



**UNIVERSITI PUTRA MALAYSIA**

***INFLUENCE OF ENVIRONMENTAL VALUE, ENVIRONMENT  
LEADERSHIP, STAKEHOLDERS' PARTICIPATIONS ON GREEN  
SERVICE DELIVERY AND SUSTAINABILITY PERFORMANCE AMONG  
CASUAL DINING RESTAURANTS***

**ROSINI BINTI NAWANG MUSTAPEN**

**SPE 2021 1**



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AND SUSTAINABILITY PERFORMANCE AMONG CASUAL DINING  
RESTAURANTS**

By

**ROSINI BINTI NAWANG MUSTAPEN**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra  
Malaysia, in Fulfilment of the Requirements for the Degree of  
Doctor of Philosophy**

**May 2021**

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in  
fulfilment of the requirement for the degree of Doctor of Philosophy

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**May 2021**

**Chairman : Azmawani Abd Rahman, PhD**  
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Previous literature showed that greening efforts as a sustainability practice has been extensively deliberated to explore and identify its relationship with sustainability performance. Despite extensive prior studies, the implementation of sustainability practices remains arguable in business operation. Some scholars suggested that accomplishment in sustainability practices are dependent on a few factors such as environmental value, environmental leadership, and stakeholder participation. However, from the perspective of the top management, mainly the owners of casual dining restaurants, these practices remain inadequate in understanding the green service delivery process. Also, top management plays a crucial role in implementing decisions in sustainability performance through their commitment to the green service delivery efforts.

Hence, this study is expected to provide an understanding of the green service delivery process by predicting its influencing factors, and examining the effects of the green service delivery process on sustainability performance as well as examining the mediating effect of its process variable. This study used natural-resources-based view (NRBV) theory as its underpinning theory, supported by value-belief-norm, upper echelons theory and stakeholder theory to explain the influencing factors and mediating effects of the green service delivery process. Data was collected over a period of six months from the top management of independent casual dining restaurants, namely, the owner, CEO or general manager. These restaurants are not affiliated with any national brand nor are they in any franchise business arrangement. A convenience sampling technique was utilized to hand-deliver five hundred questionnaires. Of the total 328 questionnaires returned, three hundred and eleven questionnaires were useable.

SmartPLS 3.0 was used to analyse the data and test the study hypotheses. Results showed that environmental value, environmental leadership and stakeholder participation are significantly positive on the green services delivery process. Results also showed that the green services delivery process mediated the relationship between environmental value, environmental leadership and stakeholder participation and sustainability performance.

The findings further showed that the greening service effort through the green service delivery process significantly affected sustainability performance. Hence, these findings are important as a turning point for restaurateurs in the casual dining restaurant which they can apply in their green service delivery process. Furthermore, the mediating effect of the green services delivery process between environmental value, environmental leadership and stakeholder participation and sustainability performance showed a high need to promote robust greening efforts to enhance understanding of sustainable development among top management who are responsible in making crucial decisions in their business operations.

Therefore, the theoretical and practical contributions of this study are essential given the actual results of the model. Also, the theoretical contributions extended the present collaborative model. Finally, this study provided practical suggestions on how green service delivery can influence sustainability performance among casual dining restaurants and showed how businesses can apply sustainability practices for better performance.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia  
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**PENGARUH NILAI ALAM SEKITAR, KEPEMIMPINAN ALAM SEKITAR,  
PENGLIBATAN PIHAK BERKEPENTINGAN TERHADAP PENYAMPAIAN  
PERKHIDMATAN HIJAU DAN PRESTASI KELESTARIAN DALAM  
KALANGAN RESTORAN KASUAL**

Oleh

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**Mei 2021**

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Usaha kelestarian hijau sebagai amalan kemampanan telah dibincangkan secara meluas pada kajian yang lepas untuk meneroka dan mengenal pasti prestasi kelestarian. Walaupun banyak kajian lepas yang telah dilakukan, pelaksanaan amalan hijau dalam operasi perniagaan masih dipertikaikan. Sesetengah sarjana mencadangkan bahawa pencapaian dalam amalan kelestarian adalah bergantung pada beberapa faktor seperti nilai alam sekitar, kepemimpinan alam sekitar, dan penglibatan daripada pihak berkepentingan. Walaupun faktor-faktor ini telah dikenalpasti sebagai faktor yang boleh mempengaruhi pelaksanaan kelestarian hijau tetapi, pendapat pihak pengurusan atasan, terutamanya daripada perspektif pemilik restoran masih tidak mencukupi dalam memahami proses penyampaian perkhidmatan hijau dalam konteks restoran kasual. Tambahan pula, pengurusan atasan memainkan peranan penting dalam pelaksanaan suatu keputusan penting dan dalam mencapai prestasi kelestarian dengan memberikan komitmen terhadap usaha penyampaian perkhidmatan hijau.

Oleh itu, kajian ini diharapkan dapat memberikan pemahaman mengenai proses penyampaian perkhidmatan hijau dengan mengenalpasti faktor-faktor yang boleh mempengaruhi, menguji pengaruh proses penyampaian perkhidmatan hijau terhadap prestasi kemampanan, dan seterusnya menguji kesan mediasi proses penyampaian perkhidmatan hijau. Bagi menerangkan faktor yang mempengaruhi dan kesan mediasi penyampaian perkhidmatan hijau, kajian ini menggunakan teori *natural-resource-based-view* (NRBV) sebagai teori teras dan dilengkapi dengan teori *value-belief-norm*, *upper echelon* serta teori pihak berkepentingan. Data kajian telah dijalankan selama enam bulan terhadap restoran kasual bebas yang berkonsepkan persekitaran kasual dan beroperasi

tanpa menggunakan jenama antarabangsa serta bukan bersifat francais. Sebanyak lima ratus soal selidik telah diedarkan sendiri kepada responden dengan menggunakan teknik pensampelan mudah. Daripada tiga ratus enam puluh soal selidik yang dipulangkan, hanya sebanyak tiga ratus sebelas set soal selidik yang boleh digunakan.

SmartPLS 3.0 telah digunakan sebagai alat untuk menganalisis data dan menguji hipotesis kajian. Hasil kajian menunjukkan bahawa Nilai Alam Sekitar (EV), Kepemimpinan Alam Sekitar (EL) dan Penglibatan Pihak Berkepentingan (StP) adalah signifikan terhadap proses penyampaian perkhidmatan hijau (GSD). Kajian ini juga menunjukkan bahawa GSD adalah mediasi kepada hubungan antara EV, EL, StP dan Prestasi Kelestarian. Dapatan kajian ini juga menunjukkan bahawa usaha perkhidmatan penghijauan melalui proses penyampaian perkhidmatan hijau secara signifikan mempengaruhi prestasi kelestarian. Oleh itu, kajian ini adalah penting sebagai titik perubahan bagi pengusaha restoran kasual untuk melaksanakan proses penyampaian perkhidmatan hijau dalam operasi perniagaan. Selain itu, kesan mediasi GSD antara EV, EL, StP dan prestasi kemampuan menunjukkan adanya keperluan untuk mempromosikan usaha penghijauan yang mantap bagi meningkatkan pemahaman pembangunan lestari dalam kalangan pengurusan atasan yang bertanggungjawab membuat keputusan penting dalam operasi perniagaan.

