

MEASURING THE FACTORS OF ECO-INNOVATION PRACTICES AMONG  
HALAL HUB MANUFACTURERS IN MELAKA DURING ENDEMIC COVID-

19



Faculty of Technology Management and Technopreneurship

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

MEASURING THE FACTORS OF ECO-INNOVATION PRACTICES AMONG  
HALAL HUB MANUFACTURERS IN MELAKA DURING ENDEMIC COVID-

19

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This Thesis Is Submitted in Partial  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

Fulfillment Of the Requirements for The Award of Bachelor of Technology

Management (Technology Innovation) With Honor

Faculty of Technology Management and Technopreneurship

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

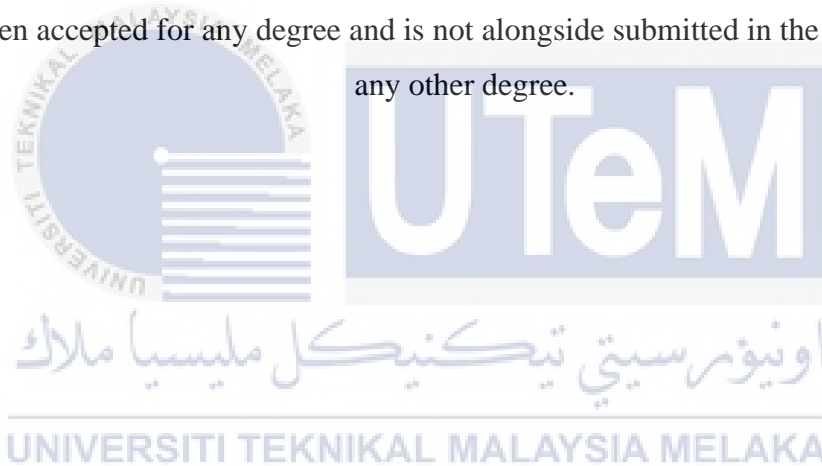
2023


## DECLARATION

I herewith declared that this thesis entitled  
**“MEASURING THE FACTORS OF ECO-INNOVATION PRACTICES  
AMONG HALAL HUB MANUFACTURERS IN MELAKA DURING  
ENDEMIC COVID-19”**

This is the result of my own research except as cited as references. This thesis has not been accepted for any degree and is not alongside submitted in the candidature of

any other degree.



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## APPROVAL

I or We are hereby to declare that I or We have read and go through this dissertation/report/thesis and certify that, this dissertation/report/thesis are the satisfactory in the sense of scope and quality as a partial fulfilment the requirements for the award of Bachelor of Technology Management (Technology Innovation) with Honours.



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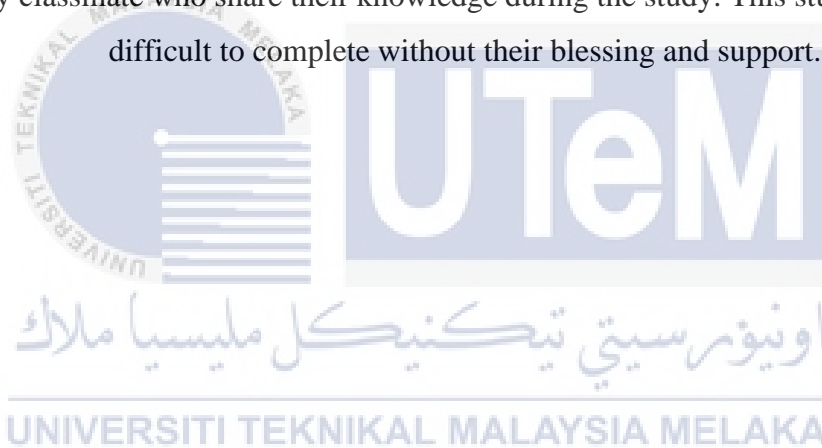
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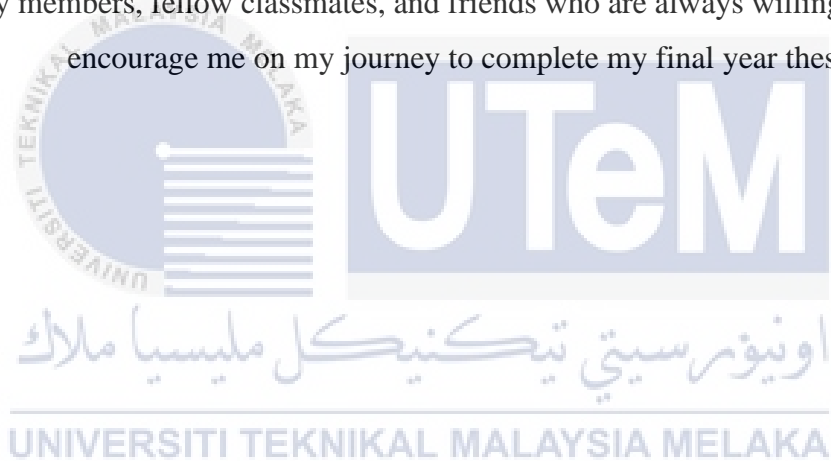
## DEDICATION

