

**USAGE ATTITUDE AMONG FOOD AND BEVERAGES
SMALL MEDIUM ENTERPRISES TOWARDS HALAL
MOBILE APPLICATION IN SABAH, MALAYSIA**



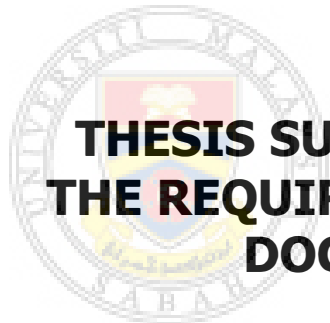
HASLINDA BINTI HASAN

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**LABUAN FACULTY OF INTERNATIONAL FINANCE
UNIVERSITI MALAYSIA SABAH
2023**

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SMALL MEDIUM ENTERPRISES TOWARDS HALAL
MOBILE APPLICATION IN SABAH, MALAYSIA**

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**THESIS SUBMITTED IN FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY**

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**LABUAN FACULTY OF INTERNATIONAL FINANCE
UNIVERSITI MALAYSIA SABAH
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UNIVERSITI MALAYSIA SABAH

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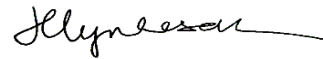
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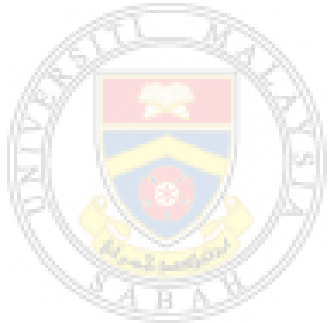
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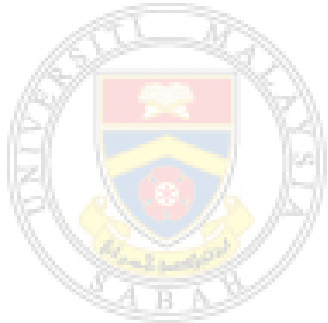
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Alhamdulillah.

*Thank you Allah,
For every single beat of my heart,
Even though when life is so hard,
You're by my side.*

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29 August 2022

ABSTRACT

The general function of the Halal Mobile Application (HMA) is to verify the Halal status of a product. However, the overarching idea is to provide access to a larger market and more transparency for those who conduct Halal business. This study was designed to examine the usage attitude among food and beverage Small and Medium Enterprises (SMEs) towards Halal mobile application in Sabah. Previous studies on Halal and mobile applications mainly addressed the Halal issue from the consumer's perspective, whereas this study addresses the HMA issue from the industry players' perspective (SMEs). The evolution of the Halal approach and the response of SMEs in Sabah to HMA as a tool to improve their Halal development programme were also discussed. The four objectives of the study are: (i) To examine the relationship between value images (Halal and social responsibility) and trajectory images (perceived consumer effectiveness and goals) towards usage attitudes of Halal mobile applications; (ii) To investigate the relationship between trajectory images (perceived consumer effectiveness and goal), and strategic images (relative advantage, perceived usefulness and perceived ease of use); (iii) To analyze the usage attitude of Small and Medium Enterprises of food and beverage with regard to mobile Halal applications based on Image theory; and (iv) To investigate perceptions of Halal among Small and Medium Enterprises in the food and beverage industry and attitudes towards the use of Halal mobile applications in Sabah. The research model was developed based on image theory and the adoption process. This study also bridges the interdisciplinary gap between Image theory for human decision making and the diffusion of innovation. Questionnaires were distributed to 200 SMEs in Sabah using the convenience sampling method. Of the questionnaires, a total of 186 were returned completed, representing a response rate of 93%. The research model was analysed using SPSS v27 and PLS-SEM. The results show that the relationship between social responsibility and goal is the strongest (0.516) and that perceived usefulness and acceptance of HMA is the weakest (-0.051). All errors of the PLS model were lower than those of the LM model. Therefore, we can conclude that the model has strong predictive power. Findings and discussion of this research will help SMEs, policy makers and researchers to find solutions, make suggestions and formulate the appropriate plans or decisions for SMEs related to HMA. This study is one of the first to address the issue of SMEs and HMA in Sabah. Moreover, this study assumes that the Halal concept is not only for marketing purposes but also as *Fardhu Kifayah* for Muslim food producers. Overall, this empirical study provides a valuable basis for further studies on the Internet of Things and SMEs in Sabah in particular and Malaysia in general. The study indicated that SMEs in Sabah have a positive attitude towards the use of HMA. The majority of SMEs surveyed in this study indicated that they are willing to use HMA to promote their business, improve productivity and manage their businesses. However, the use of HMA by SMEs in Sabah remains low due to a lack of awareness and a suitable business model. To increase the use of HMA among SMEs in Sabah, the study recommends that government agencies and industry players take proactive steps to educate and promote the use of these apps. In addition, better business models and incentives need to be put in place to encourage SMEs to use HMA.