Oleh itu, berdasarkan dapatan model dalam kajian ini, ianya adalah penting terhadap sumbangan dari segi teori dan praktikal. Bukan itu sahaja, kajian ini juga memberi sumbangan pengetahuan dari aspek teoritikal berdasarkan pengembangan kolaboratif model yang dicadangkan. Akhir sekali, kajian ini memberi cadangan pemahaman dan praktikal tentang bagaimana perkhidmatan penghantaran hijau boleh mempengaruhi prestasi kemampuan pada restaurant kasual dan menunjukkan bagaimana prestasi kemampuan dapat dicapai melalui amalan kelestarian.

## ACKNOWLEDGEMENTS

In the name of Allah, the most Gracious, the most Merciful. *Alhamdulillah* praises and thanks for His blessing that I have completed my PhD. Peace and prayers be upon our beloved prophet Muhammad, his families, companions, and followers.

My foremost gratitude, thanks and appreciation to my supervisor, Professor Dr. Azmawani Abd Rahman for her professional guidance and encouragement throughout my PhD journey. To my committee members, Professor Dr. Yuhanis Abd. Aziz and Dr. Nor Siah Jaharuddin who devoted their expertise and precious time in guiding me to reach up to this stage. Many thanks for all their best advise in assisting me. My journey towards earning my PhD would not have been easy without guidance from my supervisors. Also, I would like to take this opportunity to thank my thesis examiners, Professor Dr. Dogan Gursoy, Dr. Abdul Rashid Abdullah and Associate Dr. Mass Hareeza Ali @ Hamid for their time, helpful comments and suggestions. Many thanks also to Associate Dr. Serene Ng Siew Imm and Dr. Anusuiya A/P Subramaniam.

I also would like to express my special and sincere appreciation to my sponsors, the Malaysian Ministry of Higher Education, and Universiti Utara Malaysia who funded my PhD. Thanks to everyone who assisted me from the beginning of my study, data collection, and data analysis until the end of my thesis writing. My appreciation also goes to everybody at UUM including my colleagues at the School of Technology Management and Logistics, staff at the Registrar Department and tutor groups for their support and motivation.

My sincere appreciation to my loving parents, Jahara Ambar, and Nawang Mustapen Uchat, and to my husband, Subaktian Khamis for their endless love, prayers, patience, tolerance and care that made the difficulty of writing this noteworthy dissertation. To my brothers and sisters, Samali, Misnin, Jisnah, Nosmah, Julinah, Samian, Amin, Normah, Junaidi and Asmah, I thank you for your encouragement and prayers. Also, sincere thanks to all my friends, Khalilah, Salma, Farah Hasyima, Ina and others for their encouragement and support during my study. To others, too many to mention here, who had also contributed to this journey, your kindness means a lot to me. From the bottom of my heart, I thank everyone and may Allah repay all your kindness.



This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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## LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
DOSM	Department of Statistics of Malaysia
EcoPer	Economy Performance
EL	Environmental Leadership
EnvPer	Environmental Performance
EV	Environmental Value
GDP	Gross Domestic Product
GSD	Green Service Delivery
HOC	Higher Second Order
HTMT	Heterotrait-Monotrait of Correlations
LOC	Lower Order of Construct
PLS-SEM	Partial Least Squares (Structural Equation Modelling)
SocPer	Social Performance
StP	Stakeholder Participation
VIF	Variance Inflation Factor

# CHAPTER 1

## INTRODUCTION

### 1.1 Chapter Overview

Chapter 1 provides an introduction of the research. It starts with a discussion of the background of the study in Section 1.2 which includes an explanation of the food service sector in sub-section 1.2.1, and sustainability practices in restaurants in sub-section 1.2.2. Section 1.3 specifies the research problems, while Sections 1.4 and 1.5 outline the research questions and research objectives, respectively. Section 1.6 provides the significance of the study, while definition of terms and scope of research are included in Section 1.7, and Section 1.8, respectively. The overall presentation of the thesis is described in Section 1.9.

### 1.2 Background of Study

The global economic transition showed an increasing concern toward sustainability practices which is usually related to green practices. Some studies have also related sustainability practices as a crucial practice toward the triple bottom line or the firm's economic, environmental and social performance. Furthermore, due to concerns for the conservation of natural sources, energy, water and the environment, business owners should pay more attention to add green products and services in their business operations.

Malaysia has shown support for global sustainability trends via its involvement in the development of the Sustainable Development Goals (SDG) at the international level in late 2014 (DOSM, 2021). The SDG is a continuation of the Millennium Development Goals which ended in 2015 and contains 17 goals and 169 targets in three dimensions of sustainable development, namely, social, economy and environment. Up to now, green service practices in the service industry are present in a few sectors such as hotels and accommodation, banking, and restaurants.

Restaurants and the food service industry are not exempted from sustainability trends and issues and must deliver sustainable solutions in response to market competition and customer awareness on sustainability. There must be a strong focus on the role that restaurants need to play in their business operations for a more sustainable economy. For example, some studies have shown that there are demands and awareness on the patronage of green services or products

and willingness to pay a higher price for green services, mainly from customers with a concern for environmentalism and a healthy lifestyle (Safian et al.,2019; Mamun et al., 2018; Rezai et al.,2013).

On the other hand, previous studies have also shown that restaurateurs and their management are aware of green practices but are somewhat reluctant to implement green practices as being green is not the main concern of their business operations (Kasim and Ismail, 2012). Furthermore, Langgat (2020) showed that the demand for green restaurants depends on the customers' social demographic factors. Moreover, green products are usually priced at a premium (Sharaf and Perumal, 2018). These problems would be a challenge for business organisations that intend to engage and invest in sustainable practices. Additionally, an unstable demand for green services has also been another reason for the low involvement among restaurants which are already less concern about sustainable practices.

