people aren't forced to do it, then people won't do it'.* HM5 also added that '*I think they have to… The ministry itself has to go really all out… in terms of practicing green practices, so they have to start from the ministry itself'.* HM6 also argued that '*at the moment hotel association in particular… I am not speaking on behalf of the hotel in indirectly, but my personal perspective thing is also… it's a bit of a challenge for us. Because it's not a regulation, it's not enforceable; it's not something that is mandatory. For example, the tourism tax is mandatory, so everybody needs to do it, but if there is sustainability in the hotel industry and you make it compulsory then you behave differently'.* Further, HM7 also specified that '*The hotel association should take the lead in this initiative. They should instruct and provide guidelines to the hotels to be ready for this'.*

High cost involved in conducting these practices in the industry; thus, an incentive should be given to the hotel operators in order to encourage them to adopt the practices. The incentives proposed by the informants include; reducing some payment in utilities (energy and water), reducing tax and giving recognition and awards to the hotel operators. These incentives would encourage participation from the hotel industry if they are to be executed. HM3 suggested that giving incentives would be a good way of getting hotels to comply with the adoption as stated by HM3 that '*incentives wise should probably being consider it will encourage the adoption such as reducing some utilities charges especially for a hotel that implement the practices'.*

Moreover, creating awareness among the Malaysian society on how to preserve the environment is one way to educate them to position the society's understanding. The majority of the informants raised their concerns about how the lack of awareness among Malaysians has influenced how the hotel business operates nowadays. It is hoped that when the awareness is there, there will be a market segment for this type of consumers who will benefit the hotel restaurants in the future. For examples, HM5 stated that 't*he awareness is not there. I mean the association is actually organizing a few activities. The response is there but the awareness is still very minimal'.* HM6 added that *'in order to maintain certain standards or to maintain that these things are able to reach to the public or where awareness is crucial. So, awareness is not there....Perception in the awareness is still lacking for a city'.*

On top of that, the hotel operator should hire an expert to ensure the practices are implemented properly in the operations. The expert will assist and advise on how the hotel should operate in minimizing the impacts towards the eco-systems. Furthermore, those experts should be provided by the government if the hotel operator would like to seek for assistance. This was mentioned by HM3 and HM5 where HM3 stated that '*at the moment, when it is regarding the water, electricity that would be under engineering, in terms of wastage and restaurant operation it would be under the food and beverage director',* and HM5 added that *'* p*robably, we need to hire a few key people. At the moment, we don't have any qualified person that can take that position'.*

6.4   Organisational Characteristics

The quantitative findings identified 3 predictors of organisational characteristics that influence the MHRs in adopting the sustainability practices. The interviews analyses revealed the findings of qualitative approached. Table 6.6 presenting the hypotheses found in quantitative findings.

Table 6.6: Organisational Characteristics Hypotheses.

Hypotheses	Sig.	Supported
H1: Attitude towards change is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	*Yes, Negatively Significant*
H2: Top management is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	*Yes*
H3: Cost consideration is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p > .05**	*No*
H4: Employee connectedness is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	*Yes*

6.4.1   Attitude towards Change

Attitude towards change (Table 6.7) is found to have a negative impact on intention to adopt the sustainable practices in Malaysian hotel restaurants (MHRs). The reason for it to be negatively significant is mainly because this environmental practice has already been practised even with basic practices such as energy saving, recycling or using local suppliers.

Table 6.7: Attitude towards Change being Negatively Significant

Support		Reasons for Negatively Significant
6/10		
HM1	Y	It has already being decided and continues to practice.
HM2	Y	Management is ready to go for environmental friendly practices for restaurant.
HM3	N	Disagree.
HM4	Y	Management will decide either to go for the sustainable practices or not.
HM5	N	Disagree.
HM6	Y	Willing to adopt but have not started the practice.
HM7	N	Disagree.
HM8	N	Disagree.
HM9	Y	All departments agree and are working towards sustainability practices.
HM10	Y	Everyone support the idea and work together.

CAUSE (Negatively Significant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Ready for changes	X	X				X			X	X
Management decisions				X						

Similarly, if the management is ready to go for sustainable practices, the operations and the staff may not be ready to such change. The operations include the current standard operation procedure may need revision, the machineries and equipment need to be environmental friendly and the staff should also be trained and coached in order to perform the practices.

HM6 informed that the management wanted to have sustainable practices in the operations however they did not practise it. No action taken or even decision has been made in taking the change for environmental friendly operations. HM6 stated that '*they say they want to but they aren't practicing it. So, the question is how willingness are they are because they have not started the practices yet'.* However, H9 expressed that the entire department in the hotel and also the staff are happy to

go for the environmental practices and they are working together on it. H9 stated that '*All of the managers, then the department head and so on will support the idea. We will work together with the staff'*.

6.4.2   Top Management

The quantitative result shows that top management influences the intention to adopt the sustainable practices in MHRs. All informants commented on this when being asked about who has the authority to decide to adopt the sustainability practices in hotel restaurants. The majority said that it was the top managerial level. Their influence in ensuring these practices are executed in the operations is essential. Table 6.8 presented the significant reasons.

Table 6.8: Top Management being Significant

Support		Reasons for Significant
10/10		
HM1	Y	Already being decided.
HM2	Y	Will try it first and see.
HM3	Y	The hotel already go for minimal practices
HM4	Y	Our management decided to go for sustainable operations.
HM5	Y	Make sure the workforce understand what the sustainable practices are before implementing.
HM6	Y	The management willingness to go for sustainable operations.
HM7	Y	Guidelines and instructions from the Ministry then the hotel will implement the practices.
HM8	Y	Involve more cost when implement.
HM9	Y	It was started when the hotel owner asked the management on the current trends in the industry.
HM10	Y	I decided to go for sustainable operations.

CAUSE (Significant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Decisions made by top management	X	X	X	X		X			X	X
Guidelines and instruction					X		X			
Implementation cost								X		

This findings show the important role of hotel managers in determining the directions of the organisation especially to adopt this environmental practices. HM1 informed that the implementation of sustainability practices in their hotel property has being implemented and stated that *'it has already decided when they started this hotel 3 years ago. It is not really difficult and for top management it is not a problem'* it shows that the sustainability practices have been in the management agenda for the hotel operations and HM3 mentioned that *'the hotel already go for minimal practices by saving energy and minimise wastes'*. Further, HM2 clearly

said that *'they will try it first and then it all depends on the management'*, as because the management wanted to see to what extent the practices can give them benefits before it is further implemented. Then, HM4 also specified that *'the management has decided to go for sustainable operations or not'*; HM8 argued that *'it will involve more cost when implementing the practices'.*

HM6 added that *'the management are willing to go for the practices'* which suggests that the management are ready to have innovation in their operations; However, HM7 argued that the ministry should give the guidelines and instruction on how the sustainability practices should be done by stated that *'to implement the practices will not be a problem if the Ministry five the guidelines and standard operation procedure'*. Besides that, HM9 made the point that the current trends of sustainability in the industry has influenced the adoption and stated that *'the hotel owner always asked the top management's opinions and suggestions as to what the current trends are and that is how it started'*. HM10 then added that *'the hotel manager have the authority to decide to start the practices'*.

6.4.3   Cost Consideration

Cost consideration is found insignificant in quantitative findings. Although there are many benefits or opportunities gained in adopting the sustainable practices in hotel restaurant it involves substantial cost to operate the practices. Table 6.9 highlighted the reasons for cost to be insignificant.

Table 6.9: Cost Consideration being Insignificant

Support		Reasons for Insignificant
5/10		
HM1	N	Disagree
HM2	Y	If the hotel willing to invest it will cost a lot of money.
HM3	Y	Hotels do not adopt the sustainable practices because of costing.
HM4	Y	Cost influences the implementation.
HM5	N	Disagree
HM6	Y	Investing in sustainability practices is very costly.
HM7	N	Disagree
HM8	Y	Involve more cost when implement.
HM9	N	Disagree
HM10	N	Disagree

CAUSE (Insignificant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
High implementation cost		X	X	X		X		X		

The high cost involved when adopting sustainability practices becomes a consideration for the hotel managers to conduct the practices in their properties. The informants mentioned that adopting these environmentally friendly practices might incur a huge budget where the hotel will need to adjust the overall operations to comply with the practices. HM2 stated that '*I think it is about the costing, if the company or the hotel is not willing to invest because it might cost a lot of money'*. It is also seconded by HM3 when he stated that *'for me, honestly all hotels do not adopt these sustainability practices mainly because of costing'.* HM4 also agreed that costing was the main reason for their hotel not to consider having environmental practices in their operations.

HM6 also mentioned that invest in the environmentally friendly machineries and equipments might involve a lot of money. Substantial changes are needed to make sure the operations are able to work towards the sustainable practices he explained that '*investing in these tools is very costly…it is a disadvantage, because your cost goes up… green products are not cheap'.* HM8 further specified that the sustainable practices are very good to the environment as well as promoting a healthy lifestyle but it is not cheap and it involve more expenses in doing so. HM8 stated that '*lots of cost will be involved in implementing the green practices….. It's healthier to adopt and practice; the cost might be slight more'.*

6.4.4   Employee Connectedness

Employee connectedness is found to be significant to influence the intention to adopt the sustainable practices in MHRs. The majority of the informants agreed that their employees play a significant role when the adoption takes place in their operations. Table 6.10 shows the findings.

Table 6.10: Employee Connectedness being Significant

Support		Reasons for Significant
9/10		
HM1	Y	Should know and be trained.
HM2	N	Disagree.
HM3	Y	Play an important role to adopt the practices.
HM4	Y	Should be given training and equipped with the knowledge.
HM5	Y	Practice hazard, food safety and food assurances.
HM6	Y	Train and make them aware about the risk and consequences.
HM7	Y	Train to comply woth green practices, the process and procedure.
HM8	Y	Involvement in the practices.
HM9	Y	Make them aware and tell the impact on environment.
HM10	Y	Change the mindset and tell why sustainable practices are beneficial.

CAUSE (Significant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Training and equipped with knowledge	X			X	X	X	X	X	X	X
Important role to conduct the practices			X							X
Impacts awareness						X			X	X

The employees should be trained and equipped with the knowledge and skills to help them properly implement sustainability practices. To change the practices directly will influence employees performance as they need to be informed and trained to performance accordingly. HM1 stated that '*staff should know and be trained about the safety procedure for the practices. For example how to handle chemical'.* HM3 also added that '*they play an important role to adopt this kind of thing and its back again to human resources to educate them'.* Indeed it is not an easy task but this is the only way for a hotel that just embarks in taking this direction. HM4 mentioned that '*they should be given training, on the job training like when we implement these green practices, then we call all on the employees*

to be trained. They should be equipped with the knowledge about the practices'. HM7 also added that '*if we would like to implement, the staff and all the management should know what to do… the staff should be trained … perhaps that training should be how to comply with green practices… the process and procedure'.*

HM6, HM9 and HM10 informed that they themselves would be involved to train the employees about the environmental practices. This is to show that they are really seeing the need for this in their operations. In the training, they explain the importance of the practices and the reasons for doing it. For example, HM5 informed that '*let's say if we implement, for example energy saving, why do we need to save energy? Then we'll tell them the impact on the environment'.* HM6 further stated that '*I believe, when I do training with my staff here, occasionally I will tell them what the risk is and what the consequences are. Rather than telling them all the good things. I will tell staff about the bad things. So if let's say we are talking about the example of sustainability practices. If we do not save the number of plastic bags. Protect away, give to take away the box. Now, we take one a box in the plastic'.*

By knowing that there are only a few hotels in Malaysia that have been certified as Green Hotel, environmental friendly practices have become a new agenda for Malaysia. Therefore, HM10 agreed that to start the practices, the most important think is to change the mindset of the people by raising their awareness when he stated that '*I conduct the training by myself for the hotel. Basically when we do training to tell them about the practices. First thing we do is we try to change the mindset. Changing mindset is actually very important and it is not easy because to tell them; for example not to throw rubbish. Sometimes you have to tell them. So we have to tell them why we are doing this; why these green practices will benefit not only benefit us but also for the future generation'.*

6.5 Environmental Characteristics

The quantitative findings identified that there are 2 predictors of environmental characteristics influence the MHRs to adopt the sustainability practices. The interviews analyses also revealed the findings in qualitative approached. Table 6.11 presenting the hypotheses found in quantitative findings.

Table 6.11: Environmental Characteristics Hypotheses.

Hypotheses	Sig.	Supported
H5: **Government laws and regulation** are positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	**Yes**
H6: **Green supply chains** are positively related to the sustainability adoption in Malaysian hotel restaurants.	**p > .05**	**No**
H7: **competitive advantage (Trade pressure)** is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p > .05**	**No**
H8: The **stakeholders' demands** (consumer and community) are positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	**Yes, Negatively Significant**

6.5.1 Government Laws and Regulations

The quantitative survey found there is a significant of government laws and regulations. Table 6.12 presented the reasons for being significant.

Table 6.12: Government Laws and Regulation being Significant

Support		Reasons for Significant
10/10		
HM1	Y	No support given but only information about the sustainable practices.
HM2	Y	No enforcement from the government.
HM3	Y	No enforcement was made by the government.
HM4	Y	The guidelines must be there before implement.
HM5	Y	Only encouragement but not compulsory.
HM6	Y	Low enforcement seem like not exist. Not a mandatory.
HM7	Y	Hotel association should lead, give instruction and provide guidelines.
HM8	Y	Hotel association has proposed all hotel to practice the sustainable practices in 2012 but hotel own choice to implement.
HM9	Y	Hotel own choice to practice and implement.
HM10	Y	Government encourages but hotel own initiative to do it.

CAUSE (Significant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
No support given	X									
No enforcement		X	X		X	X				
No guidelines				X			X			
Own initiatives								X	X	X

Government laws and regulations are very important in making sure that the practices are performed accordingly by all hotel operations in Malaysia. Besides that, even there is information given to the hotel, the government needs to give support to the hotels to go for sustainable friendly operations. HM1 stated that '*no support but only information distribution about the sustainability practices'.* Further, the managers expressed their dissatisfaction towards the government for not issuing proper implementation guidelines in making the practices compulsory for all the hotel operations in Malaysia. HM2 stated that '*to tell you the truth because the enforcement is not there from the government'.* This is also seconded by HM3

where he strongly said that '*no, there is no enforcement made by the government*', and also added by HM6 with '*low enforcement from the government. So, it's like it does not exist*'.

HM9 and HM10 argued that it is the hotel's own preference and creativity to conduct the sustainable practices even it is inspired by the government. HM9 argued that '*it just a choice for the hotel and the owner if they want to comply with this, it's up to them*'. It is also agreed by HM10 as he seconded that '*the government encourages us but it's your own initiative whether you want to do it*'.