Keywords: Halal, Usage Attitude, SME, Halal Mobile App, Image Theory, Diffusions of Innovation

ABSTRAK

SIKAP PENGGUNAAN TERHADAP APLIKASI MUDAH ALIH HALAL DALAM KALANGAN PERUSAHAAN KECIL DAN SEDERHANA, MAKANAN DAN MINUMAN DI SABAH, MALAYSIA

Fungsi umum aplikasi mudah alih Halal (HMA) adalah untuk mengesahkan status Halal sesuatu produk. Walau bagaimanapun, idea sebenar adalah untuk menyediakan akses kepada pasaran Halal yang lebih besar dan lebih telus terutama kepada pemain industri yang terlibat dalam perusahaan produk makanan dan minuman. Kajian ini dijalankan untuk mengkaji sikap penggunaan dalam kalangan Perusahaan Kecil dan Sederhana (PKS) makanan dan minuman terhadap HMA di Sabah. Kebanyakan kajian terdahulu yang melibatkan Halal dan aplikasi mudah alih adalah dari perspektif pengguna, tetapi kajian ini melihat isu HMA dari perspektif pemain industri iaitu PKS. Evolusi pendekatan Halal dan tindak balas PKS di Sabah terhadap HMA sebagai alat untuk menambah baik program pembangunan Halal turut dibincangkan. Empat objektif kajian ini adalah: (i) Untuk mengkaji hubungan antara imej nilai (Halal dan tanggungjawab sosial) dan imej trajektori (persepsi keberkesanan dan matlamat PKS) terhadap sikap penggunaan aplikasi mudah alih Halal; (ii) Untuk menyiasat hubungan antara imej trajektori (persepsi keberkesanan dan matlamat PKS), dan imej strategik (kelebihan relatif, persepsi kegunaan dan persepsi mudah digunakan); (iii) Menganalisis sikap penggunaan makanan dan minuman oleh Perusahaan Kecil dan Sederhana berhubung aplikasi Halal mudah alih berdasarkan teori Imej; dan (iv) Untuk menyiasat persepsi Halal dalam kalangan Perusahaan Kecil dan Sederhana dalam industri makanan dan minuman serta sikap terhadap penggunaan aplikasi mudah alih Halal di Sabah. Model penyelidikan dibangunkan berdasarkan teori Imej (Beach, 1990) dan Penyebaran Inovasi (Rogers, 2003). Kajian ini juga berupaya merapatkan jurang antara disiplin di antara teori Imej untuk pembuatan keputusan manusia dan penyebaran inovasi. Borang soal selidik telah diedarkan kepada 200 PKS di Sabah menggunakan kaedah persampelan mudah. Sebanyak 186 responden mengembalikan borang yang lengkap, mewakili kadar respons sebanyak 93%. Model penyelidikan dianalisis menggunakan SPSS v27 dan PLS-SEM. Keputusan menunjukkan bahawa hubungan antara tanggungjawab sosial dan penetapan matlamat adalah yang paling kukuh (0.516) dan persepsi kegunaan dan sikap penggunaan terhadap HMA adalah yang paling lemah (-0.051). Semua ralat model PLS adalah lebih rendah daripada ralat model LM. Oleh yang demikian dapat disimpulkan bahawa model itu mempunyai kuasa ramalan yang kuat. Dapatan dan perbincangan penyelidikan ini dijangka mampu membantu PKS, pembuat dasar dan penyelidik untuk mencari penyelesaian, membuat cadangan dan merangka pelan atau keputusan yang sesuai untuk PKS berkaitan HMA. Kajian ini juga antara kajian pertama melibatkan isu PKS dan HMA di Sabah. Kajian juga mendapati PKS di Sabah mempunyai sikap positif terhadap penggunaan HMA. Majoriti PKS yang terlibat dalam kajian ini menunjukkan kesanggupan menggunakan HMA untuk mempromosikan perniagaan, meningkatkan produktiviti dan mengurus operasi mereka. Bagaimanapun, penggunaan aplikasi mudah alih Halal dalam kalangan PKS di Sabah kekal rendah berikutan kurangnya kesedaran dan ketiadaan model yang sesuai. Untuk meningkatkan penggunaan HMA dalam kalangan PKS di Sabah, kajian mengesyorkan pihak berkuasa dan pemain industri mengambil langkah proaktif untuk mendidik dan mempromosikan penggunaan aplikasi

ini. Selain itu, model perniagaan dan insentif yang lebih baik perlu disediakan untuk menggalakkan PKS menggunakan HMA.