I would like to show my gratitude to my dear family members who have always helped and inspired me all the time, to my beloved supervisor Ts. Dr. Nurulizwa Binti Abdul Rashid, who is always willing to spend a lot of time guiding me, and to my classmate who share their knowledge during the study. This study will be difficult to complete without their blessing and support.



## AKNOWLEDGEMENT

I would like to take this chance to thank my beloved supervisor, Ts. Dr. Nurulizwa Binti Abdul Rashid, for her guidance and instruction. Thank you for sharing useful information and experience, which has always motivated me to work hard on the road to complete this final year project. Furthermore, I will not forget to thank my family members, fellow classmates, and friends who are always willing to assist and encourage me on my journey to complete my final year thesis.



## ABSTRACT

Eco-innovation in Malaysia's SME industry is a key determinant of environmental sustainability. The current trend of enhancing good environmental management in the Malaysian SME Industry influences the goal of competitive advantage in the Malaysian SME Industry. A conceptual framework of eco-innovation factors on eco-innovation practices for halal hubs is needed to understand the origins of the impact of eco-innovation factors and eco-innovation practices. This study aims to help the Melaka SME industry to measure eco-innovation factors by using eco-innovation practices for halal hub. The study consists of four independent variables which are Technological Capabilities, Environmental Organizational Capabilities, Environmental Regulation and Competitive Pressure. The dependent variable is the eco-innovation practice for halal hub. Survey data collected from 100 respondents were analyzed using the Statistical Package from the Social Sciences (SPSS) version 27. This research uses as probability sampling purposive sampling technique. The constructed questionnaire will be distributed online during Endemic COVID-19 by the URL or link of Google Form through e-mail, WhatsApp, Facebook, and other network-based applications. By the analysis of collected data from target populations, the findings reveal that four independent variables have a significant relationship towards the dependent variable, also the beneficiary for the company in adapting their competitive even though the crisis of COVID-19 pandemic.

**Keyword** – *SMEs industry, eco-innovation factors, eco-innovation practice for halal hub.*

## ABSTRAK

Eko-inovasi dalam industri PKS Malaysia adalah penentu utama kelestarian alam sekitar. Trend semasa untuk meningkatkan pengurusan alam sekitar yang baik dalam Industri PKS Malaysia mempengaruhi matlamat kelebihan daya saing dalam Industri PKS Malaysia. Rangka kerja konseptual faktor eko-inovasi mengenai amalan eko-inovasi untuk hab halal diperlukan untuk memahami asal-usul kesan faktor eko-inovasi dan amalan eko-inovasi. Kajian ini bertujuan membantu industri PKS Melaka untuk mengukur faktor eko-inovasi dengan menggunakan amalan eko-inovasi untuk hab halal. Kajian ini terdiri daripada empat pembolehubah bebas iaitu Keupayaan Teknologi, Keupayaan Organisasi Persekitaran, Peraturan Alam Sekitar dan Tekanan Persaingan. Pembolehubah bersandar ialah amalan eko-inovasi untuk hab halal. Data tinjauan yang dikumpul daripada 100 responden telah dianalisis menggunakan Pakej Statistik daripada Sains Sosial (SPSS) Versi 27. Penyelidikan ini menggunakan teknik persampelan kelompok pensampelan bertujuan. Soal selidik yang dibina akan diedarkan dalam talian semasa endemik COVID-19 melalui URL atau pautan Borang Google melalui e-mel, WhatsApp, Facebook dan aplikasi berasaskan rangkaian lain. Dengan analisis data yang dikumpul daripada populasi sasaran, dapatan mendapati bahawa empat pembolehubah tidak bersandar mempunyai hubungan yang signifikan terhadap pembolehubah bersandar, juga benefisiari bagi syarikat dalam menyesuaikan daya saing mereka walaupun krisis pandemik COVID-19.