The informants also agreed that proper guidelines should be given to the hotels about the standard operating procedure if the practices are to be implemented. HM1 stated that '*the government and hotel association should give information and guidelines but the green practices are done by the hotel itself*'. HM3 also added that '*the guideline must be there before we start training the people. So, this must come from either the ministry or the association itself. Before we can actually start doing our own internal training to our staff.* Moreover, HM7 also further added that '*the hotel association should take the lead of in this initiative. They should instruct and provide guidelines to the hotels to be ready for this*'.

However, HM6 argued that the suggestion made by the association about the implementation of the practices was not a regulation and it was also not being enforced. HM9 stated that '*because it is not a regulation, it is not an enforcement that is mandatory for the hotel to come out with the practices*'.

6.5.2   Green Supply Chains

The quantitative findings found that green supply chains do not significantly influence the intention to adopt the sustainable practices in MHRs. Table 6.13 shows the reasons for green supply chains being insignificant.

Table 6.13: Green Supply Chains being Insignificant

Support		Reasons for Insignificant
9/9		
HM1	Y	80-90 products are from local suppliers.
HM2	Y	Using most imported products but sometimes will use local products due to demands.
HM3	Y	Need to use some imported ingredients for certain menu.
HM4	Y	Deal with local suppliers.
HM5	Y	Not yet go for local supplies.
HM6	Y	Only used imported meat, the quality is different from local meat.
HM7	Y	Depends on the menu served.
HM8	Y	Using local suppliers.
HM9	Y	Mostly ingredients get from local suppliers but need to use imported the meat.
HM10	-	-

CAUSE (Insignificant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Not fully use local suppliers	X	X	X	X		X		X	X	
Use imported supplies	X	X	X		X	X			X	
Depends on menu			X				X			

To implement sustainable practices in hotel restaurant operations, one consideration that need to point out is having local supplies. This is to minimise transporting of the outside goods and products that are believed can harm the environment. There were managers who informed that most of their food was supplied locally. However, they also said that some of the supplies were imported,

especially meat and seafood. This is because of they are looking for good quality meats and seafood product to be used in their operations. HM1 stated that '*we are using a local supplier. Around 80-90% of our products are from local suppliers'.* It was further stated by HM2 that '*normally we get the wet and dry products from local… But some of the products, if we get the premium items, some people like those especially those, who have money. They like to spend big so we need to get them imported, especially mussels. We don't actually grow mussels so we still need to get them imported but if there is no supply we will serve local mussels…because the local mussels, there is not much flesh even though it is fresh'.* HM3 also further added that '*everything is from our local suppliers. Unfortunately, we have to import salmon if there is a request… So of course, we will take more from local producers. For Kelantan of course, we will have the authentic Kelantan's cuisine. So, that is what we are doing instead of having all this lavish western cuisine or things that people are not familiar with and why must we do it because it is not going to sell anyway. So we take all the local produce, all the herbs and whatever that we can get here itself'.*

HM4 also mentioned that '*we only get meats, I mean all of our items are local… maybe 20% because we actually use meat, for example Australian beef, or New Zealand lamb… Malaysia doesn't have the quality of meat or can get good quality but we are using all local suppliers'.*

The informants also informed that the other reason for them to get some imported ingredients is because of the menu that they are offered. HM7 stated that '*it depends on our menu. We are using some international raw ingredients and some local. Mostly we are using imported meat. But not all we used imported ingredient. Here, we are using local supplies because the price is cheaper and the quality is also really good. We base it on the menu, if the menu is a western concept we will use international ingredients and all from local suppliers'.* HM9 explained that they use mostly local ingredients, but when it comes to quality assurance they have to

get the imported ones. He stated that 'm*ostly we get from the locals... Basically we try to use local stuff, even our food, except those... you know meats mostly are from New Zealand'.*

6.5.3 Stakeholders' Demand

Stakeholders demand is found to be a significant factor and is having a negative impact on adoption decision. There is no demand from the stakeholders such as the customer and community that influence the hotels for not going for the direction even though there is need to take care of the environment. Table 6.14 presented the findings of stakeholders demand for being negatively significant.

Table 6.14: Stakeholders' Demand being Negatively Significant

Support		Reasons for Negatively Significant
7/10		
HM1	Y	Community demands and not customer.
HM2	Y	Customers do not go sustainable things because of cost.
HM3	Y	It is not necessary for them.
HM4	N	Disagree.
HM5	Y	Market trends go for sustainable practices.
HM6	N	Disagree.
HM7	Y	No demand yet.
HM8	N	Disagree.
HM9	Y	There is a demand but never highlited, required or asked for.
HM10	Y	Only those who care about the environment will appreciate.

CAUSE (Negatively Significant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
High cost for customer		X								
No Demand	X		X		X		X		X	X

HM2 informed that the customers believe that having environmental friendly services provided by the hotel might cost them extra. H2 stated that '*most clients are not really into the sustainable things because of the cost'.* Besides that, according to HM3 there are no protest was made by the consumer and community because it was not important for them to know about how the hotel industry operated. HM3 stated that *'it is not something that is a necessity for them',* and added by HM7 that '*so far there are no complaints yet from them for us to go for environmental friendly operations'.* HM1 argued that, it was not the customers that demanded them to go for the sustainable practices, but it came from the community where there are located. HM1 argued that '*it was not our customer, but 60-70% is from the community who want us to go for environmental friendly practices'.*

To add on, HM9 stated that they were not sure if sustainability practices were an issue for their consumers and community where they are based because it has never been raised. HM9 stated that '*but it was the only thing that was never highlighted, required or asked for us to go for environmentally practices'.* It was also seconded by HM10 that '*those who care about the environment, they obviously appreciate it. Those who are ignorant about the environment, they never care'.*

6.6   Perceived Innovation Characteristics

There are 3 predictors of perceived innovation characteristics was found significant and have impacts to the adoption. The interviews analyses discussed further the findings in qualitative ways. Table 6.15 presenting the hypotheses found in quantitative findings.

Table 6.15: Perceived Innovation Characteristics Hypotheses.

Hypotheses	Sig.	Supported
H9: Relative advantage is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p > .05**	**No**
H10: Complexity is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p > .05**	**No**
H11: Compatibility is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	**Yes, Negatively Significant**
H12: Trialability is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	**Yes, Negatively Significant**
H13: Observability is positively related to the sustainability adoption in Malaysian hotel restaurants.	**p < .05**	**Yes**

6.6.1   Relative Advantages

The quantitative findings also has revealed that relative advantages does not significantly influence the adoption decisions in MHRs. Table 6.16 indicates the reasons for being insignificant.

Table 6.16: Relative Advantages being Insignificant

Support		Reasons for Insignificant
7/10		
HM1	Y	Do not have significant effect to the organization.
HM2	N	Diagree.
HM3	N	Disagree.
HM4	Y	Perhaps there is an advatages when adopt it.
HM5	Y	Give creativity and save cost.
HM6	Y	Very small scale of benefits.
HM7	Y	Perhaps it will speed up the operation, process and make the operation much easier.
HM8	Y	Not sure what are the advantages as it is not common here.
HM9	N	Disagree.
HM10	Y	Awareness of the sustainability should come first.

CAUSE (Insignificant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Less Advantages	X			X	X	X	X	X		
No awareness								X		X

The informants informed that they are not really sure to what extent the sustainable practices will give advantages to them. This because there are only a few cases or few numbers of hotel in Malaysia that implementing the practices. HM1 stated that '*for the moment, I have not seen any advantages in adopting the practices from Malaysia perspectives but I do believe the countries who are far developed have experience this'*. HM8 also agreed that 'I am not sure as this is not a common practice for the moment'.

There were informants who are agreed that implementing the practices is just another way to gain attention, but they also believe that it gives benefits to the operations. HM4 added *that 'I think there is an advantage by doing this when there*

is a trend now'. It was also seconded by HM6 that *'there is a benefits in doing this but in very small scale'*. HM7 mentioned that *'perhaps it will speed up the operation, process and make the operation much easier'*. HM10 also argued that *'the awareness to come out with the environmental friendly things could influence the advantages'*.

6.6.2   Complexity

Complexity was also found which does not significantly influence the adoption of sustainable practices in MHRs. Table 6.17 presented the findings.

Table 6.17: Complexity being Insignificant

Support		Reasons for Insignificant
7/10		
HM1	Y	It is not really difficult, top management can handle it.
HM2	Y	It give a competitive advantages with our competitors.
HM3	Y	Need to spend more time to learn the process.
HM4	Y	High cost needed to start with these practices.
HM5	N	Disagree.
HM6	Y	The process is needed; people cannot accept changes in one night.
HM7	Y	Difficult but there is an advantage – speed up operation, process and make operation easier.
HM8	N	Disagree.
HM9	N	Disagree.
HM10	Y	It will give high profitability even it was difficult to implement.

CAUSE (Insignificant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Difficult to adopt	X		X			X				
High implementation cost				X						
Give advantages		X					X			X

HM1 commented that adopting sustainability in the operations was not difficult as the management was able to deal with it. HM1 stated that '*it is not really difficult. For top management it is not a problem'.* However, it was argued by HM3 that adopting the sustainable practices is not an easy job because they need to really know what the practices are and it might take some time to be expert in that. HM3 stated that *'more times are needed to make this environmental friendly practices are working'.* Furthermore, HM4 also added that '*this will incurred more cost and this is a long process*'. HM6 also claimed the adoption should be accompanied by some processes and time is needed to make sure it is workable to adopt. HM6 stated that '*you need some processes, because people cannot accept changes in one night. It takes time'.*

Despite of the difficulties faced in adopting the practices and the high implementation cost, the informants also agreed that there are advantages that sustainable practices can bring to their businesses. HM2 stated that *'by implementing these practices, it will differentiate us with our competitors'.* HM7 also added that 'even it is *difficult but there is an advantage. The advantage is it will speed up the operation, speed up the process meaning to say it make the operation much more easily'.* It was also seconded by HM10 that *'I think even it is not easy to do this but it will give more profit later'.*

6.6.3   Compatibility

Compatibility was found to be a significant factor, but it will give a negative impact on the adoption decision. Table 6.18 presented the findings.

Table 6.18: Compatibility for being Negatively Significant

Support		Reasons for Negatively Significant
5/10		
HM1	Y	It is compatible with the current operations.
HM2	N	Disagree.
HM3	Y	Certain chemical not work well with the current equipment and machinery. It is not compatible for current operations.
HM4	Y	Suitable for the current hotel setting.
HM5	Y	Proclaim resort city and concern for the environment.
HM6	N	Disagree.
HM7	N	Disagree.
HM8	Y	The hotels are ready to change to sustainable operations because it was compatible.
HM9	N	Disagree.
HM10	N	It was already there and all aspect was compatible with the practices.

CAUSE (Negatively Significant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Suit current operations	X			X	X			X		X
Not compatible			X							
Ready to change								X		

HM1, HM4 and HM8 confirmed that practicing sustainability seemed to be compatible with the current operation in the restaurant. This is also seconded by HM10 *'we has certified as Green Hotel so it is not a problem for us to carry on with this practices'*.

However, HM3 informed that the hotel should change all the chemicals used to the ones that are environmentally friendly in order to be compatible with the current practices. HM3 stated that '*because certain chemicals may not work well with your equipment. So, if we do not want to have to repair the equipment because we are adopting sustainable green, chemical wise and at the end of the day we will need to repair the equipment because it is not compatible'.*

HM5 claimed that being a resort city hotel, it is a must for the hotel operations to be compatible to preserve the hotel surroundings. He further argued that '*we call ourselves a resort in the city, our concept is already emphasising on the environmental friendly environment and not many changes needed it already there'.* Further, HM8 explained that their property was ready to go for the environmentally practices. HM8 stated that '*we are moving forward to this kind of practices. When we renovate this hotel we already consider this factor'.*

6.6.4   Trialability

Trialability was also found as a significant factor, but will give a negative impact in the intention to adopt the sustainable practices. Try out in implementing the practices in the operations might give the possibility for the adoption to be rejected if it fails. As a result, the hotels may not consider to proceed with the implementation. Table 6.19 presented the results.

Table 6.19: Trialability being Negatively Significant

Support		Reasons for Negatively Significant
7/10		
HM1	Y	Already have the elements of sustainable practices when started the hotel.
HM2	Y	Try it first then fully implement it.
HM3	Y	It has to be a trial and error.
HM4	Y	Will observe and try before go deeper.
HM5	Y	Start with small scale then go for it.
HM6	N	Disagree.
HM7	N	Disagree.
HM8	N	Disagree.
HM9	Y	Do the minimum initiative to see how it goes.
HM10	Y	Try it before and we continue with the practices.

CAUSE (Negatively Significant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Have started the practice	X									X
Try it first		X	X	X						
Minimum practices					X				X	

The informants informed that they would like to make an attempt to try the practices first to see if it is workable for their operations before they decide to fully implement them. HM2 stated that '*we will try it first and see the outcomes then fully implement'. HM3 also added that 'Definitely will try it first. It has to be a trial and error thing'.* Further, HM4 also mentioned that '*basically we will observe and try first. We have to try first before we go deeper'.*

Moreover, HM5 and HM9 informed they would start with small scale instead of doing it for the whole operations. HM5 stated that '*now we can start on the smallest*

scale especially the restaurant. We don't have many restaurants here. The restaurant is the coffee house. The good thing about our property is that we are actually in the middle of refurbishment. We are going into that direction'. HM9 also added that *'maybe we can start to take the initiative to do it first… to do the minimum, whatever we can do'.*

However, HM1 mentioned that their hotel has come out with the practices since their business started he stated that 'w*e had the elements of sustainability practices when we started this hotel 3 years ago'.* HM10 also specified that they have tried the practices before and they are still doing it as it given advantages to them. HM10 stated that 'we try this before and it has give us benefits especially in reducing some of our operations cost'.

6.6.5   Observability

Observability also found as a significant factor to the adoption. Similar with trialability, having observed the sustainable practices will also give a tendency for the adoption rate to increase when it is successful. Table 6.20 indicates the findings.

Table 6.20: Observability being Significant

Support		Reasons for Significant
6/10		
HM1	Y	Already applied minimal practices.
HM2	N	Disagree.
HM3	Y	Will observe before try and go further.
HM4	Y	As a resort hotel we will directly adopt the practices.
HM5	N	Disagree.
HM6	Y	It take time, people do not accept changes instantly.
HM7	N	Disagree.
HM8	N	Disagree.
HM9	Y	See what are the advantages then try and adopt it.
HM10	Y	Already start with the practices and will keep go for it – Observed and try it before and decide to go further.