Katakunci: *Halal, Sikap Penggunaan, SME, Aplikasi Mudah Alih Halal, Teori Imej, Penyebaran Inovasi*



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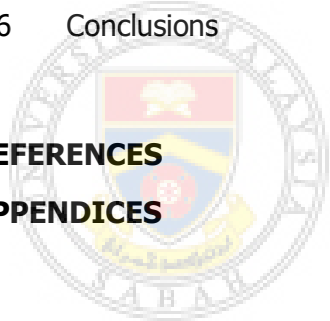
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LIST OF ABBREVIATIONS

App	-	Mobile Application
AVE	-	Average Variance Extracted
CR	-	Composite Reliability
DIDR	-	Department of Industrial Development and Research
DoI	-	Diffusion of Innovation
DOSM	-	Department of Statistics Malaysia
F&B	-	Food and Beverage
HDC	-	Halal Development Corporation
HMA	-	Halal Mobile Application
HTMT	-	Heterotrait-Monotrait
ICT	-	Information Communication Technology
IoT	-	Internet of Things
JAIN	-	Jabatan Agama Islam Negeri
JAKIM	-	Jabatan Kemajuan Islam Malaysia
JHEINS	-	Jabatan Hal Ehwal Islam Negeri Sabah
MCMC	-	Malaysian Communication and Multimedia Commission
MeSTI	-	Makanan Selamat Tanggungjawab Industri
MOH	-	Ministry of Health
PCE	-	Perceived Consumer Effectiveness
PEU	-	Perceived Ease of Use
PLS	-	Partial Least Square

PU	-	Perceived Usefulness
RA	-	Relative Advantage
RCT	-	Rational Choice Theory
SEM	-	Structural Equation Modelling
SME	-	Small Medium Enterprises
SMECorp	-	SME Corporation Malaysia
SPSS	-	Statistical Package for Social Sciences
SR	-	Social Responsibility
TAM	-	Theory of Acceptance Model
TPB	-	Theory of Planned Behaviour
TRA	-	Theory of Reasoned Action
VIF	-	Variance Inflation Factor



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CHAPTER 1

INTRODUCTION

1.1 Introduction

In the new global economy, Halal has become a central issue for business development. Traditionally Halal have subscribed to the belief that animals such as cows and the chicken should be slaughtered according to the Islamic procedures. This statement suggests that Halal used to refer only to food, especially meat. Halal is also used for other products such as clothing, animal foods, health and wellness products, Halal tourism, Halal trade finance and global wellbeing, and Halal logistics (Zulfakar et al., 2012; Hughes & Malik, 2013; Shahid, et al., 2018; Fard & Amiri, 2018; Boğan & Sarıışık, 2019; Vanany, et al., 2019; Ab Talib, & Wahab, 2021). The Halal industry has now expanded far beyond the food sector and the economic potential of Halal has spread to other sectors. This means that the Halal concept has evolved from a niche market to a lifestyle (Elasrag, 2016; Azam & Abdullah, 2020).

The two main agencies that are often associated with Halal certification in Malaysia is JAKIM and Halal Industry Development Centre (HDC). In particular, the Halal certification is under the governance of the Halal Hub Division, a special department set up by JAKIM. Both these agencies play a very important role in the Malaysian Halal industry, and the role is very different. Jurisdiction JAKIM is focused on Halal certification and compliance with Halal standards while HDC is focused on the development of local and global Halal industry and marketing of Halal products. (Soraji, et al., 2017). In 2021, the Prime Minister, Datuk Seri Ismail Sabri Yaakob, said Malaysia's Halal industry is one of the focus areas of the National Economic Recovery

Plan and Industrial Recovery to improve the economic resilience of Muslim-majority countries, boost industrial capacity and increase productivity through the use of machines, cloud computing and Internet of Things (IoT). On 9 September 2021, the government, through the Halal Development Corporation (HDC), launched the Halal Integrated Platform (HIP), an online hub for Halal industry players, especially Small and Medium Enterprises (SMEs), to grow and connect their businesses with their stakeholders, government agencies, financial institutions, industry partners, educational institutions, as well as consumers to the Halal ecosystem. (Whitehead, 2021).

The increasing demand for Halal products is primarily due to the demands with which Muslims adhere to their religious values. Muslim consumers also seek a high level of involvement in the products they purchase to ensure conformity with their faith and tend to take steps to ensure that these products are compliant with their faith (Nuraini & Sucipto, 2021). The Pew Research Centre (2019) projects that the number of Muslims will increase from 1.8 billion to nearly three billion by 2060. Figure 1.1 compares the forecast of global Muslim spending in USD between 2017 and 2023.