***Kata kunci*** – *Industri PKS, faktor eko-inovasi, amalan eko-inovasi untuk hab halal*



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## LIST OF ABBREVIATION

ABBREVIATION	MEANING
SMEs	Small And Medium Enterprises
NEP	New Economic Policy
NEM	New Economic Model
ETP	Economic Transformation Program
11MP	11 <sup>th</sup> Malaysia Plan
NKEA	National Key Area
GDP	Gross Domestic Product
JAKIM	Department Of Islamic Development Malaysia
OIC	Organization Of the Islamic Conference
HDC	Halal Industry Development Corporation
JAIN	State Islamic Religious Department
SIRIM	Standard And Industrial Research Institute of Malaysia
DSM	Department Of Standard Malaysia
HOPE	Halal Outreach Program for Entrepreneurs
PUTRA	Product Transformation Program
HTTP	Halal Technology Transformation Program
PRINCE	Product Registration Incentive
MASSIVE	Market Access Incentive Are Among the Five Key Initiatives That Have Been Developed
GHGs	Greenhouse Gases
NGTP	National Green Technology Policy
SDGs	Sustainable Development Goals
EMS	Environmental Management System
CCA	Central Coordinating Agency
KUSKOP	Ministry Of Entrepreneur Development and Cooperatives
MARA	Majlis Amanah Rakyat
AIM	Amanah Ikhtiar Malaysia
TEKUN	Tabung Ekonomi Usaha Niaga

PNB	Perbadanan Nasional Berhad
JPK	Jabatan Pembangunan Koperasi
MKM	Malaysian Cooperation College
SEDCs	State Economic Development Companies
M-WEZ	Melaka Coastal Economic Zone
PSMJ	Melakaku Maju Jaya Strategic Plan
IR 4.0	Fourth Industrial Revolution
MIHAS	Malaysia International Halal Exhibition
WHF	World Halal Forum
MNCs	Multinational Corporations
MITI	Minister Of International Trade and Industry
HIMP	Halal Industry Master Plan
MHHSB	Melaka Halal Hub Sdn. Bhd.
PKNM	Melaka State Development Corporation
MHH	Melaka Halal Hub
10MP	10 <sup>th</sup> Malaysia Plan
GMP	Good Manufacturing Practice
HACCP	Hazard Analysis and Critical Control Points
IMP	Islamic Manufacturing Practice
MeSTI	Makanan Selamat Tanggungjawab Industri
SK1M	1 Malaysia Food Protection Scheme
FDA	Food And Drug Administration
EQA	Environmental Quality Act 1974
DOE	Department of the Environment
RBV	Resource-Based View
SPSS	Statistical Package for Social Sciences



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## CHAPTER 1

### INTRODUCTION

#### 1.0 Introduction

This research objective is to study the effect of eco-innovation that influenced eco-innovation practices for halal hub in Melaka manufacturers during endemic COVID-19. In this chapter, we will discuss the problem statement by giving the meaning of eco-innovation and halal hub. From this chapter, the study also consists of research questions and research objectives, the scope of the study, significance, and limitations of the study.