CAUSE (Significant)	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Apply minimal practices	X					X				X
Fully observe			X						X	X
Direct adopt the practices				X						X

HM1 clearly stated that they have already started with minimal practices; therefore, they do not observe them anymore. HM1 stated that '*because we were already applying minimal practices when we started this hotel'.* However, HM3 argued that they wanted to observe the practices and decide on it later because it might involve substantial adjustment. HM3 stated that '*we will observe it first. The practices is not easy, it might incurred many changes in the operations'.*

HM4 mentioned that they would not observe how sustainability could work out as their hotel is a resort city, which preserves the green surroundings and conducting

these practices is part of their main identity. HM4 stated that 'w*e directly adopt the practices because we position ourselves a city resort hotel'.* On the other hand, HM6 said that they would observe to what extent the sustainable practices will give any positive outcome to their businesses before fully operate it. HM6 argued that '*some processes are needed, because people cannot accept changes in one night. They take time. So when changes happen then they said oouuhhh… but we are able to have two systems running you can see… The new one feels like it is running like the current one. Until a certain stage, then you will see it was in a parallel line'.*

6.7   MHRs Adoption Performance

The informants were also asked about the performance in adopting the sustainable practices. Table 6.21 below revealed the performance.

Table 6.21: MHRs Adoption Performances.

Informant	Adoption Performances
HM1	Apply the minimal practices and give benefits, especially increasing the profit.
HM2	-
HM3	Not affect performance and not all guest prefer this practices; increase hotel image and reputation;
HM4	Improve image and reputation; generate more revenue.
HM5	Increase profit.
HM6	Save cost and very good to be considered; recognition from worldwide and locally.
HM7	Save cost and other operating cost; increase reputation and image.
HM8	-
HM9	Give benefits to operations and cost saving; reputation improves and revenue increases; increase profits.
HM10	Increase business profit.

Current Practices	HM1	HM2	HM3	HM4	HM5	HM6	HM7	HM8	HM9	HM10
Saved cost						X	X		X	
Increased reputation and image			X	X		X	X		X	
Increased profit	X			X	X	X			X	X

The informant stated that there would be an advantage for their operations if the consumers started to like what they did. HM6 stated that '*if the public openly accepts it, I think this is something very good for everybody; and moving forward, it is even something that is helpful and it is save cost too'.* One of the managers also added that the benefits gained when the practices save them a significant amount in their expenses. HM7 stated that 'w*e could save a lot. Save cost and other operating costs'.*

Besides that, the hotel staff and owners would benefit from the practices if their satisfied clients recommended their hotels to others. HM9 stated that '*if you have all the practices there and then you follow them. I think the staff will get the benefits. The owner will get the benefits and the customer will also come back… The customer will stay and have a meal and come for an event or any function in this hotel then from there they will spread the word… I believe'*.

Half of the informants mentioned that adopting sustainability practices in the hotel restaurants would build up a good rapport and reputation. The hotels' image would be raised and they said this would lead to the growth of the revenue earned. HM3 stated that '*the hotel image will not be affected in a negative way, probably more in a positive way actually… positive reputation… we will probably win one of those hotels who could talk about sustainability not only within the state or within the country itself and also probably in other Asian countries as well'*. It was also further added by HM4, '*slowly I think it will improve and our image and reputation in participating in the sustainability will be better; will be increased and will be stronger'*. Moreover, HM6, HM7 and HM9 also agreed that they believe by adopting the practices it will improve the hotel image and increase their reputations.

However, one informant in a confident gesture said that adopting sustainability practices would not improve the performance of the hotel operations in Malaysia where HM3 stated that '*it would not affect performance. It's just, you know, this 'look card'. You have something to inform your guests about that these are the practices that we are doing. I think foreigners especially those that come from Europe and the US really appreciates this thing'*.

The informants also agreed that adopting sustainability practices in their property would give more revenue in return. For examples HM1 stated that '*as I mentioned we have started this hotel by complying with minimal sustainability practices and I think it is 50-50 where it gives us the benefits'*. It was also added by HM4 and

stated *'when the practices are already stable and concrete, definitely this will attract more people and generate more revenue… and yes it will increase our restaurant revenue from time to time'*. HM5, HM7 and HM9 also seconded for this performance to be received as highlighted by HM9 *'I think people will start to come in and try and then of course the revenue is there because we started to implement this small, small little thing indirectly. You don't realize that your bottom line is increasing and then at the same time, the issue here is that we save the environment'*.

6.8   Qualitative Analyses Discussion

6.8.1   Current Sustainability Practices in Malaysia

Based on the findings from the interviews, the Malaysian hotel industry is aware of the environmental issues associated with their existing operations, but the initiatives adopted to deal with the issues have been to-date, insignificant and unclear (Siti et al., 2011). In fact, since 2016, only ten hotels in Malaysia have been certified as green hotels by Tourism Malaysia. Accordingly, this demonstrates that the sustainability agenda has still not yet reached a sufficient level of practical understanding in order to develop proactive actions in this industry. The face-to-face interviews with the ten informants also highlighted that most of the hotels in Malaysia had not implemented sustainability practices in their restaurants. While these hotels are aware of the impact of their operations on the environment, little effort has been expended to prevent or reduce the impacts (Siti et al., 2011). Furthermore, it was found that most hotels in Malaysia created or developed their own initiatives to implement environmentally friendly practices in restaurants. Even though legal enforcement was not evident, the hotel industry realises it has a responsibility to ensure that the environment is not harmed further by hotel operations. In fact, the hotel industry relies heavily on the ecosystem for its survival in this competitive hospitality market. The following are some examples of relevant statements from the informants.

"For me, honestly not all hotels adopt these sustainability practices" (HM3, 5-star hotel, urban)

"As far as I know overall green practices now as I mentioned to you earlier, not many hotels are actually going in that direction…" (HM5, 4-star resort, urban)

"It is just a choice for the hotel and the owner if they want to comply with this. It's up to you." (HM9, 4-star hotel, urban)

"The Association is encouraging it. The government encourages it but it's your own initiative whether you want to do it…" (HM10, 4-star hotel, urban)

The interview findings indicated that the Malaysian government has still not enforced regulations and laws making it compulsory for hotel businesses to adopt environmentally friendly 'green' practices in their operations. Moreover, it was found that no parties or organisations have been appointed to oversee said practices in Malaysia. These findings are in line with previous literature reviewed in Chapter 3; the limited implementation of sustainability practices in the Malaysian hotel industry is primarily due to lack of support systems in place to encourage environmentally friendly practices (Kasim, 2005). The lack of guidelines, instructions, supervisory authority and participation by the hotel industry as a whole, has resulted in hotels' independently adopting sustainability practices. Without instructions or guidelines or enforcement through regulatory authorities, the industry will soon perceive that there is little need for them to comply with these practices. Therefore, it is crucial to enforce sustainability practices in Malaysian hotel restaurants and the hotel industry in order to sustain and protect the ecosystem for future generations and the wellbeing of the industry. The following statements are some of the opinions voiced by informants regarding government enforcement of sustainability practices.

"To tell you the truth [it is] because the enforcement is not there from the government" (HM2, 4-star hotel, urban)

"No, there is no enforcement made by the government" (HM3, 5-star, urban)

"It is just a choice for the hotel and the owner if they want to comply with this. It's up to you." (HM9, 4-star hotel, urban)

"The 'Association' is encouraging it. The government encourages it but it's your own initiative whether you want to do it…" (HM10, 4-star hotel, urban)

Most of the hotel operations in Malaysia have only implemented basic environmentally friendly practices in their restaurant operations such as energy and water savings, using local suppliers and waste management. Notably, these practices were found to be quite common in the Malaysian hotel industry and are comparable to previous study conducted by Yusof and Jamaluddin (2013). Furthermore, these practices, while limited were also found in earlier studies, and practices within the room department of hotel operations (Anton et al., 2004; Potokish and Prakash, 2005; Wang, 2012). Figure 6.1 shows current sustainability practices in Malaysian hotel restaurants.
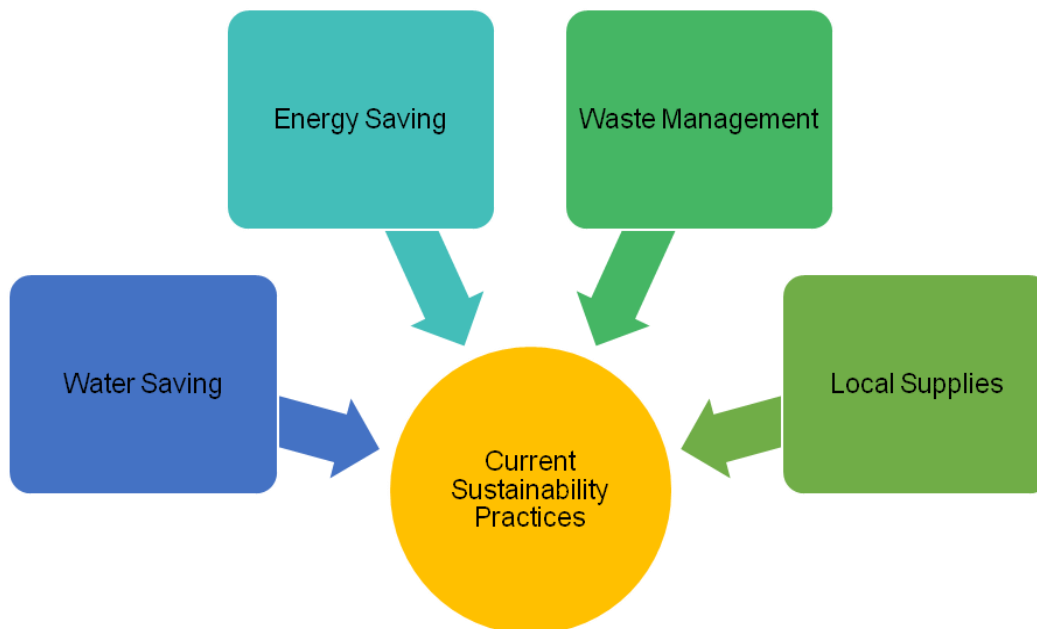
Figure 6.1: Current sustainability practices in Malaysian hotel restaurants.

Even though the Malaysian hotel industry has implemented these practices in hotel restaurant operations, the findings of this study have found that these practices were not entirely or consistently undertaken. For example, energy and water savings were achieved through minimal actions such as making sure all supply of power was switched off when the hotel's operations were closed. However, no details emerged to identify whether the equipment or facilities in the restaurant operations complemented or correlated to the amount of energy savings. Regarding waste management, the majority of hotels indicated that waste from their restaurant operations was minimal as they packaged the waste and disposed of it in rubbish bins. However, some hotels had been composting their waste into plant fertiliser. Indeed, this is good practice and should be adopted by other hotels. Following are statements made from the informants about waste management.

"Waste at the moment is as per normal practice. There is no green waste that we actually use to manage the waste so it's still goes down the garbage bin. At the end of the day we don't actually use it as compost or things like that..." (HM3, 5-star, urban)

"The other main practice we do is that any food waste from the kitchen, from the restaurant, it doesn't go to land fill. It goes to a company called Glomas ecology where we send the food waste. They will process our food waste into organic fertilizer within 24 hours… Our hotel adopts a farmer's program. We have 20 farmers from Bundu Tuhan where we adopt them. So what we tell them is "You buy the organic fertilizer at a special rate. Use that organic fertilizer for your vegetables. When you harvest, we will buy from you." (HM10, 4-star hotel, urban)

Importantly, hotel management should educate employees regarding how to deal with food waste efficiently. This is especially necessary given that hotels have fluctuating occupancy rates all year round, where guests and customers alike, come to stay and dine in their restaurants during the holiday season. Accordingly, it would be beneficial if the hotel industry could develop a set of standard operating

procedures (SOPs) to assist hotel restaurants in dealing with food waste and other processes.

The majority of restaurants were using products purchased from local suppliers to produce their meals. Only meat and seafood products were imported due to the quality and variety that attracted hotel guests. Notwithstanding, this could be a potential obstacle to procuring local produce given the difficulty of acquiring quality meat and seafood products in Malaysia. Notably, these findings were not identified in previous studies conducted in Malaysia from a hotel restaurant perspective.

Interestingly, different scenarios can be observed within hotel chains and independently operated hotels regarding SOPs for implementing sustainability practices. In fact, most hotels within a hotel chain have developed their own SOPs regarding how to implement a range of practices. Independently owned and operated hotels tend to develop their own initiatives for sustainable operations by merely undertaking minimal practices, (often non-standard), given that there are no guidelines or expertise available to assist them regarding sustainability measures and practices.

Given that only a handful of hotels in Malaysia have been certified as green hotels, there is a need to understand and investigate why the numbers green hotels is so low (Tourism Malaysia, 2016). To examine the entirety of hotel operations in Malaysia would take considerable time. Therefore this study will, instead, identify the barriers that inhibit hotels from adopting sustainability practices, specifically in hotel restaurants. Enabling factors of sustainability practice that would help to encourage the adoption of sustainability practices in hotel restaurants will also be identified, as this contribution is considered to be of greater value.

6.8.2   Barriers to Sustainable Practices

High Implementation Cost

As identified in the interviews, one of the key concerns raised by informants were the costs associated with implementing sustainability practices in restaurant operations. Modifying current practices or introducing new practices will involve substantial adjustments to current hotel operations if the changes are quite abrupt or different from current practices. The need to invest in environmentally friendly technology and equipment may also incur significant expenditure. Similar findings regarding the high costs involved in applying environmentally friendly or sustainability practices have also been reported by Florida, Atlas and Cline (1999). Further, this finding was found to be consistent with a separate study by Kasim and Ismail (2012), where the financial aspect of implementing environmentally friendly practices was a key consideration. Investing in sustainability practices in hotel restaurant operations will need substantial funds. Likewise, contemplating the risks associated with adopting sustainability practices may also exacerbate the costs and perceptions (Jawarski and Kohli, 1993). The following are the examples of statement made by the informants.

> *"…insufficient money, the cost in doing that. Investing in these tools is very costly…it is a disadvantage, because your cost goes up… green products are not cheap…" (HM6, 4-star hotel Urban)*

> *"Big costs will be involved in implementing the green practices" (HM8, 5-star hotel, suburban)*

Low Customer Demand

Low customer demand for green products, including eco-friendly practices in the hotel industry has influenced how hotels presently operate. This is evident from customers who do not appreciate the move or transition from traditional hotel

practices to sustainability practices. The circumstances of the Malaysian hotel industry reveal that a negative relationship exists between the demands of the stakeholder, especially customers, and the adoption of sustainability practices in hotel restaurants. Accordingly, it is not surprising to observe that the hotel industry is slow in implementing sustainability practices in hotel operations. However, some studies conducted in other countries tell different stories. In fact, customers have been part of the environmental activities in the accommodation (lodging) industry (Fry and Polonsky, 2004). Further, customers play a significant role in creating, communicating and delivering green value (Polonsky, 2011). Low customer demand for sustainability (environmentally friendly practices) has influenced hotel managers' to perceive such practices as not being client-related. However, if there were demands in this area (sustainability practices, green products, etc.) received from customers, the hotel was twice as receptive to the adoption of sustainability practices in their hotel restaurant operations. The following are the statements by two of the informants.