A few researchers showed green practices as innovation to gain sustainability performance either through products or services (Bonomi et al.,2016; Chou et al.,2012). Guyader et al. (2014) showed that businesses can implement incremental or radical sustainable innovations in green services and products which could be accomplished through changes in resources integration and service provision (Kneipp et al., 2019). Other authors such as Tong and Wang (2016), Peramon et al. (2014), Wang et al. (2013) and Jeong and Jang (2010) showed that green restaurant practices such as healthy food (menu sustainability), recycling and composting, energy and water-efficient equipment, friendly cleaning and waste reduction improved sustainability performance including brand image and equity, profit, corporate image and customer loyalty. However, these studies examined 3Rs (Reduce, Reuse & Recycle), green food, food preparation, energy and water efficiency. Service processes in restaurant activities require a combination of different types of sources, hence the relationship of performance in adopting green service delivery process practices is worth further investigation. Furthermore, Baldwin et al. (2011) showed that the combination of materials used in the food service industry, including restaurants, could impact land use, respiratory, inorganic substances, and fossil fuels. Thus, it is undeniable that the current practice of service delivery in restaurant operations needs to be addressed and aligned to become more sustainable and obtain sustainability performance.

Another problem that arises from restaurant operations that need more attention is improper water discharge as it significantly contributes to water pollution. According to the Department of Environmental, restaurant activities cause sullage water from washing food and dishes, food derivatives, detergents and cooking oil (New Strait Time, 2014). Furthermore, sullage water from restaurants and food courts are more contaminating compared to sullage water from households. This problem has indirectly increased the government's environmental protection and pollution management costs. The government spent MYR293.9 million on environmental protection in 2018 which increased to MYR413.8 million in 2019, an increase of 40.8 percent (Department of Malaysia

Statistics, 2020). The same source also mentioned that MYR 751.7 million was spent on waste management in the year. The overall expenses for environmental protection by sectors are shown in Table 1.1. Therefore, action is required from the restaurant sector for better control of water conservation.

**Table 1.1: Environmental Protection Expenditure by Sector and Type of Expenditure, 2019 (in MYR million)**

<b>Environmental Protection Expenditure</b>	<b>MYR (mil)</b>	<b>Type of expenditure</b>	<b>MYR (mil)</b>
Manufacturing	2,183.3	Pollution management	2,021.2
Services	413.83	Waste expenditure	751.7
Mining & quarrying	96	Other environmental protection	41.0
Construction	161.2	Environmental assessment & audits and environment charges	64.9

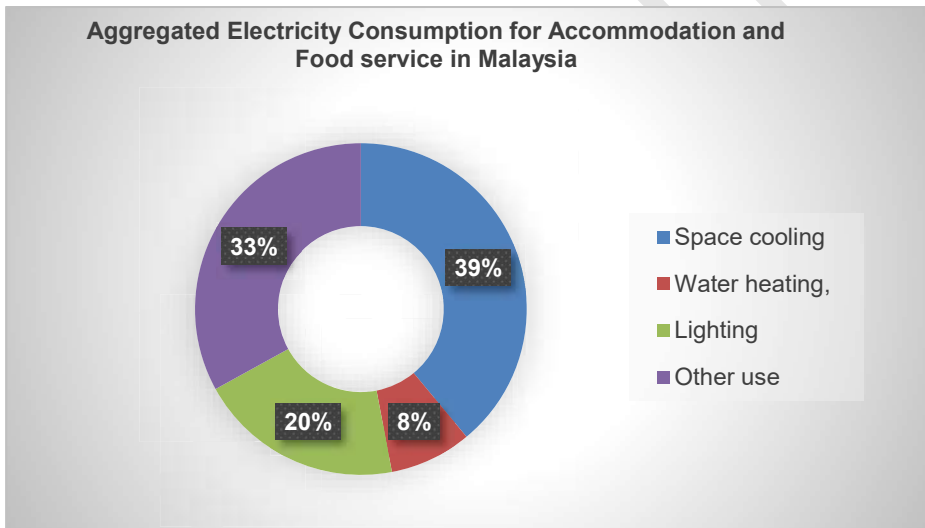
(Source: www.dosm.gov.my, 2020)

The conventional service delivery process in restaurants also needs to be changed to become more sustainable due to the problem of food waste, plastics consumption, water pollution and energy consumption which potentially contribute to food footprint and food security problem that causes environmental pollution and inefficient electricity consumption. Azuar (2020) showed that food courts and restaurants wasted 1,941,608 tonnes of food per year. The issue of food waste has been repeatedly highlighted in the local news where restaurants were shown also to be a contributor. For example, in 2017, Malaysia was the world's third largest waster of food per capita, and the biggest in Asia (<http://www.ecobusiness.com>, May 5, 2017). Furthermore, studies on water quality identified food waste as the main pollutant in rivers flowing through Kuala Lumpur and Selangor ([straitstimes.com](http://straitstimes.com), Aug 25, 2016) (as in Appendix 1).

Besides food waste, plastic is another material that go to landfills. The demand for packaging material is unavoidable, especially plastic for multiple usages, as it is inexpensive. However, plastic bags are harmful to the environment as they contain additives that can leach out into the soil affecting the seeds of plants through the absorption process (Menicagli et al., 2019). Hence, high dependency and usage of plastic lead to environmental pollution (Blettler et al., 2019; Galafassi et al., 2019; Khaled et al., 2018) which may increase the environmental protection cost. Due to the negative impact on high single-use plastic usage, the government has launched campaigns to increase public awareness and reduce consumption of single-use plastic (Jamain, 2021). Furthermore, in 2018 the government has banned the use of plastic straws to help reduce plastic pollution.

The National Restaurant Association (2018) showed that America's full-service restaurants used about 63 percent of energy consumption for food preparation followed by at least 35% for heating, ventilation, and air conditioning. Based on a survey on energy consumption between 2014 to 2016 conducted by the Energy Commission of Malaysia for commercial and residential sectors which included the accommodation and food service sector, space cooling consumed the highest (Malaysia Energy Commission, 2016b).

Figure 1.1 shows the aggregate consumption of energy for the accommodation and food service sector where 39 percent was for cooling purposes, followed by water heating at 20 percent and lighting at 8 percent. The remaining 33 percent of electricity usage was for other uses which included food preparation, sanitation, and refrigeration. In other words, food preparation, sanitation, and refrigeration were the second highest consumption of electricity.



**Figure 1.1. Aggregate Electricity Consumption**  
(Source: Malaysia Energy Commission, 2016)

Previous studies have shown that the green approach has assisted restaurateurs in reducing wastage which in turn leads to cost reduction (Chileshe, Rauddeen, & Reza, 2016; Garrone, Melacini, & Perago, 2014; Mori Junior, Franks, & Saleem, 2016; Maria, Balatbat, & Garmcheal, 2013). Also, due to changes in market demand, the concept of sustainability should be embedded in the restaurant service delivery process. Therefore, it is expected that the restaurateur would be able to enhance competitiveness, as well as improve their social and environmental involvements by implementing better sustainability practices.