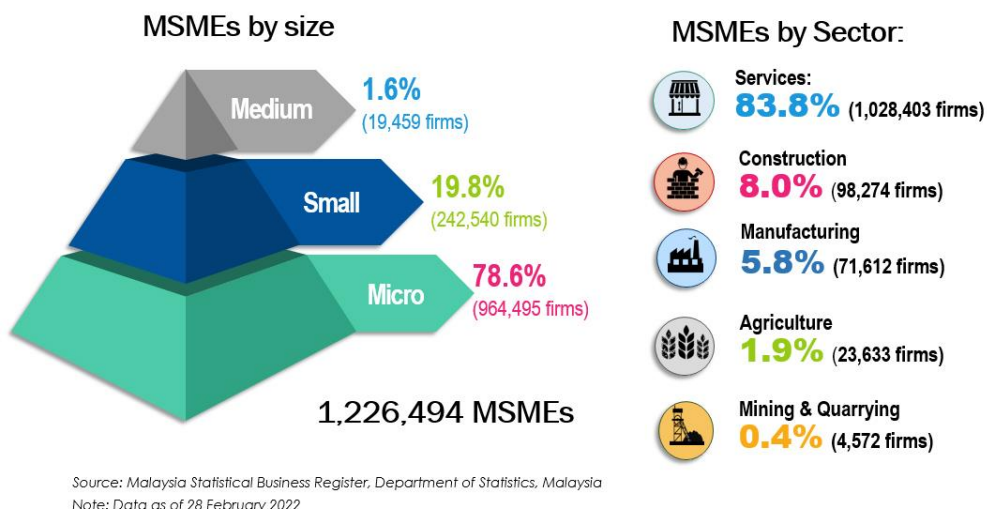
## 1.1 Research Background

More and more SMEs are emerging nowadays, this shows how important SMEs are in Malaysia. SMEs are the backbone of the Malaysian economy, representing 97.4% of total business establishments in 2021. According to statistics evidenced by the Department of Statistics Malaysia, SMEs can be seen in three groups, namely micro covering 78.6% (964,495 firms), small with 19.8% (242,540 firms), and medium with 1.6% (19,459 firms). This statistic creates a total establishment with a total of 1,226,494 SMEs in Malaysia. SMEs in Malaysia are also divided into several sectors, of which 83.8% of SMEs companies are services (1,028,403 SMEs), 8.0% are construction sector (98,274 SMEs), 5.8% are covered by manufacturing (71,612 SMEs), 1.9% are agriculture (23,633 SMEs), and 0.4% are mining and quarrying sectors (4,572 SMEs) as figure 1.1.

From the establishment of the New Economic Policy (NEP) 1971 to the New Economic Model (NEM) 2010 to the Economic Transformation Program (ETP) 2020 introduced by the Malaysian government to develop the country's economy. Looking at the ETP, the goal of the policy is to make Malaysia a high-income country in line with other developing countries. In other words, to improve the living standards of the community by bridging the income gap of the community. However, the Malaysian Government continues to strive to put more effort into recognizing the importance of SME growth in the national economy.

According to SME statistics (2020), SME exports were recorded at RM117.8 billion, compared to SME exports in 2019 of RM176.3 billion. Because of covid 19, the Malaysian economy experienced a slight decline, and the employment decreased in 2020 which is 7.25 million workers compared to 2019 at 7.3 million workers as shown in figure 1.2. The Malaysian vision to become a high-income country can be achieved with the emerging existence of SMEs as one of the economic contributions of Malaysia. SMEs must continue to be the backbone of Malaysia's economic development to achieve high-income country status by 2020.

**MSMEs are the backbone of the economy, representing 97.4% of overall business establishments in 2021**



**Figure 1.1: Economic Census**

	SME GDP	SME Exports	SME Employment
SME Performance in 2020	<b>RM512.8 bil</b> [38.2% share]	<b>RM117.8 bil</b> [13.5% share]	<b>7.25 mil workers</b> [48.0% share]*
	(2019: RM553.5 bil) [38.9% share]	(2019: RM176.3 bil) [17.9% share]	(2019: 7.3 mil workers) [48.4% share]*

Source: Department of Statistics, Malaysia \* revised methodology

**Figure 1.2: SMEs performance in 2020**

The 11MP was created to help the Malaysian economy. The SME policy is based on the 11MP, which includes four strategies for further strengthening economic fundamentals and maintaining economic stability, namely unlocking productivity potential to ensure sustainable and inclusive growth, encouraging investment to lead to economic growth, and increasing exports to improve balance. Trade, as well as increased fiscal flexibility, are needed to ensure a stable fiscal position. To achieve

inclusive and balanced growth, the 11MP focuses on the development of resilient and sustainable SMEs. During the 11MP period, the development of SMEs is based on the initiatives of the SME Master Plan (2012-2020), which includes the implementation of six High Impact Programs and other support initiatives in the Plan (SME Corp Malaysia).