"Not every guest will like it if we implement too much" (HM4, 4-star hotel, suburban)

"Here, so far, we have not encountered such guest behaviour…" (HM7, 3-star hotel, urban)

Absence of Government Enforcement

While there is no enforcement in Malaysia regarding sustainability practices as described earlier, there are equally no guidelines as to how these practices should be implemented and conducted in hotels, specifically in hotel restaurants. In fact, most studies identify the influence of government support and enforcement towards the adoption and monitoring of eco-system friendly or sustainability practices in hotels (Bohdanowicz, 2006; Burler, 2007; Gu et al., 2013; Tzschentke et al. 2008a; Kasim and Ismail, 2012). However, it was found in this study that there is minimal if any government support and enforcement to implement sustainability practices in the hotel industry. Accordingly, guidelines and supporting

information should be made available and introduced for the hotel industry, including hotel restaurants in Malaysia.

The majority of hotels that have introduced environmental practices in their operations have done so based on their own initiatives and innovative approaches. Indeed, the feedback received by informants who participated in this study, indicated that if government support and enforcement were in place, hotel managers would adopt these sustainability practices four times over (quantitative finding), in their operations. This finding is consistent with that of Banerjee (1998), Vercalsteren (2001), Rhee and Lee (2003), Emery and Watson (2004) and Stone et al. (2004). Government laws and regulations are considered to be fundamental towards influencing and motivating hotels to move their existing operations to become more sustainable (Bohdanowicz, 2006; Tzschentke et al. 2008a; Gu et al., 2013). The lack of government regulation enforcing environmental legislation contributes to the slow take-up of these practices as demonstrated in the tourism sector (Anguera et al., 2000; Pryce, 2001). The following are some statements from the informants.

> *"To tell you the truth because the enforcement is not there from the government"* (HM2, 4-star hotel, urban)

> *"No, there is no enforcement made by the government"* (HM3, 5-star, urban)

Lack of Association Guidelines

Most of the informants mentioned that they had not been provided with any guidelines from the Malaysian Hotel Association (MHA) regarding how practices can be conducted in hotel restaurants. Due to the lack of guidelines, hotel managers seemed to be demotivated from adopting sustainability practices. The MHA should play a critical role in motivating hotel managers by providing them with the necessary sustainability practice guidelines to help adopt these new practices.

Importantly, hotels will heavily rely on these guidelines to implement sustainability practices in their operations (Kasim, 2007), including energy and water conservation, waste management and environmental education (Erdogan and Tosun, 2009; Rivera and de Leon, 2004; Rivera and de Leon, 2005). An example of the statement made from two of the informant emphasised the importance of such guidelines;

> *"The guidelines must be there before we start training the people. So, this must come from either the ministry or the association itself before we can actually start doing our own internal training for our staff"* (HM3, 5-star hotel, urban)

> *"The association should take the lead in this initiative. They should instruct and provide guidelines to the hotels to be ready for this"* (HM7, 3-star hotel, urban)

Limited Expertise

Regarding the interview findings, adopting sustainability practices was viewed by hotel managers as being a difficult and complicated process. One of the most interesting points raised by the hotel managers was regarding the need for an 'expert' to assist and guide the implementation and monitoring of sustainability practices in hotel restaurants. The hotel industry in Malaysia needs to acquire experts or a reference panel to help with implementing projects of this kind. This issue (and perceived barrier) may also be related to the lack of enforcement and support received from the government, given that no experts are available to assist in the implementation of sustainability practices and projects in Malaysia. This is in line with previous studies, where environmental experts are considered critical to the implementation of new practices and making ensuring the practices are correctly executed (e.g. Yusof and Jamaludin, 2014). Surprisingly, there is little knowledge and information available regarding eco-friendly practices in the hotel industry (Kasim, 2009). Transitioning to new work practices will significantly impact the operations of the hotel if not efficiently managed and executed. Expertise is

needed to evaluate activities, processes, hardware and services relating to the implementation of sustainability practices (Carlson, 2002). The following statement regarding the lack of sustainability expertise available is indicative of the challenge posed to hotels.

> *"We need to hire a few key people. At the moment, we don't have any qualified person that can take that position…" (HM5, 4-star resort, urban)*

Accordingly, hotel chains and franchised hotels do not have an issue relating to expertise given that operations can be carried out according to their respective SOPs, including sustainability practices or environmental protection practices. However, the main issue regarding hotel chains and franchised hotels is that the practices were performed internally and not widely adopted across the industry. Notably, the absence of government enforcement and standards in the Malaysian hotel industry has affected the entire system, (i.e. lack of conformality and standards within the industry).

Lack of Public Awareness

Environmental performance, environmental awareness and education are all important factors to be considered in the hotel restaurants (Buckley and Araujo, 1997; Erdogan and Tosun, 2009; Rivera and de Leon, 2004; Rivera and de Leon, 2005). For sustainability practices to operate effectively, public awareness as to why and how to preserve the eco-system should be a main priority. Although environmental management could help to preserve or safeguard the eco-system, the findings in this study found that awareness about methods and necessity of performing such practices was absent. This has influenced how businesses are managed and operated in Malaysia, especially in the hotel sector. Leslie (2007) claims that lack of knowledge on green issues and ambiguity of environmental guidelines lead to the public losing any sense of urgency regarding the protection of the ecosystem. Furthermore, while the industry has been alerted about the

enormous and adverse impacts resulting from their operations on the environment, slow progress has been taken to manage this situation (Siti et al., 2011). Therefore, the need to preserve the environment through education and awareness programme should be undertaken with the community and, likewise, individuals from an early age etc. The following are the statements made by the informants.

> *"We need to create awareness [regarding] why we have to take care of the environment." (HM9, 4-star hotel, urban)*

> *"There's more to creating the awareness. Because of how much awareness is there… In Malaysia it's not much" (HM10, 4-star hotel, urban)*

Consequently, the community and business operators will appreciate and value the eco-system more by adopting sustainability practices in conducting business. This is in line with the findings from Kasim and Ismail (2012), Vikneswaran et al. (2012) and Kamalulariffin et al. (2013).

6.8.3   Enablers to Sustainable Adoption

Government Support and Guidelines

The informants viewed government support and guidelines as an enabler which would support the adoption of sustainability practices. They believed that the government and the MHA should consider offering support and issuing appropriate guidelines and instructions (i.e. procedures) on how to adopt sustainability practices. This is extremely important given that hotel operations are contributing to environmental issues and polluting the ecosystem, for example, through the use of uncontrollable perishable products and utilities (APAT, 2002; Mensah, 2004; Trung and Kumar, 2005). It also appears that Malaysian hotels are not under any form of legislative pressure to implement sustainability practices. This is one of the key reasons for the poor, if not, non-adoption of such practices. Relying on hotels to

take responsibility and introduce their own initiatives has not been sufficient to increase the adoption rate for sustainability.

Undoubtedly, if the Malaysian government began to enforce and make sustainable practices compulsory in the hotel sector, this would inevitably get the attention of key players within the industry. Indeed, the hotel sector is relying on the government to introduce laws and regulations to support the implementation of sustainability practices (Kasim, 2007). Therefore, policies, guidelines and SOPs could help to support the implementation of sustainability practices. This is in line with prior studies indicating that government support and enforcement strongly influences the adoption of environmental practices in hotels (Bohdanowicz, 2006; Gu et al., 2013; Tzschentke et al. 2008a; Kasim and Ismail, 2012).

Incentives

Incentives are considered to be a means of increasing the participation of hotels in adopting sustainability practices and are perceived to decrease the total cost of implementing these practices. While some hotels have the financial capacity, along with sufficient resources to accommodate the costs associated with implementing environmentally friendly (sustainability) practices (Florida, Atlas, and Cline, 1999), most hotel managers are still not convinced about the business case to justify the implementation of such practices. To move the existing operations to more sustainability practices will require sufficient funds, resources and leadership. Also, the hotels will need to invest in new equipment and machinery for their restaurants that complies with environmental safety standards. Admittedly, employing environmental technology is one of the potential solutions in order to prevent environmental degradation. However, obtaining the technology requires an upfront investment.

Notably, offering incentives to adopt new practices could help to change the hotel manager's current perception regarding sustainability practices as future (recurring) costs. Some of the incentives that were found to motivate hotel managers' included; reducing utility payments and tax and recognition for making such changes through national award programs. Support in the form of incentives and rewards from adopting sustainability practices has been found to motivate and encourage participation from the hotel sector (Khanna et al., 2009; Massoud et al., 2010; Zeng et al., 2011). Even though there could be a significant implementation cost, the incentives, in this case, could help to cover some of the expenses and other overheads involved.

Public Awareness

The informants are not entirely convinced, as previously mentioned, regarding the business case to justify adopting sustainability practices, given that the demand from consumers is low. Most of the informants were aware of the issue surrounding awareness but are nonetheless waiting for the public to recognise such practices as providing value, thereby increasing demand. Sustainability awareness among the Malaysian public remains extremely low. Kasim and Ismail (2012), Vikneswaran et al. (2012), and Kamalulariffin et al. (2013) reported that the lack of societal awareness regarding sustainability prevents the public from taking the matter seriously. Therefore, there is a need for the Malaysian government to actively enforce sustainability via the Environmental Act, with supporting campaigns, marketing, awareness programme and other activities to increase the level of awareness among the Malaysian population.

Sustainability Expertise

According to the informants interviewed in this study, having skilled experts available who could help and assist with implementing environmental management systems (EMSs) and environmentally friendly initiatives would facilitate the

adoption of sustainability practices. Engaging in sustainable operations was found to be a meticulous process for hotel managers. In fact, knowing that only ten Malaysian hotels had been certified as green hotels, the managers were completely aware that the certification process involves many steps and was difficult to attain. Accordingly, adopting sustainability has been argued to involve substantial changes in management, policies and even operations (Revilla et al., 2001). Therefore, sustainability expertise is needed to help managers ensure the right processes are in place and are being sufficiently managed. Indeed, experts in this area can also provide help and advise how hotels should operate in order to minimise the ecological impacts of current practices and operations (Vikneswaran Nair et al., 2012; Yusof and Jamaludin, 2014).

6.8.4 Organisational Characteristics

It was found that, concerns about the impacts towards the environment are positively associated with the intention to adopt sustainability practices in hotel restaurants. This correlation was also found in a previous study conducted by Chan et al. (2014). The organisational characteristics used in this study were adopted from Nicholls and Kang (2012) and Kasim and Ismail (2012). The characteristics are (1) attitude towards change (level of risk taking), (2) top management, (3) cost consideration and (4) employee connectedness.

The findings of this study have revealed that the managers' attitudes towards change have a strong influence on the adoption of sustainability practices in hotel restaurants. Hotel managers were found to strongly affect the decision regarding innovation adoption (Enz and Siguaw, 2003). Further, these managers were identified as possessing a high level of risk taking (Jawarski and Kohli, 1993). In addition, the majority of the informants said that they would adopt eco-friendly practices in their hotel restaurants if this was also supported by other top management. This result revealed that top management were considered to be the most crucial people for leading the implementation of these practices in hotel

operations. This outcome was consistent with other studies (Banerjee, 1998; Griffiths and Petrick, 2001; Lusser and Riglar, 1999; Vercalsteren, 2001; Stone, Joseph, and Blodgett, 2004; Kasim, 2009; Kasim and Ismail, 2012).

Further, this study also revealed that high costs were found to be the main issue in the adoption. This result was also found to be in line with a previous study which indicated that the financial issue is the main factor when an organisation would like to invest in an environmental management system (Kasim and Ismail, 2012). A previous study revealed that employees appreciate working with organisations that are concerned about the environment's preservation (Harvey et al., 2010). This outcome was found to have a similarity with findings of this study. Most of the informants agreed that their employees should be involved in adopting sustainability practices in hotel restaurants and they should be equipped and trained in how to carry their jobs without harming the environment (Kasim and Ismail, 2012).

6.8.5 Environmental Characteristics

Environmental characteristics were also found to have a strong influence in the sustainability adoption in hotel restaurants. The environmental characteristics used in this study were adopted from Kasim and Ismail (2012): (1) government laws and regulations, (2) green supply chains, (3) competitive advantage and (4) stakeholder demands. Government laws and regulations were found to strongly influence the adoption in hotel restaurants. The majority of the informants said that there was no instruction and or support from the government, and this reduced the likelihood of adopting these practices in their properties. In other words, if the government makes the practices compulsory this will influence hotels to implement these eco-friendly practices in their restaurants. Accordingly, these findings echo the previous conclusions from other studies (Bohdanowicz, 2006; Burler, 2007; Tzschentke et al. 2008a; Kasim and Ismail, 2012; Gu et al., 2013).

In relation to sustainability adoption in hotel restaurants, most of the informants said that currently most of their supplies were from local producers. Using green supply chains was initially common practice for Malaysian hotel restaurants. Therefore, this outcome is similar with a previous study conducted by Kasim and Ismail (2012). Further, adopting sustainability practices was found to give a competitive advantage to the hotel adopting them. Previous studies have also found evidence of competitive advantages received when adopting the practices (Porter and van der Linde, 1995, p.98; Chavan, 2005; Chen, Lai, and Wen, 2006; Kasim and Ismail, 2012). In contrast, the current study result indicates that stakeholder demands were found exert positive influence on the likelihood of hotels implementing sustainability practice. However, it was found that consumers who were concerned about the environment (Clemes et al., 2009; Gracia et al., 2011; Kim et al., 2008; Lee and Back, 2010) and community (Bohdanowicz and Zientara, 2009) have an association with the adoption.

6.8.6 Perceived Innovation Characteristics

Perceived innovation characteristics were shown to have influenced the adoption of sustainability practice. This result was found to be similar to previous research conducted by Rogers (1995), Le et al (2006) and Chia et al. (2012) which found that innovation characteristics are the most influential factors affecting the intention to adopt. Innovation characteristics were adopted from Rogers' innovation theory, first posited in 1962, and the characteristics were drawn from the five attributes of innovation (Rogers, 2003). The attributes are (1) relative advantage, (2) complexity, (3) compatibility, (4) trialability and (5) observability. The findings of relative advantage were verified by the informants when they agreed that adopting sustainability it hotel restaurant would give them an advantage. This result reflects with the findings in previous studies conducted by Karagozoglu and Lindell (2000), Jeon et al. (2006), Lin et al. (2007), Hsiu et al. (2008) and Zolkepli and kamarulzaman (2015).