However, sustainable development studies in restaurants in Malaysia is still limited mainly in the context of greening service delivery process in its operations. This agenda remains unseen in sustainability discussions among restaurateurs. Also, as sustainability is one of the service innovation approaches in service operations, thus, an understanding of the green service delivery process, its influencing factors and impact on sustainability performance in casual dining are essential and are significant from both the theoretical and practical aspects.

### **1.2.1 The Food Service Sector and Restaurant Industry in Malaysia**

The food service industry consists of multiple types of business operations. Generally, the food service industry may be operated as either a commercial or on-site food services. Gregoire and Spears (2007) stated that these segmentations might be categorised according to specific characteristics including price, location, menus, and ambience. Furthermore, the commercial food services can either be operated as a limited-service or full-service structure.

There are a few restaurant types in the restaurant industry. In the traditional outlook, they could be categorized as quick service, fine dining, and upscale restaurants (Muller and Woods, 1994). The authors also noted that the traditional typology is inadequate for the multi-unit chain which is moderate upscale restaurant and business dining. Furthermore, moderate upscale dining, also known as casual dining or themed restaurants, are full-service restaurants.

Although the term 'full-service restaurant' has been used widely in the food service industry, there are no common characteristics to explain full-service restaurants. For example, Euromonitor International (2018) stated that a full-service restaurant refers to any restaurant that offers sit-down establishments. The focus is on food rather than on drinks with proper full table services where customers are being attended by a waiter who takes orders at the table. Gregoire and Spears (2007) noted that the style and ambience of full-service restaurants differ significantly from casual to fine dining. Similarly, the term 'full-service' has also been used to explain upscale and casual dining restaurants both in a chain or an independent structure as shown in Table 1.2.



**Table 1.2: Types and Definitions for Restaurants**

Restaurant Segmentation	Definition/ Characteristics	Sources
Full-Service Restaurants	<p>Encompass all sit-down establishments where the focus is on food rather than on drinks. Table service only which has proper full table services with staff attending to customers and taking orders at the tables.</p> <p>Characteristics:</p> <ol style="list-style-type: none"> <li>1. Table services and relatively higher quality of food compared to quick-service units.</li> <li>2. Menu offers multiple selections and may include breakfast, lunch and dinner.</li> <li>3. Preparation of food products is often complex and involves multiple steps.</li> </ol> <p>Operate in a chain independent structure and offer different menus at higher prices, mid and lower prices, some operate using national brand.</p> <p>Offer waited table service for customers who are greeted and seated by a host. Dishes ordered will be delivered by a waiter and customers pay their bill once the meal is completed.</p>	<p>Euromonitor International, (2018)</p> <p>Gregoire and Spears, (2007)</p>
a) Casual Dining	<p>Services that are relaxed with capable service staff projecting friendly informality in their dealing with guests, while maintaining professional efficiency and offering table service with moderate price (MYR12 - MYR30) depending on geographical location; offer a casual atmosphere (informal), relaxed mood, some may have themes, or are family-friendly</p>	<p>Walker (2011); Parpal (2013)</p>
b) Casual Upscale Restaurant	<p>Can be further segmented by price and service level. It has a slightly lower price than fine dining. It tends to operate on national brands. Mostly universal in the design of their menu, interior décor, and often the exterior of the building.</p>	<p>Barrows, Powers, and Reynolds (2012); Muller &amp; Woods (1994); and Ismail (2012)</p>
c) Fine dining/ Exclusive Restaurants	<p>Mostly operated in full-service with professional chefs and experts. The prices charged are normally expensive and this restaurant operation requires a combination of a large market, skilled workers and dedicated management.</p>	

Based on the above definition, a full restaurant can be operated as casual dining or fine dining structures. Nonetheless, a casual dining structure is more

convenient compared to fine dining. Under the Malaysian Standard Industry Code (MSIC 2008), the restaurant business can be grouped under food and beverage service activities Division 56. This division includes restaurants and restaurants-cum-night club, cafeterias/canteens, fast-food, ice cream truck vendors and parlours, mobile food carts, food stalls (hawkers) and food or beverage outlets that operate in market stalls. Specifically, MSIC 2008 defines a 'restaurant' as, "enclosed structures used for business activities, which are usually in a building and the whole premise can be locked up to keep goods and equipment."

In this study, a casual dining restaurant is defined based on Parpal (2013) who described full-service casual restaurant offers moderate pricing (of between MYR12-MYR30) depending on geographical location, an informal service approach, supports a family-friendly environment, and are suitable to groups aiming for casual dining purposes. Another important characteristic of a casual dining restaurant is it being independent from any national brand, and as such, restaurant owners or top management are more accessible to the researcher.

Table 1.3a shows that the food service sector activities witnessed growth and contribution to the economic development, especially in the gross domestic product. The positive performance also contributed positively to employment opportunities. Specifically, 645,743 persons were engaged in the food and beverage services in 2010 and increased to 891,616 in 2015 with a 6.7 percent of annual growth per year (DOSM, 2017). Furthermore, the food service industry employed 645,743 persons in 2010 and increased to 819,616 persons in 2015. Table 1.3a shows an increase in the value of gross output, number of persons engaged, and number of establishments for the food and beverages services during 2010 - 2017.

**Table 1.3a: Selected Statistics of Food and Beverage Services (2010, 2015 and 2017)**

Year	Value of Gross Output	Number of persons engaged
2017	82.8	958,803
2015	66.4	891,616
2010	37.3	645,743

(Source: Annual Economic Survey, Department of Statistics Malaysia, DOSM, 2017)

Table 1.3b shows a comparison between the number of establishments and gross output value from the different sub-sectors in the food services industry. The gross output value was the highest from restaurants and restaurants-cum-night clubs with a value of MYR31,381,433 although the number of

establishments (36.34%) was much smaller as compared to food stalls (57.55%).

**Table 1.3b: Food Services Establishment and Gross Output Value, 2017**

Industry	Number of Establishments	Percentage (%)	Gross Output Value (RM '000)	Percentage (%)
Restaurants and restaurants-cum-night clubs	48,357	36.34	31,381,433	58.79
Cafeterias	5,444	4.1	2,282,892	4.27
Fast food restaurants	2,597	1.95	7,311,066	1.37
Ice cream trucks	101	0.07	24,720	0.05
Food stalls	76,582	57.55	12,370.334	23.18
<b>Total</b>	<b>133, 081</b>	<b>100</b>	<b>53,370,544</b>	<b>100</b>

(Source: Annual Economic Survey, Department of Statistics Malaysia, DOSM, 2017)

The Annual Economic Survey also reported that in 2017, a total of 958,803 people were engaged in this industry. Furthermore, the food service industry provided the highest employment engagement with 710,174 persons followed by event catering with 99,520 persons. Before the outbreak of Covid-19, food and beverage services recorded a gross output value of RM82.8 billion with 958,803 workers in 2017 (DOSM 2019). The output value was also a result of a significant increase in the number of restaurants which grew from 130,570 in 2010 to 167,490 in 2015 (annual growth rate of 5.1%).