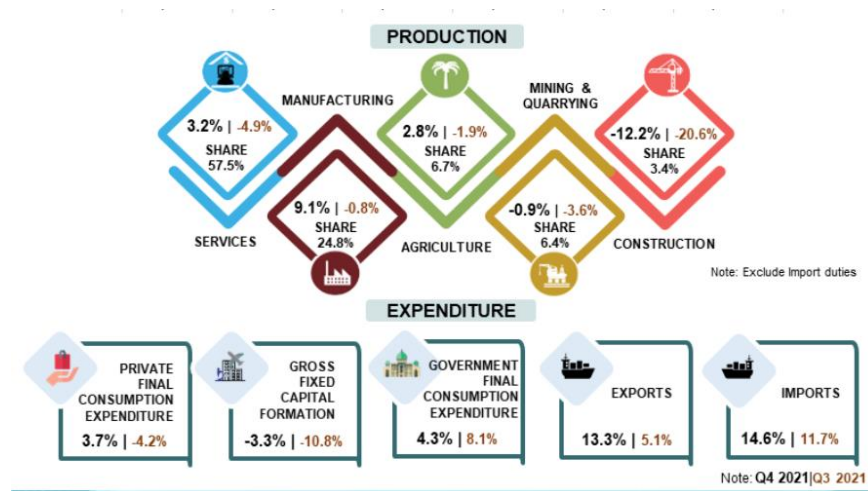
SME growth can provide employment prospects for the local populace while also encouraging positive engagement. Furthermore, most large corporations rely on small-enterprise resources in their communities to conduct business and improve quality. The partnership between these SMEs and large corporations has the potential to be mutually beneficial. SMEs in Malaysia must continue to support domestic growth in innovative and sustainable industries to achieve greater output in a more competitive and demanding environment.

There is no denying that SMEs in Malaysia are very important in the development of the Malaysian economy. Mustapha & Sorooshian, 2019 stated that the SMEs business in either developed or developing countries provide a significant positive contribution to the nation's economic development. However, the higher the economic development, the higher destruction occurs. This is because many SMEs in Malaysia lack environmental management understanding and misinterpret the idea (Moorthy et al., 2012). It might also be claimed that the literature on social and environmental management should pay more attention to the SME sector.

Most SMEs in Malaysia have not paid much attention to this problem unless they are power-intensive ventures or aim to project a clean and environmental image. Malaysia's government also has an ETP, which encourages a wider range of small and medium firms in the country to explore the development of green technologies. Furthermore, National Key Area (NKEA) is one of the declaration governments that is promoting green technology implementation.

The Malaysian economy was also impacted by the covid-19 pandemic. According to the Malaysian Department of Statistics (2022), performance in 2021 is still below the pre-pandemic level of 2019, with all sectors being affected except manufacturing. The major contribution to the economy, the services sector, was down 3.7 percent from the previous year. The accommodation sub-sector was the hardest hit, with less than half of the pre-pandemic level recorded.