Furthermore, previous studies have revealed that integrating innovation into current practices was not that difficult (McCabe, 1987; Gopalakrishnan and Damanpour, 1994; Rogers, 1995; Lin et al., 2007). The findings were found to have a resemblance with current study. Moreover, the compatibility attribute was found to have influence on adoption of sustainability practices. Half of the informants agreed that adopting the practices was compatible with their current operations. This outcome was supported by the previous studies (Lee et al., 2006; Hsiu and His, 2008; Zolkepli and Kamarulzaman, 2015). In addition, most of the informants said that they would like to try the practices first before committing to permanent adoption. This result was significantly related to the conclusion that was derived from several studies (Sahin, 2006; Hsiu and His, 2008; Zolkepli and Kamarulzaman, 2015). Finally, observability, the last attribute of innovation, was shown to be important as the hotel managers were keen observe to what extent sustainability practices would be effective and provide benefits (Lee et al., 2006).

6.8.7   MHRs Adoption Performance

All of the informants revealed that adopting sustainability in hotel restaurant would significantly reduce costs. These findings correspond with a study conducted by Cvelbar and Dwyer (2013) that identified that implementing environmentally friendly business operations would give a competitive cost advantage especially in water and energy consumption.

Furthermore, it was found that adopting the eco-friendly practices will also increase a hotel's reputation and image. This outcome is also in line with previous study which suggested that introducing environmental practices in a business enhance the image of said business (Montegomery and Ramus, 2003; Sheldon and Park, 2011). In addition, the current study also demonstrates that highlighting sustainability practices in hotel restaurant could increase a hotel's profit. Most of the studies also discovered a strong correlation between implementing environmental practices and an increase in business revenue (Aragon-Correa et

al., 2008; Bird et al., 2007; Bragdon and Marlin, 1972; Grave and Waddock, 1994; Hart and Ahuja, 1996; Nicolau, 2008; Orlitzky et al., 2003; Pava and Krusz, 1996; Preston and O'Bannon, 1997; Russo and Fouts, 1997; Studivant and Ginter, 1997; Waddock and Grave, 1997).

6.9   Summary

This chapter has briefly reported on the findings of the in-depth semi-structured interviews with ten hotel managers of 3-5 star rated hotels in Malaysia. The findings revealed the current sustainability practices in Malaysian hotel restaurant operations. Most of the practices were found to be from the hotel own initiatives. Furthermore, these Malaysian hotels are only executing basic sustainability practices such as energy saving, food waste management and using a certain percentage of local produces in their restaurant operations. In relation to why the sustainability practices in restaurant operations do not get attention from the industry players, this is because of high implementation cost, no government support, lack of information and guidelines from the hotel association, no expert as a reference when conducting the practices and also because there is no awareness from society, which can influence how a business performs. Meanwhile, it was found that perceived innovation characteristics, organisational and environmental characteristics were found have a strong connection in adopting the sustainability practices in hotel restaurants.

The most interesting findings of this study are that sustainability adoption in hotel restaurants makes possible for a hotel to save more in the long run, to raise the hotel's image and reputation, which were identified as having a significant impact on the increase of profit in food and beverage outlets and therefore this will put forward this department as another main contributor to the hotel profit generator. Finally, this study hopes to provide a clear picture of a model to be used in the Malaysian context which can influence the adoption in hotel restaurants and in hotel operations as a whole.

The Malaysian government and the hotel association should provide guidelines and support to the hotel operator and give incentives by reducing some utilities expenses and, tax and give recognition to the hotel business when they are adopting the practices. Besides that, it is the responsibility of all parties to work raise awareness, to educate society about how important it is to preserve the environment and to get an expert to make sure the green practices in hotel restaurants comply with the standard operation procedure of sustainability practices.

The following chapter will present the contribution of the Malaysian Hotel Restaurants (MHRs) Sustainable Model.

Chapter 7

7.1 Contribution: MHRs Sustainable Model

As explained in Chapter 1, the main aim of this study is to assess the efforts through the implementation of sustainability practices by developing a new framework to assist MHRs in the application of sustainability practices. There are three variables were used in the framework to predict the sustainable adoption in MHRs: Organisational characteristics (Nicholls and Kang, 2012; Kasim and Ismail, 2012), environmental characteristics (Kasim and Ismail, 2012, and perceived innovation characteristics (Rogers, 2003). Therefore, the MHRs Sustainable model is refined, and its developments are presented and discussed following the completion of both quantitative and qualitative analyses. In addition, this chapter discusses the changes made to the MHRs model based on the results obtained from the survey (Chapter 5) and interview (Chapter 6), which broadly covered three areas described as follows:

1. A general overview of the conceptual model and its evolution to the new MHRs business model.

2. The enablers towards sustainable adoption as well as adoption performance.

3. The summary of the MHRs sustainable model.

7.2   The Evolution of MHRs Sustainable Model

In the context of the present study, the conceptual model named *'Malaysian Hotel Restaurants'* (MHRs) sustainable model was developed based on a comprehensive literature review presented in Chapter Three specifically, the findings from the literature reviews identified that it is necessary for Malaysian hotel industry to have a sustainable model for the purpose of influencing sustainable practices in restaurants operations. However, it should be noted that the conceptual model was established based on limited evidence; hence, it requires further development, refinement, and verification. The findings of the current research were obtained from survey data collected among 169 respondents and 10 in-depth semi-structured interviews conducted with the informants who were willing to participate in the second stage of this study.

Furthermore, it is crucial to note that the new MHRs sustainable model is novel and regarded as an adaptable solution considering that there are only ten hotels in Malaysia that are certified as Green Hotel. Accordingly, this model is expected to assist the hotel in implementing sustainable practices in restaurants operations. The overall results of the present study suggested that this solution is considered suitable for MHRs that aim to embark on the sustainable operations for the first time.

The new MHRs model consists of three variables as follows: (1) Organisational Characteristics (OC), (2) Environmental Characteristics (EC), and (3) Perceived Innovation Characteristics (PIC). In the case of the present study, OC was adopted from Nicholls and Kang (2012) and Kasim and Ismail (2012) with several characteristics which include attitude towards change, top management, cost consideration, and employee connectedness. Meanwhile, EC was adopted from Kasim and Ismail (2012) with a few characteristics such as government laws and regulation, green supply chain, competitive advantage, and stakeholders' demands. On the other hand, PIC was adopted from Rogers (2003) with relative

advantage, complexity, compatibility, trialability, and observability as the sub-variable. More importantly, the characteristics were later identified as predictors that are expected to influence the adoption of sustainable practises in MHRs. Figure 7.1 shows the proposed MHRs sustainable model.

Organisational Characteristics
- Attitude towards change
- Top management
- Cost consideration
- Employee Connectedness

Environmental Characteristics
- Government laws and regulations
- Green supply chains
- Competitive advantage (trade pressure)
- Stakeholder's demands (Consumer and community)

Perceived Innovation Characteristics
- Relative advantages
- Complexity
- Compatibility
- Trialability
- Observability

SUSTAINABILITY ADOPTION

Figure 7.1: Proposed MHRs Sustainable Model.

The thirteen characteristics of OC, EC, and PIC were represented as predictors and tested in the quantitative analyses conducted among 169 respondents. The analyses confirmed that eight predictors influenced the adoption of sustainable practices in MHRs. The interviews with ten hotel managers supported the findings

in qualitative ways. Accordingly, the evolution of the model is discussed in the following sections.

7.2.1 Organisational Characteristics

In the context of the present study, the findings confirmed that the impact of hotel operations towards the environment has influenced the hotel management to opt for sustainable practices (Beard, 1996; Banerjee, 1998; Jawarski and Kohli, 1993; Kasim and Ismail, 2012; Chan et al., 2014). On a more important note, the model verified that there are three predictors of organisational characteristics which influenced the adoption statistically based on the interviews findings related to the hypotheses developed for OC as presented in Table 7.1.

Table 7.1: Organisational Characteristics Hypotheses: MHRs Sustainable Model

Hypotheses	Quantitative	Qualitative
H1: Attitude towards change is positively related to the sustainability adoption in Malaysian hotel restaurants.	*Yes, Negatively Significant*	6/10 hotel managers agreed that the management is ready to change to sustainable practices but the systems, operations and staffs are not ready for the changes.
H2: **Top management** is positively related to the sustainability adoption in Malaysian hotel restaurants.	*Yes*	10/10 hotel managers agreed that the top management influences the decisions to adopt the sustainable practices in MHRs.
H3: **Cost consideration** is positively related to the sustainability adoption in Malaysian hotel restaurants.	*No*	5/10 hotel managers agreed that high cost is required in implementing the sustainable practices in HMRs.
H4: **Employee connectedness** is positively related to the sustainability adoption in Malaysian hotel restaurants.	*Yes*	9/10 hotel managers agreed that employee needs to be trained and well-equipped to perform the sustainable practices.

The organisational characteristics were examined via hypotheses H1, H2, H3, and H4. First, the investigation assessed the attitude towards change as well as the relationship to adopt sustainable practices in MHRs. Next, it was followed by top

management, cost consideration, and employee connectedness. Table 7.1 shows that hotel management is ready to change (H1) to sustainable practices; however, it can be clearly understood that the decisions will negatively impact restaurant operations. In other words, the quantitative findings discovered that there is no problem for the management to opt for sustainable practices. However, several considerations in adopting the practices were derived from the interviews which explained that the current restaurant setting, standard operation procedure, and staffs are not ready for the practices. Therefore, this further suggests that substantial adjustment needs to be conducted prior to the adoption of the practices in the restaurants operations.

Furthermore, the present study also identified that the top management (H2) influences the decisions to adopt sustainable practices in MHRs. Both analyses revealed similar results for this predictor regarding the influence on the intention to adopt sustainable practices in restaurant operations. In this case, all the hotel managers agreed that they have the authority to decide if the restaurant would opt for said practices. Table 7.1 indicates that cost consideration (H3) is the main barrier in adopting sustainable practices. Specifically, it is crucial to understand that the implementation of sustainable practices involves a high cost due to several important changes in terms of the current standard operation procedure, staff training, and the purchase of new equipment and machineries that are environmental friendly. In other words, high investment is needed if the hotel opts towards this direction. Apart from that, both analyses revealed that employee connectedness (H4) also influences the intention to adopt sustainable practices in restaurant operations. In this case, the hotel managers identified that the employees need to be trained and well-equipped in order to perform the practices because it is important for them to understand and familiarise themselves with the practices considering that they are directly involved in the operations.

7.2.2 Environmental Characteristics

The need for the hotel business to be more environmental friendly has influenced the industry to implement sustainable operations (Kasim, 2009; Bohdanowics, 2006). Accordingly, the environmental characteristics that were tested in this model managed to confirm that there are two predictors which significantly influence the adoption of MHRs as illustrated in Table 7.2.

Table 7.2: Environmental Characteristics Hypotheses: MHRs Sustainable Model

Hypotheses	Quantitative	Qualitative
H5: **Government laws and regulation** are positively related to the sustainability adoption in Malaysian hotel restaurants.	*Yes*	10/10 hotel managers agreed that there is no enforcement made by the government to implement the sustainable practices.
H6: **Green supply chains** are positively related to the sustainability adoption in Malaysian hotel restaurants.	*No*	9/10 hotel managers agreed that there are not fully using local supplies for their restaurant operations.
H7: **Competitive advantage** (trade pressure) is positively related to the sustainability adoption in Malaysian hotel restaurants.	*Predictor dropped*	Not Tested
H8: **Stakeholders' demands** (consumer and community) are positively related to the sustainability adoption in Malaysian hotel restaurants.	*Yes, Negatively Significant*	7/10 hotel managers agreed that they want to opt for sustainable operations but less demand from the stakeholders.

In this case, it can be clearly observed in Table 7.2 that there is a need for the Malaysian government to enforce (H5) the implementation of sustainable practices in hotel industry. Nicholls and Kang (2012) stated that hotel managers are aware of the impact of their industry towards the ecosystem, but the adoption has not been satisfactory. The findings obtained from both the quantitative and qualitative approaches managed to shed some lights on the issue. In regard to this matter, all of the managers agreed that no enforcement has been made by the government to implement sustainable practices. Therefore, there is a need for the Malaysian

government to emphasize the restriction on the laws and regulation in order to influence the adoption of MHRs.

On the other hand, green supply chains (H6) was found to have no influence on the adoption of MHRs. The interviews findings revealed that majority of the managers admitted that the supplies for restaurant operations are not fully obtained locally due to the quality and specification of the ingredients used for certain menu served at the hotel. Moreover, some ingredients might not have met the standard that might influence customer satisfaction. Meanwhile, competitive advantage (H7) was removed from the quantitative analyses because it was found to influence the whole model analyses due to the fitness and robust characteristics of the MHRs model (Hair et al., 1998). Hence, this predictor was also not tested during the interviews with the hotel managers. On another note, the stakeholders' demands (H8) were also examined and the findings revealed that it has a significant but will impact the adoptions. The stakeholders believe that the sustainability practices will result in extra cost. Overall, the hotel managers mentioned that they would opt for sustainable directions but no demand from the customer has caused the delay.

7.2.3   Perceived Innovation Characteristics

Changing the current hotel operations to sustainable operations is considered as an innovative approach (Rogers, 2003, pp229). In the case of the present study, a total of five predictors of PIC were tested; however, only three predictors were found to be significant but negatively influence the sustainable adoption of MHRs. Table 7.3 presents the findings of the hypotheses.

Table 7.3: Perceived Innovation Characteristics Hypotheses: MHRs Sustainable Model

Hypotheses	Quantitative	Qualitative
H9: Relative advantage *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	*No*	7/10 hotel managers agreed that there are less advantages in adopting the sustainable practices in restaurant operations.
H10: Complexity *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	*No*	7/10 hotel managers agreed that it is difficult to adopt sustainable practices in restaurant operations.
H11: Compatibility *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	*Yes, Negatively Significant*	5/10 hotel managers agreed that the current hotel operations is compatible with the sustainable practices but need to consider some aspects need to be considered.
H12: Trialability *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	*Yes, Negatively Significant*	7/10 hotel managers agreed that they want to try sustainable practices before fully adopting it.
H13: Observability *is positively related to the sustainability adoption in Malaysian hotel restaurants.*	*Yes*	6/10 hotel managers agreed that they want to observe sustainable practices before fully adopting it.