The restaurant type of casual dining primarily operates in urban areas or central cities (Euromonitor International, 2018), and has grown in popularity mainly for casual dining structures. Nowadays, casual dining restaurants in Malaysia are becoming popular because of the attractive ambience for socialising and the wide range of menu offered at affordable prices. Euromonitor International (2018) has also reported that the increase in number of restaurants and value growth for casual dining restaurants is higher than the non-casual dining restaurants.

On the other hand, the increase in the number of restaurants and establishment types pose a challenge for restaurateurs to compete in the food service business. Furthermore, the increase in living costs has also added to the consumers' concern when it comes to dining out (Euromonitor International, 2017). As such, restaurateurs have to find alternative approaches to cope with market and social changes and to maintain their market competitiveness. Thus, engaging in sustainability has been suggested as an alternative strategy to mitigate the market obstacle (Bansal & Jardine, 2014; Nadim & Lussier, 2010; Kitsios et al., 2020).

### 1.2.2 Sustainability Practices Among Restaurants

In Malaysia, a few associations have been established specifically for restaurants. All of these organisations are non-government organizations, for example, Malaysian Indian Restaurant Owners' Association (PRIMAS) established in 1994, Malaysian Muslim Restaurants Owners' Association (PRESMA) established in 1994, and *Persatuan Pengusaha Makanan Melayu Islam Wilayah Persekutuan Kuala Lumpur dan Selangor (Permas)*. An examination of their websites show that none of these associations highlight any green restaurant practices or mention sustainability efforts in their restaurant operations. Thus, the information of green practices among restaurants is limited as compared to green practices at hotels and international NGOs such as Green Restaurant Association in the United States.

Nonetheless, a few established and well-known restaurants in Malaysia with national brand were reported to apply green practices in their business operations, such as KFC, Starbucks, and McDonald's. For example, a KFC restaurant in Nilai has been certified as a green restaurant in 2015. It was awarded three green certifications from three different green certificates associations, which are Gold-Green Building Index Sdn Bhd (Malaysia), Platinum-BCA Green Mark (Singapore) and Gold-LEED (USA). These certifications provide an advantage for KFC Malaysia as the first eco-friendly restaurant in Malaysia (QSR Brand Holding, 2015).

Green practices at Starbucks encourage their customers to become involved in their sustainability programs. For example, Starbucks offers price discounts to customers who bring in their own Starbucks mugs or bottles. A McDonald's restaurant in Setia Alam is fitted with green technology solutions such as a roofing system integrated with solar photovoltaic, indoor LED lights, thermal solar water heater, rainwater harvesting system, smart thermostat and hybrid air-conditioning system. Furthermore, McDonald's targets to open 200 green restaurants by 2025, as part of its commitment towards long-term sustainability efforts.

For decades, plastics consumption is typical in the Malaysian daily life and without any proper control. Overuse of single use-plastic has created another major problem in the country. A study by Chen et al. (2021) noted that the high usage of single use-plastics generates significant challenges for waste management services. Furthermore, as single-use plastics are mostly non-biodegradable, this makes the recycling process more difficult and increases management costs. To overcome this problem, the government has established a new policy to control the usage of plastics for all food and beverage outlets including restaurants. In 2018, Malaysia launched its *Roadmap Towards Zero Single-Use Plastic (2018-2030)*. The holistic approach of the plan involves all stakeholders in overcoming the consumption of single-use plastics with a vision to creating a cleaner and healthier environment. As such, all stakeholders are expected to play their roles effectively to achieve this plan by 2030.

Since 2019, licensed traders and operators of food outlets have been banned from using plastic drinking straws and are encouraged to use straws made from biodegradable material or paper (Chen, 2018). In addition to banning plastic straws, the campaign against using plastic bags has also been implemented at shopping malls and hyper-markets during weekends or throughout the week. The public has become aware and acceptable of these campaigns, or they can choose to pay MYR0.20 for each plastic bag they buy from the hypermarkets.

Based on the above discussion, it can be said that Malaysia is alert on sustainability practices and is taking efforts to involve the public at large. Policies to control the use of single-use plastics and banning of plastic straws are initial efforts to educate the public and provide the opportunity for restaurateurs to become more involved in sustainability practices. Langgat (2020) also noted that customers are acceptable to green restaurant practices if the owners and top management make their service operations become more sustainable.

Furthermore, through restaurant associations, information on sustainability can be highlighted. This effort will assist in creating awareness among the public, particularly, restaurant owners and top management. Nonetheless, more effort is required to design specific green practices to encourage sustainability practices among restaurateurs. In many countries throughout the world, the issue of restaurant sustainability has captured the attention of many organisations. The Green Restaurants Association in the United States has developed criteria for green restaurants, including water efficiency, waste reduction and recycling, sustainable, durable good and building materials, sustainable food, energy, reusable and environmentally disposable, and chemical and pollution reduction.

Although there are already sustainability practices put in place in Malaysia, its implementation among restaurants remains discouraging and slow (Tan et al., 2016; Abdul Aziz et al., 2018). Hence, this study is essential in providing more evidence in understanding the contributing factors to the green service delivery

process and sustainability performance among casual dining restaurants in Malaysia.

### 1.3 Research Problem

The government supports a green economy to achieve a better quality of life through sustainability (Economic Planning Unit, 2016) as in the Eleventh Malaysian Plan (2016-2020). This vision, placed under the agenda of sustainable development 2030 (SDG 2030), would be carried out in the Twelfth and Thirteenth Malaysian Plan during the periods of 2021-2025 and 2026-2030, respectively (Ministry of Foreign Affairs Malaysia, 2019). In a broader context, food security is one of the critical indicators toward a green economy and a connection between food security and restaurant occurs indirectly. According to SWCorp Malaysia, a government agency dealing with solid waste, food courts and food beverage sector contributed to food waste (Naidu, 2017). Restaurant activities had contributed to food waste of around 941,608 tonnes per year (Jereme et al., 2017). This threatens food security through depletion of the limited natural resources. Hence, this situation must be addressed appropriately and quickly toward achieving the government's agenda in providing a better quality of life through food security planning.