According to the Department of Statistics Malaysia, Malaysia's Gross Domestic Product (GDP) expanded by 3.6 percent in the fourth quarter of 2021, reflecting the significant rise in exports and imports during the period. In terms of the current economic situation, the performance in 2021 will be lower than it was before the pandemic in 2019. However, the fourth quarter of 2021's economic performance as shown in figure 1.3 was 0.01 percent higher than the fourth quarter of 2019. Manufacturing is a substantial contributor to the Malaysian economy in terms of sectoral performance. Manufacturing rose at a solid rate of 9.1 percent. The entire manufacturing sector grew to 8.3 percent on a quarter-over-quarter seasonally adjusted basis. In the fourth quarter of 2021, the Services sector rose by 3.2 percent. The sector rebounded by 7.0 percent on a quarter-to-quarter seasonal adjustment. The Private services sub-sector, which grew by 2.7 percent, helped to boost the overall performance. During the quarter, the agriculture sector recovered 2.8 percent, helped by a 4.8 percent increase in oil palm and a rise in the other agriculture sub-sector (5.4%). Increase In seasonally adjusted terms, the agriculture sector had a minor increase of 0.2 percent. However, the mining and quarrying industry shrank 0.9 percent in the third quarter, owing to a 6.5 percent drop in the Crude Oil & Condensate sub-sector. The natural gas sub-sector, on the other hand, increased by 3.9 percent. The sector also saw a 0.6 percent increase in seasonal adjustment. In the fourth quarter of 2021, the construction sector experienced a double-digit decrease of 12.2 percent. Residential, civil engineering and non-residential structures were the biggest contributors to the sector's downturn. Despite this, specialist construction activity increased by 9.0 percent in the third quarter. The entire Construction industry rose 6.2 percent on a quarter-over-quarter seasonal adjustment.



**Figure 1.3: Malaysia GDP in Q4 2021**

The concept of SMEs and the history of SMEs in Malaysia begins with this literature-based study. It then discusses the factors of eco-innovation practices among halal hub manufacturing in Melaka during COVID-19. The discussion leads to a consideration of the factors of eco-innovation practices among halal hub manufacturing in Melaka during COVID-19. The final section concludes with the understanding of the factors of eco-innovation practices among halal hub manufacturing in Melaka during COVID-19.

### 1.1.1 Malaysia Halal hub Small Medium Enterprises (SMEs)

The Malaysian SME industry became the mainstay in contributing to the national economy, especially during the COVID-19. This resulted in some people losing their jobs and others staying at home, prompting them to start their own enterprises to make a livelihood while also providing employment chances to the community. Because most of Malaysia's population is Muslim, some people start businesses without considering incorporating eco-innovation, and so can turn halal hub practices into a competitive edge in the SMEs industry.

The halal hub is a collaborative effort between Islamic organizations or bodies such as Halal manufacturers, Halal traders, buyers, and consumers. According to Shirin Asa & Abdul Ghani Azmi, 2017, Malaysia is a multicultural and multiracial country. Muslims are the majority, and the constitution, which recognizes Islam as the country's official religion, supports their position and interests. When it comes to eating, most people make decisions based on their taste buds, desires, and skills. Muslims, on the other hand, must determine whether the food is allowed in Islam. This is because Muslims' lives are guided by the concepts of halal and haram. The Quran and the Sunnah both contain basic instructions on the issue of halal eating. The demand for halal cuisine is fueled by Muslim consumers' understanding of their religious requirements. The halal concept has become a normal need that is attracting significant attention in the local, international, and global markets.

Halal foods have grown in popularity in recent years, not only among Muslims but also among non-Muslims. This is because it has progressed from religious observance to the assurance of food safety, hygiene, and trustworthiness. Demand for processed frozen foods has increased because of the Covid-19 pandemic. Most of these Halal processed frozen products have been rotating off supermarket shelves as consumers buy food that is simple and easy to cook during the curfew time, as most people stay at home during the curfew period. Many believe that in the new normal following the outbreak, this product will continue to be in demand as more people work and eat at home.

Malaysian Halal Certification by the Department of Islamic Development Malaysia (JAKIM) has been recognized internationally as a standard logo and certification system. It is also permitted to be used by all Muslim countries that are members of the Organization of the Islamic Conference (OIC). Malaysia has an advantage in this regard because it is recognized internationally as a progressive Islamic country with the potential to be a significant producer of Halal food products. The Malaysian Halal Industry Development Corporation (HDC) is a specialized agency directly under the Ministry of Finance Incorporated whose mission is to strengthen Malaysia's halal ecosystem as well as commercial and industrial development and branding. It is a Malaysian government program aimed at establishing Malaysia as a global leader in halal-related innovation, production, and trade, with a focus on specialty processed foods, cosmetics, personal care,