The findings from the survey and the interview revealed that relative advantage (H9) does not influence the intention to adopt sustainable practices among the managers because they believed that there are less advantages in adopting the practices in MHRs. A possible explanation to this may be due to the need of substantial adjustment on the whole operations system as well as high implementation cost. Apart from that, the findings also confirmed that complexity (H10) does not significantly influence the adoption. In this case, hotel managers argued that it is difficult to adopt sustainable practices; however, the guidelines and expertise provided by the government and association will act as the enabler for the adoption of sustainable practices in MHRs.

Moreover, compatibility (H11) was found to be significant but negatively impacts the adoption. In this case, half of the hotel managers identified that the current operations are compatible with sustainable practices, but it is also important to consider other aspects which include the implementation cost, staff training as well

as the changes in SOPs. On the other hand, trialability (H12) was also found to be significant and have an impact on the adoption determine to what extent the adoption will benefit them before fully adopting the practices. As a result, the hotel may not adopt the practices if there is a failure or consequences in the adoption. Finally, the last predictor of observability (H13) was also found to be significant and will provide a positive impact on the adoption. Similar with trialability, the managers believed that it is best to observe the adoption before fully implementing it into their operations.

The model was refined after the verification from quantitative analyses and supported by qualitative findings, and the final model of MHRs Sustainable Model is introduced in Figure 7.2.
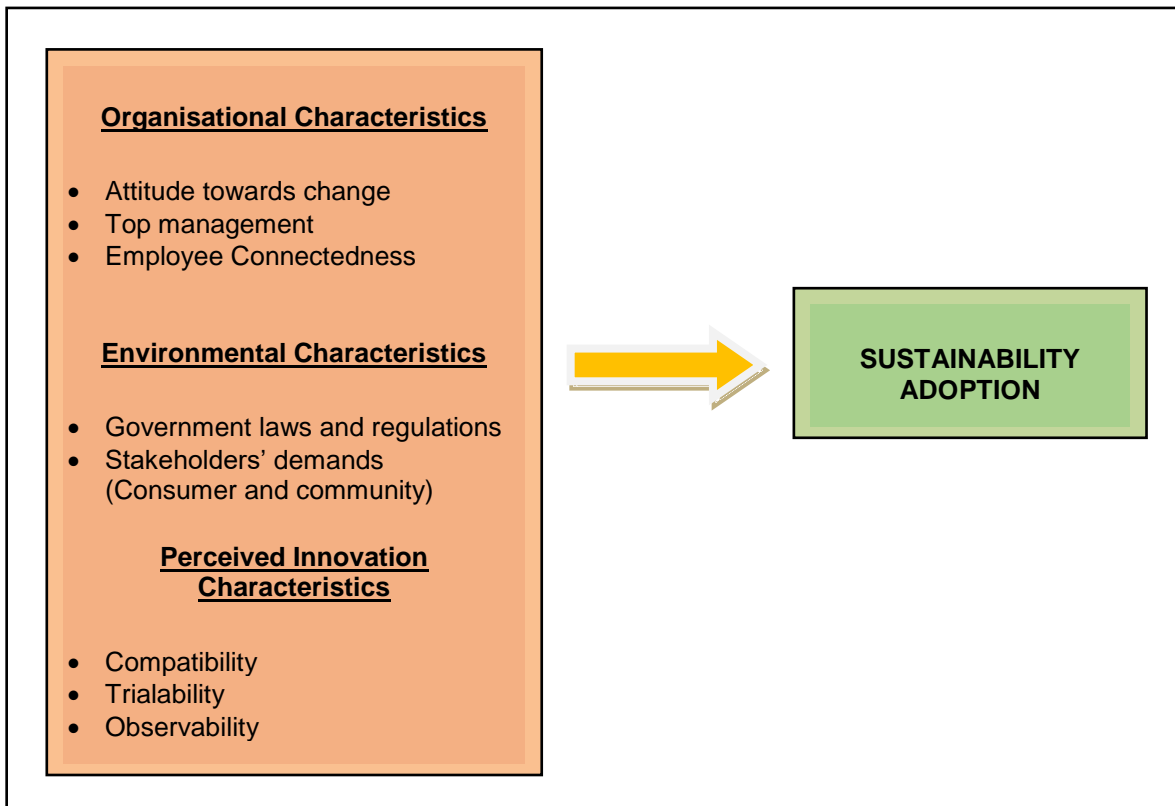

Figure 7.2: Final MHRs Sustainable Model.

7.3   Sustainability Practice Guidelines

The present study adapted the sustainability practices guidelines developed by Mensah and Blankson (2013) and statistically tested it among the hotel managers. However, there was no question asked to the hotel managers during the interview. The statistical findings revealed that majority of the hotel managers agreed that the followings are important in supporting the sustainable practices in MHRs as well as the whole hotel operations: (1) environmental education, (2) support for the host community, (3) conservation projects, (4) compliance with legislation and by-laws, (5) waste management, and (6) voluntary programmes. Table 7.4 shows the important mean of the guidelines variables.

Table 7.4: Sustainability Practice Guidelines.

Guidelines	Mean	Remarks
Environmental education	*3.99*	*Important*
Support for the host community	*4.06*	*Important*
Conservation projects	*3.98*	*Important*
Compliance with legislation and by-laws	*3.58*	*Important*
Waste management	*3.98*	*Important*
Voluntary programmes	*3.98*	*Important*

On another note, the quantitative findings implied that environmental education is a very important guideline for the hotel managers to adopt the practices in hotel operations. In other words, this is the main consideration that needs to be highlighted in the attempt of educating and increasing the level of awareness among stakeholders which include guest, staff, and society. Meanwhile, it should be noted that support for the host community was found to be important in implementing the sustainable practices. Apart from that, local community household can be improved, and good relationship can be built by providing job

opportunities to the local community, using local resources, purchasing from local suppliers, and promoting local culture.

Furthermore, imposed conservation project were found to be important in encouraging the implementation of sustainable practices in MHRs. Hence, this in turns will reduce the operations expenses when dealing with waste management, recycling, energy saving, and purchases. Moreover, the compliance with legislation and by-laws was revealed to be important by the hotel managers. As a result, this will influence hotel operations, especially the MHRs to operate more environmental friendly through the support and enforcement made by the government. On a similar note, waste management and being involved in voluntary programmes are considered as the important factors in the guidelines. In this case, a proper handling of the waste from the operations will enhance the hotel image as well as improve the hotel performance. Other than that, voluntarily auditing the sustainable practices in the operations will be able to increase the hotel's image, reputation, and competitive advantages.

7.4   Enablers to the Adoption

In the context of the current research, the quantitative findings managed to identify six barriers that influenced the sustainability adoption in MHRs. In addition, hotel managers revealed the potential enablers that can encourage the adoption of sustainable practices among the MHRs. Table 7.6 highlights the barriers and enablers to the adoption.

Table 7.5: Barriers and Enablers to Adoption

Barriers to Adoption	Enablers to Adoption
• *High implementation cost* • *Low customer demand* • *Absence of government enforcement* • *Lack of association guidelines* • *Limited expenses* • *Lack of public awareness*	• *Government support and guidelines* • *Incentives* • *Public awareness* • *Sustainability expertise*

More specifically, government support and guidelines were identified as the techniques that can encourage the environmental friendly practices in MHRs. In regard to this matter, it can be implied from the slow adoption of sustainable practices among Malaysia hotels that no enforcement has been taken to ensure that the practices are well executed. In other words, hotels in Malaysia will not be able to opt for sustainab1le hotel operations if the hotel has to come up with their own initiative to conduct the practices. In addition, the hotel managers also agreed that providing some incentives to the hotels that has implemented the practices is one way of influencing the adoption. As previously mentioned, high cost involved in changing to sustainable operation is one of the barrier to prevent the practices from being adopted. However, incentives that will be provided would change the managers' perception on future recurring cost.

On another note, one of the enablers to the adoption of sustainable practices refers to the increase of awareness among stakeholders. The qualitative findings revealed that sustainability awareness among Malaysian society are extremely low, which led the hotel operations to refuse from opting for sustainable operations. Additionally, providing an expert has also been identified as one of the enablers to influence the adoption of sustainable practices. In other words, the presence of an expert as a reference could assist the environmental friendly initiatives. Overall, it can be said that it is not easy to engage in sustainable operations, especially for Malaysian hotels that are new to sustainable practices.

7.5   Adoption Performances

The findings of the present study showed that hotel managers agreed with the notion that the adoption of sustainable practices in MHRs is able to improve hotel performances. Table 7.6 presents both the hypothesis and performances.

Table 7.6: Sustainability Adoption Performance hypothesis.

H14: Organisational performances are positively related to the sustainability adoption in MHRs.	
Quantitative	**Qualitative**
• *Improve hotel image* • *Increase customer satisfaction* • *Increase employee satisfaction* • *Increase profitability* • *Marketing advantage* • *Improve relationships with local community*	• *Saved cost* • *Increased hotel image* • *Increased profitability*

In regard to this matter, hotel managers agreed that adopting sustainability practices in restaurant operations will significantly improve hotel image and reputation, increase stakeholders' confidence in hotel operations, and enhance customer satisfaction. More importantly, imparting the environmental friendly practices in MHRs will encourage customers who are really concerned about the environment to come and visit. In addition, employee satisfaction can be increased when they are directly involved in the implementation of sustainable practices in MHRs. Therefore, sufficient training and coaching should be provided to the employees to enable them to perform said practices in the restaurants.

On another note, hotel managers also mentioned that adopting the sustainable practices will increase profitability considering that customers who are really concerned about the environment will come and visit the hotel. Apart from that, this allows the hotel to reduce their operational cost by introducing a waste management program, recycling activities, and energy saving methods. In addition,

hotel managers also agreed the adoption of sustainable practices can provide them with marketing advantage. In other words, the promotion of sustainable practices in the operations will enhance the hotel image and reputation, which consequently provide advantage in promoting the hotel. Other than that, the adoption is expected to enhance the relationship with the local community by taking care of the environmental for the benefits of the well-being.

The evolution and the changes in the MHRs model were confirmed and verified throughout the analyses from the quantitative findings, which was then supported by the qualitative findings. Figure 7.3 presents the finalized MHRs Sustainable Model.
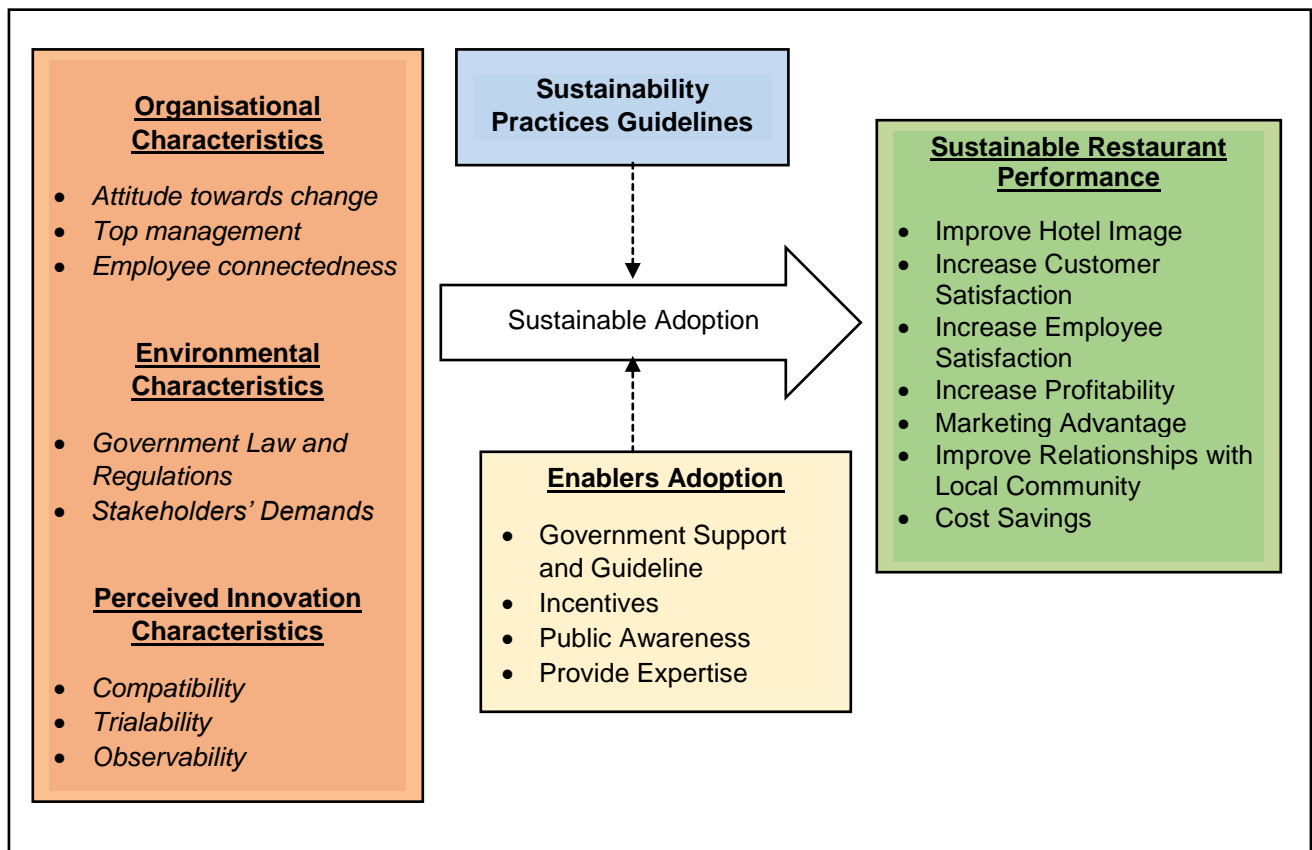

Figure 7.3: MHRs Sustainable Model based on Key Findings of the Study.

7.6   Summary of MHRs Sustainable Model

The research background discussed in Chapter Two recognised the need for MHRs to have a sustainable framework or model that can influence the adoption of sustainable practices in Malaysian hotel industry. Accordingly, a conceptual MHRs sustainable model was proposed in Chapter 3 based on the literature review. The conceptual model aimed to facilitate MHRs in transitioning from traditional practices to sustainability practices. In the case of the present study, a total of 169 survey questionnaires were distributed between July-October 2017 in order to test, refine, and improve this conceptual model. This was followed by an in-depth semi-structured interview performed with ten hotel managers of 3-5 star rated hotels in Malaysia.

The original model was refined and developed in line with the findings derived from the quantitative analyses and further supported by the qualitative findings. The findings revealed that there are eight predictors that influence the adoption of sustainability practices in MHRs which are described as follows: (1) attitude towards change, (2) top management, (3) employee connectedness, (4) government law and regulations, (5) stakeholders demands, (6) compatibility, (7) trialability, and (8) observability.