In addition, Tonini, Albizzati and Astrup (2018) showed that severe food waste increased landfill space for compost which could change the land function. Therefore, food waste can affect climate change through greenhouse creations affecting food production (Parvin and Ahsan., 2013). Several researchers also showed the impact on food production due to climate change and global warming which, in turn, affects food security efforts (Rawe et al., 2021; Firdaus et al., 2019; Vaghetei et al., 2015). Hence, this problem should not be ignored, requiring more actions to improve green sustainability.

Restaurant operations need water for kitchen activities, including for dishwashing and other cleaning purposes. However, awareness of harmful contaminants from restaurant activities are not taken seriously. The Department of Environmental in 2014 showed that the food and beverage industry were also contributing to river pollution in Malaysia (Afroz & Rahman, 2017). Husain et al. (2014) also showed that improper monitoring of fat, oil and grease disposal from restaurants had contributed up to 70% of the management costs of sanitary sewer overflows. Water consumption in restaurants is unavoidable but the restaurateur might control harmful contaminants through sustainability efforts by properly managing their food service cleaning, and disposal of solid waste, and fats, oils and grease. These actions not only enhance better water management but also help in preventing harmful contaminants from polluting our water.

Awareness and demand for green products, including food, is not something new in Malaysia. Studies by Rezai et al. (2013) and Jusoh and Ahmat (2016) showed that Malaysian consumers are aware of the green concept and are willing to pay

extra for green food and products. Langgat (2020) also showed that Malaysian customers are ready to accept more sustainable practices, mainly for energy savings and food waste. Hence, with increasing awareness and demands on environmental friendly practices from customers, it becomes essential for restaurateurs to apply sustainability practices. Some studies on customer behaviour regarding green restaurant preference have shown that consumers are more likely to value environmental concern and patronise environmentally-friendly restaurants that use safe products (Kwok et al., 2016, DiPietro et al., 2013). As such, restaurants are encouraged to change their traditional service delivery to more green approaches for future conservation.

Consequently, restaurants need to change their current conventional service delivery processes and put in place sustainability practices (Chou et al., 2012; Higgins-Desbiolles et al., 2019; Legrand et al., 2010; Salzberg, 2016; Sharma et al., 2020). These authors noted that sustainable practices are both an innovation and organisation strategy in the delivery process. Hence, through proper planning and management of the service delivery process, restaurants can reduce food waste (Heikkila et al., 2016). These sustainability practices could be integrated into the service delivery process by adding some modifications of the service delivery (Wong et al., 2013). Therefore, in this study, in the context of modification, it is emphasised at the different stages of the service delivery process inside the restaurant itself, which occurs before, during and after the service. For example, a restaurant can provide a recycling spot for waste and garbage, clearly and cleverly placed signage of green practices at the restaurant, avoid use of plastic straws, reduce tissue consumption, collect waste of fat, oil and grease, and use eco-friendly detergents for tableware.

Some studies have suggested that sustainability practices can improve sustainability performance (Hong, Zhang & Ding, 2018; Katiyar et al., 2018; Rezai et al., 2016; Hami et al., 2015). In the context of restaurant service operations, Perramon et al. (2014) found that sustainability practices are important not only for economic but also for social and environmental benefits. Based on previous studies, several factors were shown to influence the implementation of sustainability practices such as cost factor, company size, sustainability knowledge, suppliers, customers, government and business environment (Tsai et al., 2014; Cassia, 2020; Ariffin et al., 2015; Lin & Chen 2016; González-Benito & González-Benito 2016).

Thus far there has been little discussion about the influence of factors on the green service delivery process and sustainability performance. Other aspects such as environmental value, environmental leadership and stakeholder participation are also important influencing factors (Jang et al., 2017; Abdullahi et al., 2018; Zia Ur Rahman et al., 2021; Ottenbacher et al., 2019; Ayuso et al., 2021), and there is still inadequate research on the relationship between green service delivery and sustainability performance.

Earlier research argued that psychological elements such as environmental values are necessary to identify sustainability practices (González-Benito & González-Benito, 2006; Park et al., 2014; Tan et al., 2016). However, these studies were conducted in the manufacturing sector. Chiariani and Vagoni (2016) suggested that it is essential to include environmental value in service firms as individuals with environmental values is more open to green efforts. The dimension of environmental value has been included in various studies and examined as a determinant of environmental leadership (Jang et al., 2017). However, Dolnicar et al. (2016) showed that an individual's environmental value has not necessarily led to environmental action. These contradictory findings should be further examined to get a clear understanding of the effect of environmental value on sustainability efforts. Furthermore, although environmental value has been discussed in previous studies, the emphasis was primarily from the customers' perspective of green restaurants (Kang et al., 2015; Kim Jihyun et al., 2016; Namkung & Jang, 2013).

Previous studies on food sustainability practices examined different types of sustainability practices such as green food (Namkung & Jang, 2013; Kwok et al., 2016), green behaviour (Wang et al., 2013; Rezai et al., 2016), and recycling and composting (Jeong & Jang 2010; Demicco et al., 2014). However, these studies were more focused on sustainability practices and less concerned on the service delivery process. Furthermore, many of these studies examined the consumers' perspective instead of the restaurant owners' or top management's point of view.

Previous research has also shown the importance of environmental leadership since top management plays a crucial role in sustainability decisions (Ariffin et al., 2015; Park et al., 2014). For instance, giving priority to buying green products provides clear environmental targets and objectives and promotes environmental practices at the outlet (Montabon et al., 2007; Wang et al., 2013).

An independent casual dining restaurant may initiate its own decisions without interference from corporate headquarters as compared to a restaurant chain (DiPietro et al., 2013). In Malaysia, Ismail and Kasim (2012) noted that top management are informed and concerned about environmental issues but were reluctant to change their conventional practices because of poor customer demands, weak enforcement, and irregular product supply. Empirical studies that examined the top management's perspective is also minimal in the food service industry. Hence, more empirical studies are needed as the tendency to practice sustainability in the food service sector remains slow and minimal (Nicholls & Kang, 2012; Tan et al., 2016).

Furthermore, the existing literature has also recognised the role of stakeholder engagement towards sustainability implementation (Kwok et al., 2016; Tong & Wong, 2016; DiPietro et al., 2013). A stakeholder can be an individual or group such as a government body, customers, or industry association (Leonidu and Bilge, 2015). Although studies have shown evidence that stakeholder pressure



have a significant impact on sustainability practices, the results may be dissimilar in a different context. The implementation of restaurant sustainability practices in an emerging country like Malaysia is still in its evolving phase requiring participation from customers, government and suppliers to be effective and successful. Prior studies suggested (Raab et al.,2017; Tsai et al.,2014; Dora et al.,2014; Ho et al.,2014) that customers, government and suppliers can influence sustainability practices through various ways. For example, customers could support environmental efforts by requesting receipt and plastic straws only if necessary. The government should enforce sustainability policies, provide proper facilities such as recycle bins, and offer relevant incentives for sustainability practices. Furthermore, suppliers should ensure product availability, be alert to sustainability regulations and offer products or services at reasonable prices. However, to date, empirical studies on the important role of customers, government and suppliers in the green service delivery process is scarce. Hence, this study is expected to add to this body of knowledge from the restaurateurs' perspective.