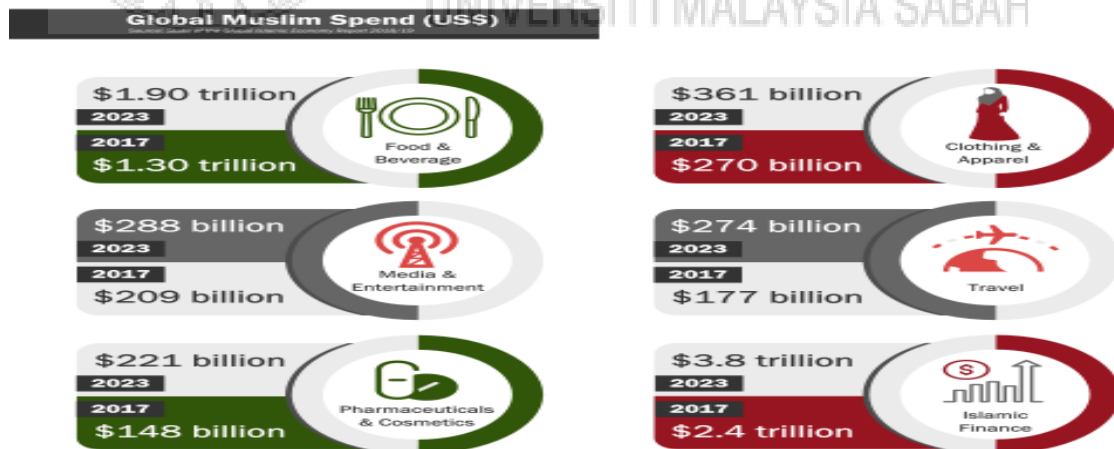


Figure 1.1 : Global Muslim Spend (US\$) 2019

Source : Pew Research Center (2019)

There are currently 200,000 SMEs involved in the domestic Halal industry, but less than 10,000 are Halal certified, according to HDC (2021) only 300 companies in Sabah has received Halal certification. As noted by Ahmad Tarmizi et al. (2020), in the last five (5) years, about 6,138 SMEs have been Halal-certified and in 2018, there are about 5,800 Halal-certified SMEs, indicating a 6.7% decrease in the number of Halal-certified companies (SME Corporation, 2018). The decline in Halal-certified SMEs indicates that there are loops in maintaining Halal integrity among SMEs. They added that with the presence of advanced technology such as the IoT, Halal integrity could be maintained among these SMEs. This aligns with the HDC's long-term objective (HIP) to encourage and support Malaysian SMEs to become Halal certified and connect with other Halal players domestically and in the global Halal market. As mentioned in Salaam Gateway (2021), the global Halal economy will be worth USD 5 trillion by the end of the decade, but Malaysia's contribution has been insignificant. With the strong support and initiatives from the government, it is hoped that SMEs will be motivated and strive to bring their Halal products to the wider market.

As mentioned by Al-Alawi & Al-Ali (2015), SMEs play a key role and are considered one of the most important drivers of socio-economic development and job creation, even in times of economic crisis. According to Armstrong & Drnevich (2009), there are two main reasons for the existence of small businesses: (i) to provide goods and services to satisfy the needs of customers in such a way that they continue to use and recommend the company's goods and services to others, i.e. "customer service business", and (ii) to produce the desired goods and services so that the investment in the business is converted into cash as soon as possible, i.e. "cash conversion business". As mentioned by Khan & Khalique (2014), researchers and agencies responsible for small business development are seeking a better understanding of small businesses, and in many countries, SMEs have also attracted the attention of policy makers. As added by Dalrymple (2004), all economies focus on the SME sector to promote employment, economic development and innovation. As mentioned by Kutlu & Ozturan (2008) information technology (IT) offers all companies a wide range of opportunities for doing business.

SMEs have always been considered the most important economic actors and a strong source of economic growth. Therefore, it is obvious that the use and deployment of IT in SMEs is very important for the global economy. When people think of Halal, technology is not the first thing that comes to mind, although technology would enable Halal to keep up with the modern world, as SME Asia (2019) mentions. With technology, Muslims can ensure that an article of faith of Halal can be adhered to despite the complexity of today's environment. The best platform for developing the application would be smartphones because they are light and small and are often taken everywhere by the user. In addition, the capabilities and functions of the smartphone itself are one of the reasons for its choice (Shankar & Hollinger, 2007; Yahaya et al., 2011; Md. Nasir et al., 2011; Bakar, et al., 2014; Ambad, et al., 2020).

As the world becomes increasingly interconnected, the proliferation of smartphones remains one of the decisive factors for technological progress. In recent years, the proportion of people in emerging countries who own and use a smartphone has risen steadily. The proliferation of cheaply manufactured mobile phones and the decline in the cost-of-service plans have contributed to the increasing popularity of smartphones across the Asia-Pacific region. By 2021, the number of smartphone users in Malaysia is estimated to be about 29 million. Given the growing population, the number of smartphone users in Malaysia is expected to increase by another 1.74 million by 2025. (Table 1.1)