In addition, this model included the sustainability practices guidelines as the means of information guidelines in adopting the practices. The qualitative findings also revealed the barriers of the adoption which allows this model to enclose the enablers to the adoption with the aim of increasing the adoption rate among MHRs. The enablers include the followings: (1) government support and guidelines, (2) incentives, (3) public awareness, and (4) provide expertise. Finally, the model was able to confirm the performances in the adoption of sustainable practices in MHRs through the findings derived from both the quantitative and qualitative approaches. The following chapter presents the conclusion and recommendations of the present study.

Chapter 8

8.1 Conclusions and Recommendations

This chapter summarises the key findings and recommendations arising from them in the following six sections: (1) Discussion of the research design and research questions identified in Chapter 1 (2) An overview of the study as a whole; (3) Study result and implications; (4) Novelty and contributions ; (5) Limitations of the study; (6) Recommendations for further study.

8.2 Research Design

This research was designed to explore the Malaysian hotel restaurants (MHRs) and their intention to adopt the sustainability practices to improve their overall competitiveness and performance. This study also aims to assess the effort through the implementation of sustainable practices by developing a new model to assist MHRs in the application of sustainability practices. While previous studies indicated that there was on slow adoption of sustainability practices in Malaysian hotels, there is no study introduces a model that allows the hotel managers to make a transition from current traditional practices to a more sustainable operations in hotel restaurants.

In order to develop an efficient way to progress this study and develop a new model, this research sought to answer the following research questions:

1. What makes Malaysian hotel restaurants (MHR) adopt sustainable practices?
    - How sustainable are MHRs?
    - To what extent do MHRs adopt sustainability practices?

- To what extent is the adoption of sustainability practices in MHRs influenced by organisational, environmental and innovation characteristics?

2. Is there a noticeable difference between hotel restaurants that have already implemented sustainability practices compared to hotel restaurants that have not?

- Do MHRs need to adopt sustainability practices to improve their overall organisational and operational performance?

8.3   Overview of the Study

This study investigates the present status (i.e. state-of-play) of sustainable Malaysian hotel restaurants (MHR) and their intention to adopt sustainability practices in order to improve their overall sustainability, organisational competitiveness and performance. The research rationale of this study is based on the premise that only 10 out of 1,400 hotel properties in Malaysia have been certified as a 'Green Hotel'. The study has found that the gradual, if not, slow uptake (i.e. adoption) of environmentally friendly initiatives by the Malaysian hotel industry has been inadequate, even though the industry has known about the excessive impact caused by hotel operations on the environment. Intensive research was undertaken in Chapter 2 followed by a more rigorous literature review in Chapter 3 which discussed and argued further on sustainability adoption and performance relative to adopting sustainability practices.

Innovation theory by Rogers (1962) was used as the underpinning theory in the context of this study. Five attributes of Perceived Innovation Characteristics (PIC) from Rogers (2003) were used as one of the variables in this study, namely; relative advantage, complexity, compatibility, trialability and observability. Two more variables were adapted which included; organisational and environmental characteristics. The Organisational Characteristics (OC) were used to identify to what extent does the attitude towards change, top management, cost considerations and employee connectedness influence the intention to adopt

sustainable practices in hotel restaurants. Environmental Characteristics (EC) consisting of government law and regulations, green supply chains, competitive advantage and stakeholder demand were also tested in this study.

While there have been a number of studies examining sustainability within the hospitality industry, most have simply focused on the room division department while little evidence suggests any focus by researchers on hotel restaurant operations. However, limited research on sustainability practices was foremost in the area of commercial restaurants which are afforded with relatively more straight-forward management systems.

The research of this study was conducted in Malaysia which is considered to be one of the first studies of its type exploring the adoption of sustainability practices in hotel restaurant operations. This study has (1) critically analysed and gained valuable insight into the sustainable operations of MHR and their present status, (2) evaluated how PIC, OC and EC influence the decision to adopt sustainability practices in MHRs, (3) evaluated to what extent sustainability adoption practices in MHRs improved organisational and operational performance, (4) developed a new and improved sustainability framework to facilitate MHRs to transition from traditional practices to more sustainable practices. Furthermore, 14 hypotheses were developed to examine the various relationships with regards to sustainability adoption in MHRs.

The study applied philosophical paradigms where mixed method approaches were employed. The methodology used in this study enabled the researcher to collect data via surveys and face-to-face interviews with hotel managers. This afforded the researcher with the opportunity to understand the issues and challenges in the industry towards the adoption of sustainability practices, specifically in MHRs. Next, the discussion of research designs, population and sampling frame, were highlighted and discussed in Chapter 4. Chapter 5 reported the quantitative findings of this study and the fitness of the conceptual model was evaluated.

Statistical analyses of descriptive analysis and binary logistic regression were performed and discussed to achieve the most significant findings. The qualitative findings of this study were coded and categorising for the analytic process and reported and discussed in Chapter 6. The MHRs sustainability model were refined and verified through the key findings of this study and presented in Chapter 7.

8.4   Study Result and Implications

The initial findings of this study identified the status of sustainable operations in MHRs (i.e. state-of-play). Four practices were initially implemented by MHRs in the early stages of environmental practices, namely; water and energy savings, waste management and using local suppliers. The qualitative approached found that six barriers were causing slow adoption in MHRs and the hotel industry towards the implementation of sustainable (environmentally friendly) practices. The barriers included; high implementation costs, low customer demand, the absence of government enforcement, lack of association guidelines, shortage of expertise and lack of public awareness. However, the hotel managers also provided several suggestions where the implementation of said practices could be successfully undertaken. These included suggestions or enablers for adoption, namely; government support and guidelines, giving incentives, increasing public awareness, and providing sustainability experts. These enablers imply that it is possible for the MHR to adopt sustainability practices.

The main highlight of this study relates to the second finding which identifies how OC, EC and PIC influence the decision to adopt sustainability practices in MHRs. Thirteen attributes were developed from these characteristics. However, only four attributes were found to influence sustainable adoption in MHRs significantly. This result confirmed the proposed model for the sustainability adoption framework that will be used by MHRs. Next, the third finding of the study confirmed by the hotel managers was that sustainability adoption in MHRs would lead to the improvement in overall hotel operational performance. Adopting sustainability practices in MHRs

will improve the hotel image and reputation, increase customer and employee satisfaction, increase profitability, provide marketing advantages, improve relationships with the local community and save operational costs. The final highlight of this study was the sustainability adoption framework for MHR which will facilitate the adoption of environmentally friendly practices in MHR operations.

This study also highlighted that the practice and concept of sustainability should be the primary focus of the Malaysian tourism and hospitality industry (THI). The impressive expansion of the Malaysian THI has recently demonstrated the urgency of the industry to respond to this issue. Adopting sustainability practices in MHRs could be one of the options to assist in this area. The intention to adopt sustainability practices among hotel managers has helped in narrowing down and closing many of the gaps in this area by exposing the barriers and the enablers of adoption and the sustainability framework to facilitate adoption and increase overall hotel organisational and operational performance.

8.5 Novelty and Contribution

Recent studies have shown that sustainability practices adopted in the hospitality sector are limited (Chung and Parker, 2010; Kim et al., 2017). Therefore the findings of this study will help to provide a better theoretical comprehension academically regarding sustainability practices in the hospitality industry, specifically in hotel restaurant operations. In the context of sustainable practices in Malaysia, this research has identified how, as to what level or stage of sustainability the MHRs operations actually are (i.e. state-of-play). Some hotels in Malaysia have adopted sustainability practices independently, under their own initiatives. However, these hotels are only implementing basic practices such as water and energy conservation (i.e. savings), waste management and using local suppliers. The findings have further revealed the adoption barriers in MHRs by providing explanations as to why there were only 10 hotels since 2016, certified as a 'Green Hotel' in Malaysia (Tourism Malaysia). The barriers to adoption include;

high implementation costs, low customer demand, the absence of government enforcement, lack of association guidelines, shortage of expertise and lack of public awareness.

This study further contributes to the understanding as to which of the predictors will influence the intention to adopt sustainability practices among Malaysian hotel managers. Indeed, it was found that this was significantly influenced by organisational attitude towards change, top management, employee connectedness, government law and regulations, stakeholder demands, compatibility, trialability and observability. Accordingly, these results highlight the importance of the predictors in influencing sustainability adoption in MHRs and providing valuable insights to both the intention and decision to adopt sustainability practices. However, this heavily relies on gaining government support and guidelines, incentives, community and social awareness, and experts to assist as mentioned.

One of the key objectives of this study has been to provide recommendations to government, related industry associations and non-profit agencies (NGOs on how to increase the adoption of environmentally friendly (green) practices in the Malaysian hospitality industry, especially in MHRs. To achieve this objective, the Malaysian government should help to provide their complete support through the development of policies and guidelines.

8.6   Limitations of the Study

This study has successfully explored the current position and status of MHRs regarding the level of sustainability and the challenges faced by the industry to adopt said practices. This included gaining valuable insight into the hotel industry by interacting with hotel managers to understand their intentions to adopt sustainability practices and to improve overall sustainability, organisational

competitiveness and performance. Nevertheless, several limitations were observed in conducting this study.

Firstly, only 169 hotels participated in the study from a total population of 629, 3-5 star rated hotels in Malaysia. The survey initially targeted 242 hotel managers to participate in this survey (Hair et al., 1998). Within 169 hotels, there were 85 from 3 star rated, 61 from 4 star rated and 23 were from 5 star rated. The proportion of these hotels was not balanced even though it can be used to generalise the findings of this study. It could give more valuable findings if the present study able to collect sufficient or equal numbers of respondents from each of the 3-5 star rated hotels. Having sufficient or more respondents able to conduct further analyses to be executed to derive the most important insights for quantitative understanding.

The second limitation is that only 10 informants agreed to participate in the second stage of the data collection process, by participating in semi-structured (in-depth) interviews. Therefore, the findings from conducting the ten interviews were used to generalise the whole MHR sustainability issue in Malaysia. More informants should be obtained in the future to explore further the issues. Rich data should be obtained to explore further the sustainability practices in MHR. Therefore, a large number of participants (at least 30 to 60) are needed to obtain the richness data (Morse, 1994). Recruiting more informants could give a meaningful understanding of the sustainability issue in qualitatively.

The third limitation encountered is regarding the characteristics used to influence adoption. Only three characteristics were used to test adoption while there could be further characteristics that could have been included. Furthermore, four predictors from the characteristics adopted were found negatively significant. These predictors are proven significant by the model, but they are barriers instead of facilitators. Malaysia is still new to sustainability practices, so by using other variables or characteristics can provide more information on sustainability and can

be used as a source of reference. Therefore, by exploring other characteristics as predictors could give more insights about the sustainability practices in MHR.

The usage of 5-point Likert scales was also has identified to be the fourth limitation of this present study. As justified by Champney and Marshall (1939), under favourable rating conditions the practice of limiting rating scales to 5-point may often give inexcusable results. Increase the value of the scale could influence the reliability of the scales to be increased (Champney and Marshall, 1939; Ferguson, 1941; Jahoda, Deutsch and Cook, 1951). This could interpret the results in more sophisticated ways through the quantitative approach. Moreover, applying the diffusion of innovation theory in this study was identified as the fifth limitation where it was only highlighting the innovation happened in MHRs. This theory only touches on the innovations that apply when adopting sustainability practices and has limited the findings into the innovation context. Meanwhile, there are other theories could be used as the underpinning to look into the sustainable adoption in MHRs. By using other theory could give more insights about the sustainability issue in different perspectives.

Nevertheless, it is hoped that the measures undertaken to reduce the limitations and perceived drawbacks while conducting this study do not adversely affect the value and contribution of this research. The researcher believes that the scope of this study regarding the sample size (3-5 star rated hotel managers) and field of study (intention to adopt sustainability practices) will allow the findings to be accepted.

8.7   Recommendations for Further Study

Recommendations for further study will target the hotel industry with a particular focus on the profiles of hotels. The first recommendation is to examine the diverse types of hotel ownership, namely; independently owned, chain owned and franchised owned hotel properties. There were significant differences observed

between the sustainability practices regarding hotel ownership types and with their SOPs to implement sustainability practices. Also, each star-rated hotel will undoubtedly have their own management structure, budgeting and SOPs. Besides that, it is recommended to explore further the organisational performance after practising the sustainable practices between chain hotels and local hotels. This could give a glimpse to the relatively new Malaysian hotels in these sustainability practices regarding performance in adopting the sustainability practices in operations. Further studies should investigate where do the revenues go either it will go to the country of origins or to the local economy. It could give an insight on how much the hotel industry contributed to the growth of the Malaysian economy. The growth in the nation economy will influence the hotel industry in Malaysia to embark in this sustainable journey.

Secondly, it is proposed that further work be undertaken concentrating on those regions where the hotels are located. It is believed that the locations where the hotels are located will also influence the adoption of sustainability (green) practices in MHR operations. For example, a hotel that is located in an urban or suburban area is assumed to have its own SOPs according to the operational impact on consumers and the local community. In addition, further study should emphasis on the four predictors; attitude towards change, stakeholders' demands, compatibility and trialability, should there be any changes or new findings in the forthcoming studies. Finally, it is recommended to adopt a qualitative approach, also incorporating in-depth interviews to obtain the information, analyse the results and produce the findings to explore the adoption of sustainability practices further in MHRs in Malaysia.

8.8 Concluding Remarks

Malaysian hotels have to change their current practices. Chen et al. (2009) claimed uncontrolled development in hospitality industry gave significant impacts on the environment and societies. Indeed, according to Rezaee and Choi (2016, pp35) *"business sustainability affects many aspects of the hospitality industry, from creating long-term financial performance by generating sustainable revenues and reducing operating costs and maximizing RevPAR (revenue per available room), to ensuring customer satisfaction, a safe work environment and fulfilling social and environmental responsibilities".*

Innovatively changing the traditional practices to sustainable practices is a good move. The hospitality industry can remain to operate competitively without harming the environment and also increase the organisational performances.

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APPENDICES

1.1 Consent Form (Survey)

UNIVERSITY OF
E X ETER

STAGE 1: SURVEY
QUESTIONNAIRE

University of Exeter Good Practice in the Conduct of Research
http://www.exeter.ac.uk/research/toolkit/throughout/goodpractice/

THE BUSINESS SCHOOL

Participant Consent Form

Researcher's name JULIANA ANAK LANGGAT

The researcher named above has briefed me to my satisfaction on the research for which I have volunteered. I understand that I have the right to withdraw from the research at any point, by informing the researcher of my wishes. I also understand that my rights to anonymity and confidentiality will be respected.

☐ I agree to fill in the survey questionnaire.

☐ I understand that my data, once analysed and anonymised, may be published in the researcher's doctoral thesis, and perhaps in her other academic publications (eg. academic journal articles).