A review of the literature also showed another shortcoming with regards to the impact of green service delivery on sustainability performance. Previous research focused on the natural-based view (Alt et al., 2015; Wong et al., 2013), the theory of planned behaviour (Rezai et al., 2016; Tan et al, 2014; Chou et al., 2012) and environmental attitudes behavioural theory (Kang et al.,2015; Park et al.,2014; Dieft and Font, 2010a). Thus, this study is expected to fill this research gap by extending the natural-resource-based-view theory in a sustainability setting to better understand the factors of the green service delivery process on sustainability performance. This study also employed the value-belief-norm, the upper echelons and stakeholder theory as complementary theories to understand the influence of environmental value, environmental leadership, and stakeholder participation on green service delivery.

Sustainability practices in the casual dining restaurant operating business remains an important research gap that needs to be examined. The current literature has shown that sustainability significantly affects performance in different types of research contexts. For example, sustainability practices were examined in terms of green building (Newsham et al.,2017; Rameezdeen et al.,2019; Samad et al.,2020), green supply chain (Chai et al.,2018; Kalyar et al.,2019; Younis & Sundarakani 2019) and green hotel (Beatriz Forés et al.,2020; Masa'deh et al., 2017; Asadi et al.,2020; Davic & Topler, 2021). However, comprehensive studies with a specific dimension of green service delivery in the restaurant are limited. Hence, based on these discussions, examining sustainability practices of the green service delivery process from the perspective of top management in restaurants are worth exploring and would provide a valuable contribution to the knowledge on sustainability practices in service operations.

Previous research has also shown a concern on sustainable practices and business performance, mainly economic performance (Pham and Kim, 2019; Hong et al., 2018; Das, 2018; Katiyar et al., 2018 Damjan et al., 2016).

Additionally, there are other critical concerns, such as, measuring the organization's or business performance (profit), social performance (create customer awareness on sustainability practices, reduce workplace accidents) and environment (reduce harmful materials, reduce single use-plastic, reduce food waste). Based on the issues and the benefits of adopting sustainability practices, there exists a research gap which provides a necessity for further research among restaurants. Thus, this study was designed to explore the influence of environmental values, environmental leadership, and stakeholder participation on the green service delivery process and expected outcome on sustainability performance.

#### **1.4 Research Questions**

Based on the discussion in the earlier sections, this study examined how green service delivery process influences sustainability performance among casual dining restaurants. As such, research questions were designed as follows:

1. What is the influence of environmental value on the green service delivery process?
2. What is the influence of environmental leadership on the green service delivery process?
3. What is the influence of stakeholder participation on the green service delivery process?
4. What is the influence of green service delivery process on sustainability performance?
5. Does green service delivery process mediate the relationship between environmental value, environmental leadership, stakeholder participation and sustainability performance?

#### **1.5 Research Objectives**

In light of the issues discussed in the earlier sections, the main objective of this study is to examine the influence of greening service delivery process on sustainability performance among casual dining restaurants. The specific objectives of this study are:

1. To determine the influence of environmental value on the green service delivery process.
2. To analyse the influence of environmental leadership on the green service delivery process.

3. To determine the influence of stakeholder participation on the green service delivery process.
4. To evaluate the influence of green service delivery process on sustainability performance.
5. To evaluate the mediating effect of green service delivery process on the relationship between environmental value, environmental leadership, and stakeholder participation and sustainability performance.

## **1.6 Significance of the Study**

A review of the literature on the theoretical and empirical research in the field of environmental sustainability in the food service industry showed that they are opportunities for further investigation especially in developing countries (Tan et al., 2016). Thus, this study extends the current environmental sustainability discussion and contributes to the literature in several ways.

Chiarini and Vagoni (2016) noted that there is a requirement to include environmental values in firm service operations. The existing literature on green practices showed customer preference on environmental practices (Kim et al., 2015; Dewald et al., 2014; DiPietro et al., 2013; Jeong and Jang, 2010). Nonetheless, only a few studies examined the restaurant owners' perspectives. The New Service Development concept have helped researchers to understand the critical dimension of environmental values towards sustainability performance. Based on this concept, this study proposed a theoretical model that examined top management's environmental values on sustainability practices. As such, this study is expected to add knowledge to the sustainable literature in the service context, especially in the foodservice industry.

Furthermore, the existing literature shows empirical evidence on the significance of stakeholders' engagement in influencing green practice adoption (Costa and Pesci, 2016; Hauser, 2016; Alt et al., 2015; Steurer et al., 2005). However, limited research has examined the combined effect of different types of stakeholders' engagement such as the government, customers, and suppliers towards sustainable efforts. Hence, by investigating the effect of stakeholder participation, this research expects some contributions to the literature on sustainable practice in the food service industry.

In considering the current situation, there is no specific green restaurant policy or certificate for restaurants in Malaysia. Thus, organisational efforts through top management's commitment towards sustainability is expected to be a decisive factor on the adoption of sustainable practices in the service operation. To involve the top management team on sustainability is quite challenging and some organisations have denied their engagement in the sustainability efforts due to the wrong perception towards green practices. The environmental value concept

states that people with strong environmental values are more to understand the consequences of environmental problems. They also show responsibility and contribute or may support pro-environmental actions. The relationship between the managerial contribution on restaurant sustainability is deliberated by Perramon et al. (2014) who argued that not many studies have focused on this aspect in developing countries. Hence, there is a need for more empirical studies from the Malaysian context.

This study is also expected to be helpful to the top management of the food service industry to better understand how the service delivery process has a connection with sustainability performance. Also, factors that encourage the top management must be identified to support firms to expand their best-practice ideas. On the other hand, the food service industry can create awareness and educate their customers on sustainability through the organisation's greening efforts. Additionally, by having a transparent green service delivery process, the management can better understand what they should do at each service delivery process to improve their restaurants' sustainability performance.

## 1.7 Definition of Term

### 1.7.1 Conceptual Definition

This section provides the terms used in this study as defined by different authors. The terms and definitions are as follows.

**Sustainability Performance:** There is no specific definition for sustainability but most of the discussion on sustainability normally refers to sustainability performance that measures the economic, environmental and social aspects (Schaltegger, 2006).