Signature of participant   ………………………………………………………………

Date   …………………………………………………………

This form will be produced in duplicate. One copy should be retained by the participant and the other by the researcher.

1.2 Consent Form (Interview)

UNIVERSITY OF
EXETER

STAGE 2:

University of Exeter Good Practice in the Conduct of Research
http://www.exeter.ac.uk/research/toolkit/throughout/goodpractice/

THE BUSINESS SCHOOL

Participant Consent Form

Researcher's name JULIANA ANAK LANGGAT

The researcher named above has briefed me to my satisfaction on the research for which I have volunteered. I understand that I have the right to withdraw from the research at any point, by informing the researcher of my wishes. I also understand that my rights to anonymity and confidentiality will be respected.

☐ I agree to have the interview/discussion recorded with voice recorder device.

☐ I understand that my data, once analysed and anonymised, may be published in the researcher's doctoral thesis, and perhaps in her other academic publications (eg. academic journal articles).

Signature of participant   ………………………………………………………………

Date   ………………………………………………………………

This form will be produced in duplicate. One copy should be retained by the participant and the other by the researcher.

1.3 Survey Questionnaire

SUSTAINABILITY ADOPTION IN HOTEL
RESTAURANTS: EVIDENCE FROM MALAYSIA

SECTION A: PROPERTY PROFILE

1. **State:**

   ☐ Sabah
   ☐ Sarawak
   ☐ Labuan
   ☐ Johor
   ☐ Melaka
   ☐ Negeri Sembilan
   ☐ Selangor
   ☐ Kuala Lumpur
   ☐ Pahang
   ☐ Perak
   ☐ Penang
   ☐ Kedah
   ☐ Perlis
   ☐ Kelantan
   ☐ Terengganu

2. **Location**

   ☐ Urban
   ☐ Suburban
   ☐ Rural

3. **Property type:**
   ☐ 3 star hotel/resort
   ☐ 4 star hotel/resort
   ☐ 5 star hotel/resort

4. **Property size**

   ☐ 1-10 rooms (small)
   ☐ 11-50 rooms (medium)
   ☐ 51+ rooms (large)

5. **Number of employees**

   ☐ 1-10 employees
   ☐ 11-30 employees
   ☐ 31 + employees

6. **Years in operation**

   ☐ 0-10 years
   ☐ 11-30 years
   ☐ 31 + years

7. **Business types**

   ☐ Chain affiliated
   ☐ Independently owned/operated

8. **Average customer mix**
   ☐ Business
   ☐ Leisure

9**. Do you have an intention to adopt sustainability practices in your hotel's restaurant?**

☐ No
☐ Yes

10. **Hotel Cop/Stamp:**

   _____

SECTION B: ORGANISATIONAL CHARACTERISTICS

Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree	
1	2	3	4	5	

No.	Item	Scale				
	Attitude towards change (Level of risk taking)					
1	Top managers in this hotel believe that higher financial risks are worth taking for higher rewards.	1	2	3	4	5
2	Top managers in this hotel accept occasional new product failure as being normal.	1	2	3	4	5
3	Top managers in this hotel like to take big financial risks.	1	2	3	4	5
4	Top managers in this hotel have encourage the development of innovative strategies, knowing well that some will fail.	1	2	3	4	5
5	Top managers in this hotel like to "play it safe."	1	2	3	4	5
6	Top managers in this hotel like to implement plans only if they are very certain that they will work.	1	2	3	4	5
	Top Management					
7	Concerned about the preservation of the environment.	1	2	3	4	5
8	Consider environment preservation to be an important aspect in our life.	1	2	3	4	5
9	Consider myself educated about environmental issues.	1	2	3	4	5
10	Aware of a programme called Pollution Prevention.	1	2	3	4	5
11	Would consider establishing an environmental management system (EMS) at our premise.	1	2	3	4	5
12	Would consider implementation of environmentally friendly practices to be in the top-three priority list in our company policy.	1	2	3	4	5
	Cost Consideration					
13	Would consider investing in an environmental management system (EMS) at this restaurant.	1	2	3	4	5
14	Would consider purchasing higher-priced organic product as ingredients or items at this restaurant.	1	2	3	4	5
15	Would consider implementing EMS even if I find it too expensive for this restaurant.	1	2	3	4	5
16	Believe implementing EMS would be beneficial economically in the long run.	1	2	3	4	5
17	Would only consider implementing EMS when defiance would cost me a penalty.	1	2	3	4	5

18	Would consider spending on advertising to promote the restaurant if I decide to be environmentally friendly.	1	2	3	4	5
	Employee Connectedness					
19	The training at this establishment includes environmental awareness.	1	2	3	4	5
20	Include environmental awareness in the training programme.	1	2	3	4	5
21	Would reward employees of they contribute ideas that elevate the practices of friendly practices.	1	2	3	4	5
22	Would reward employees who are committed to elevate the practices of environmentally acts.	1	2	3	4	5
23	Would encourage employees' involvement in the process of establishing EMS.	1	2	3	4	5

SECTION C: ENVIRONMENTAL CHARACTERISTICS

Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

No.	Item	Scale				
	Government law and regulations					
1	Aware of the laws and regulations of the Environment Act.	1	2	3	4	5
2	Feel restricted by the laws and regulations of the Environment Act.	1	2	3	4	5
3	Feel that there is enforcement of the laws and regulations of the Environment Act.	1	2	3	4	5
4	Feel that the local authorities are concerned about the environment.	1	2	3	4	5
5	Feel that the federal law is concerned about the environment.	1	2	3	4	5
6	Feel that the media is reflects a government that is concerned about the environment.	1	2	3	4	5
	Green supply chains					
7	Select suppliers that practice green management.	1	2	3	4	5
8	Would consider changing my 'non-green' suppliers to green suppliers.	1	2	3	4	5
9	Would educate my suppliers on the importance of being green.	1	2	3	4	5
10	There is an abundance of green suppliers to choose them.	1	2	3	4	5
	Competitive Advantage (Trade pressure)					
11	Feel that being a green restaurant will give an added advantage	1	2	3	4	5

	over our competitors.					
12	Feel that there is a need to be green innovator in the restaurant industry.	1	2	3	4	5
13	Feel that being a green restaurant will increase the revenue of this restaurant.	1	2	3	4	5
14	Being environmentally friendly is important in this industry.	1	2	3	4	5
	Stakeholder's demands (Consumer and community)					
15	Our guest demand that we run an environmentally friendly restaurant.	1	2	3	4	5
16	The community that we are based in demands that we run an environmentally friendly restaurant.	1	2	3	4	5
17	I feel that the community that we are in is generally an environmentally aware community.	1	2	3	4	5

SECTION D: PERCEIVED INNOVATION CHARACTERISTICS

Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

No.	Item	Scale				
	Relative Advantages					
1	It give greater control in hotel restaurant operations.	1	2	3	4	5
2	It improves the service quality in hotel restaurant operations.	1	2	3	4	5
3	It improves the productivity in hotel restaurant operations.	1	2	3	4	5
4	It easier to do the operation in the hotel restaurant.	1	2	3	4	5
5	It would help to accomplish tasks more quickly the hotel restaurant.	1	2	3	4	5
6	It would improve the quality of the operation the hotel restaurant.	1	2	3	4	5
7	It would enhance the effectiveness of the green practices in the hotel restaurant.	1	2	3	4	5
8	It resulted in dramatic increase in profit margin.	1	2	3	4	5
9	It resulted in dramatic increases in market share.	1	2	3	4	5
10	It resulted in dramatic improvement in overall financial performance.	1	2	3	4	5
11	It resulted in very extensive positive change in the cost position relative to key competitors	1	2	3	4	5
12	It resulted in much stronger reputation with customers.	1	2	3	4	5
13	It resulted in very extensive improvements in the ability to compete	1	2	3	4	5

	in international markets					
	Complexity					
14	It would differentiated our service and product from competitors.	1	2	3	4	5
15	It is technically complex.	1	2	3	4	5
16	It is easy to adopt.	1	2	3	4	5
17	It need high investment.	1	2	3	4	5
18	It require long-term commitment	1	2	3	4	5
19	It require large consequential adjustment	1	2	3	4	5
20	It has large potential effect on profitability	1	2	3	4	5
	Compatibility					
21	It fits with all aspects of our restaurant operation.	1	2	3	4	5
22	It fits into our restaurant operation routine.	1	2	3	4	5
23	It fits with the equipment and technologies that we have in restaurant operation.	1	2	3	4	5
	Trialability					
24	I would adopt the sustainability practices on a trial basis long enough to see what it would benefits to.	1	2	3	4	5
25	Before deciding to adopt sustainability, I would be able to properly try it out.	1	2	3	4	5
	Observability					
26	The usefulness of the adopting sustainability is highly observable.	1	2	3	4	5
27	The advantages of adopting sustainability can be noticed by others.	1	2	3	4	5
28	The excitement of adopting sustainability can be noticed by others.	1	2	3	4	5

SECTION E: OVERALL SUSTAINABILITY PERFORMANCE

Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

No.	Item	Scale				
1	Improve the image of the hotel.	1	2	3	4	5
2	Improve relationships with the local community.	1	2	3	4	5
3	Give us a marketing advantage over our competitors.	1	2	3	4	5
4	Increase profitability.	1	2	3	4	5
5	Increase customer satisfaction.	1	2	3	4	5
6	Increase employee satisfaction.	1	2	3	4	5

SECTION F: SUSTAINABILITY ENVIRONMENT INDICATORS

Not at all important	Slightly Important	Important	Fairly Important	Very Important
1	2	3	4	5

No.	Item	Scale				
	Environmental education					
1	Guests' education on eco-friendly practices.	1	2	3	4	5
2	Staff educations on eco-friendly practices.	1	2	3	4	5
3	Guests' information about hotel's environmental activities/policies.	1	2	3	4	5
4	Enforcement of no-smoking in public areas.	1	2	3	4	5
5	Provision of accurate information to guests.	1	2	3	4	5
6	Use of ozone-friendly detergents and equipment.	1	2	3	4	5
7	Measures to ensure sanitation and food safety.	1	2	3	4	5
8	Production of brochures and publicity material using recycled paper.	1	2	3	4	5
9	Modification of operations to reduce environmental impacts.	1	2	3	4	5
	Support for host community					
10	Employment of people from the local community.	1	2	3	4	5
11	Use of local materials.	1	2	3	4	5
12	Promotion of the local traditional culture.	1	2	3	4	5
13	Purchases from local sources.	1	2	3	4	5
14	Improvement of lives of local residents by ploughing back profit.	1	2	3	4	5

	Conservation projects					
15	Use of energy-efficient equipment and products.	1	2	3	4	5
16	Installation of water-efficient devices and equipment.	1	2	3	4	5
17	Prescription of environmental standards for suppliers.	1	2	3	4	5
18	Purchase of eco-friendly materials and/or detergents.	1	2	3	4	5
19	Cash or kind of contribution towards conservation project.	1	2	3	4	5
20	Purchase in bulk.	1	2	3	4	5
	Compliance with legislation and bye-laws					
21	Submission of environmental impact statement (EIS) to the EPA.	1	2	3	4	5
22	Acquisition of environmental permit from the EPA.	1	2	3	4	5
23	Submission of environmental management programme (EMO) to the EPA.	1	2	3	4	5
24	Acquisition of health permit from the AMA.	1	2	3	4	5
25	Implementation of a linen and towel-reuse programme.	1	2	3	4	5
	Waste management					
26	Composting of waste.	1	2	3	4	5
27	Implementation of recycling program.	1	2	3	4	5
28	Sorting of waste into paper, glass, plastic, etc.	1	2	3	4	5
29	Reuse of papers, cans, bottles and plastic.	1	2	3	4	5
	Voluntary programmes					
30	Acquisition of an ISO 14001 certification.	1	2	3	4	5
31	ISO 14010 or environmental audits by external organizations.	1	2	3	4	5
32	Eco-labelling or certification.	1	2	3	4	5
33	Periodic environmental audit.	1	2	3	4	5

Second Stage Data Collection Invitation

The main highlight of this research is to develop new and better sustainable framework that will facilitate Malaysian's hotel restaurants from traditional to more sustainable practices. Therefore, we would like to seek the co-operation from the participants to contribute to the development of the framework by filling in the box below. The second stage will be conducted by interview and the session will be recorded with voice recorder device. However, the information given by each respondents is confidential and will remain anonymous. The information will be analysed and the anonymised data will be published in journal article.

☐   **Yes, I am agree to participate in the second stage of the research.**

☐   **No, I am not agree to participate in the second stage of the research.**

1.4   In-depth Semi-structural Interview Questions

SECOND STAGE: QUALITATIVE METHOD - INTERVIEW
VOICE RECORDED INTERVIEW

Note: Please make sure you have signed and acknowledged the Consent Form attached before the interview started.

No.	Item
1.	What do you think about current sustainability practices in Malaysia hotel industry?
2.	Do your restaurants/FandB department practicing the sustainability practices? If your hotel has not practicing the practices, will your hotel consider adopting sustainability practices? OR • If your hotel has started the practices, what are the practices have you implemented? • What makes the management to adopt sustainability/green practices? • Do you think that it is a risk to adopt the practices in your restaurant? • Do you think you will perform better if you adopt sustainability practices? • Will it fit with your restaurant operation and routine?
3.	Do you think that costing will be the main issue in adopting sustainability practices? • Will/ have you invest in the environmental management system? • Will/ have you purchase organic and local products/ produces/green supply chains?
4.	Do you think, employees should be trained and involved in sustainability practices? • What kind of training should be conducted to the employees?
5.	To what extend does Malaysia Government enforcement towards sustainability practices by the hotel in this country? • ☐ Are there any bodies monitored the sustainability practices in Malaysian hotel? • ☐ It is easy to practice sustainability in Malaysia? • ☐ What kinds of support do the hotel industry received from the Malaysia Government; Tourism Malaysia and Malaysia Association of Hotel (MAH)?
6.	Do you think that by adopting sustainability practices in your restaurant it will give the competitive advantage of your hotel? • What do you think the advantages/benefits will you received when you adopt the practices in your restaurant? • Will it increase your restaurant operation revenue and the hotel revenue?
7.	Do you think your stakeholder's (consumer and community) care if your restaurant adopting the practices? • Will you give it a try first before you really adopt the practices?

8.	Do you think innovation is important in hotel industry? • Do you think by adopting sustainability practices in your restaurant it is an innovation in an operation? • What do you think about the relative advantages in applying innovation such as adopting the green practices in your restaurant? • What are the complexity will you face when you adopt the practices? • Do you think it is compatible with your hotel operation? • Or will you try and observe the practices first before deciding the practices in your restaurant?
9.	What do you think are the restaurant performances if you adopting sustainability practices?

Note: If you would like to receive the results of this research please thick this box.