**Social Sustainability Performance** Social sustainability performance may refer to the improvements and maintenance of the quality of life with minimum environmental destruction (Steurer et al., 2005). It can also be defined as a measure of the human's welfare (Abdel Mohsen and Paleologus, 2021) and as specifying and managing both the positive and negative impacts of the system, process, organization and activities on people and social life (Balaman, 2019).

**Economic Sustainability Performance:** According to Mohamed and Antia (1998) economic sustainability relates to the production, distribution, and consumption of goods and services. The

dimension of economic sustainability can include financial performance, long term competitiveness and economic impact (Steuer et al., 2015).

**Environmental Sustainability Performance:**

In the context of restaurants, sustainability performance refers to the combination of tangible and intangible uses of materials and products that needs the contribution from both society and the community (Sustainable Restaurants Association, 2018). Steurer et al. (2005) pointed out that environmental sustainability could be attained through resources, emission, environmental damages, and risk performance.

**Environmental Value:**

Nordlund and Garvill (2002) described environmental value as a belief that 'the ecosystem has intrinsic values'; hence, it should be protected. Environmental value is also essential in identifying pro-environmental behaviours because value plays a significant role in influencing attitudes toward environmental efforts (Stern, 2000).

**Stakeholder Participation:**

GraféBuckens and Hinton (1998) described stakeholder participation or engagement as a participative action from stakeholders to assist an organization in finding solutions to environmental problems and develop a rational environmental strategy.

**Environmental Leadership:**

Maak (2007) and Voegtlin et al. (2012) defined environmental leadership as its responsibility for sustainability action. Babasyan (2018) described environmental leadership as something that anyone can do by taking the first step in creating awareness, consciousness, and action on reducing harm to the planet. Other authors defined environmental leadership as the ability to influence individuals and mobilize organisations to realize a vision of long-term ecological sustainability (Egi and Herman, 2000).

**Green Service Delivery Process:**

The definition of green service delivery process differs according to the context of the service business. A service delivery process enables delivery from provider to end-user (Alix and Vallespir, 2017).

Pickworth (1988) described service delivery process as a system that consists of the hardware and software components. In the restaurant context, service delivery process is the stage of delivering services to customers that involves a few steps, namely, greeting and seating, ordering and delivery, consumption and payment, and exiting (Namkung and Jang, 2010).

In a broad context, Wong et al. (2013) defined green service delivery as a firm's practices and efforts to be environmentally responsible while delivering its core service business. According to El-Bersishy and Scholz-Reitzer (2016) green service delivery can be adopted at the tactical and operational levels.

### 1.7.2 Operational Definition

The operational terms used in this study are defined here to help the readers understand the study more clearly. The terms and definitions are as follows.

**Social Sustainability Performance:** In this study, social performance was measured in terms of employee motivation, reduction in environmental risk, and customer and employee awareness of environmental protection and safety in the workplace.

**Economic Sustainability Performance:** This study describes economic sustainability performance as an achievement of a restaurant in terms of lessening the costs for material and energy consumption, improving business competitiveness, profitability, customer loyalty, business image and customer volume.

**Environmental Sustainability Performance:** In this study, environmental sustainability performance refers to the reduction of harmful materials, electricity use, solid wastes and liquid disposal, and plastic material usage in the service delivery process.

**Environmental Value:** In this study, environmental value refers to beliefs on the importance of environmental protection from the perspective of top management that can be influenced by sustainability practices, namely, green service delivery process.

**Environmental Leadership:** In this study, environmental leadership refers to the top management's ability to plan and practice sustainability

efforts by setting up annual targets for energy and water conservation, waste reduction, and promoting sustainability practices on their business website or premises.

**Stakeholder Participation:**

Berman et al. (1999) suggested that commitment from stakeholders is essential to achieve firm performance. Hence, in this study, stakeholder participation refers to the participation of customers, government, and suppliers in terms of customer concern on environmental, government regulation towards green practices, and the continuous supply of green products.

**Green Service Delivery Process:**

For this study, green service delivery refers to the restaurant's efforts on practices toward sustainability performance through green practices at the stage of service delivery processes. These include providing recycling spots, purchasing green products, using energy-saving equipment, offering suitable portion sizes to customers, providing take-aways, using eco-friendly detergents, separating kitchen waste and garbage, and concern on restaurant layout for convenience of workflow.

## 1.8 Scope of Research

This study examined the influence of environmental value, environmental leadership, and stakeholder participation on green service delivery and sustainability performance among casual dining restaurants in Malaysia. The sustainability practices of casual dining restaurants in Malaysia are still at its infancy stage compared to developed countries, hence, findings of this study is expected to provide an essential understanding of sustainable practices among casual dining restaurants in Malaysia.

Data was collected from the independent casual dining restaurants in the major cities of Selangor, Kuala Lumpur, Perak and Johor Baharu. These states were selected as they had the highest number of restaurant establishments (DOSM, 2017). The respondents held the top management positions, mainly, restaurant owners, general managers, or chief executive officers. These individuals were selected as they have the responsibility and authority to make decisions for business operations. Data was collected from the respondents using survey questionnaires.

## **1.9 Organization of the Thesis**

This thesis contains six chapters. Chapter 1 highlights the background of the study, problem statements, questions, and objectives of the research. The background of the food service sector and restaurants and sustainability practices in restaurants were discussed in the chapter. This chapter also addressed the significance of the study, definition of terms and scope of the study.

A review of the literature on sustainability practices is discussed in Chapter 2 which includes sustainability performance, influencing factors of sustainability performance, and the measurements used in the study. The concept of green service delivery is also discussed in Chapter 2 as green service delivery is another side of service innovation. The chapter also provides a review of the relationship of the main variables on green service delivery process and sustainability performance.

The theoretical framework and hypotheses development are explained in Chapter 3. It includes the theories that were employed to explain the proposed research framework.

Chapter 4 highlights the research method of this study. It includes the research design, population sampling and instrumentation. The construct validity and pilot study are also explained in the chapter.

Chapter 5 presents the data analysis and the key findings of the study. It includes the data screening process, model evaluation using PLS-SEM, measurement model and structural model. The chapter also provides a discussion of the assessment of the hypotheses developed for the study.

The thesis ends with Chapter 6 with a discussion of the implications of the findings, recommendations and suggestions for future research. The contributions of the study and its limitations are also included in the chapter.

## **1.10 Chapter Summary**

Chapter 1 provides a discussion of the central idea for this study and introduces the research background, statement of problem and research issues. The chapter shows the design of the research objectives based on questions put forward in the research problem. The expected research outcome and contribution are also presented in the chapter. Chapter 2 provides a discussion of the food service industry and empirical studies.



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