




Institute of Technology Management and Entrepreneurship



**THE DEVELOPMENT OF SOCIO-TECHNICAL APPROACH TO
ENHANCE THE USAGE OF MYeHALAL SYSTEM IN MELAKA,
MALAYSIA**

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Master of Science in Human Resource Development

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**THE DEVELOPMENT OF SOCIO-TECHNICAL APPROACH TO ENHANCE
THE USAGE OF MYeHALAL SYSTEM IN MELAKA, MALAYSIA**

NURDINAH BINTI ABU BAKAR

**A thesis submitted
in fulfillment of the requirement for the degree of Master of Science in Human
Resource Development**



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2020

DECLARATION

I declare that this thesis entitled “The Development of Socio-Technical Approach to Enhance the Usage of MYeHALAL System in Melaka, Malaysia” is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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APPROVAL

I hereby declare that I have read this thesis and in my opinion this thesis is sufficient in terms of scope and quality for the award of Master of Science in Human Resource Development.

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DEDICATION

To my beloved husband, mother, late father and my daughter.



ABSTRACT

The aim of JAKIM MYeHALAL system implementation is to facilitate the halal certification in Malaysia. However, it is hardly achievable considering the discouraging acceptance among the MYeHALAL system users. Some halal applicants consider the system is complex and complicated to use, resulting in the prolonged or rejected application. Some companies resort to hiring external consultant agencies to perform the halal certification applications for them and creates unnecessary charges to the companies. Therefore, this research aimed to address three (3) research objectives, firstly, to investigate the actors/factors that limit and facilitate the use of the MYeHALAL system, secondly, to explore how actors influence each other (facilitate and hindrance) in enhancing the usage of MYeHALAL system, and thirdly, to develop a socio-technical model for the applicants to improve their competency towards an enhanced usage of MYeHALAL system. Considering the usage of the MYeHALAL system is a combined interaction of social and technical elements, this research applied Actor-Network Theory (ANT), a theory that enables an equal treatment of analysis for both human (social) and non-human (technical) elements in one analysis, the translation process. Framed by ANT, this study has conducted semi-structured interviews with 14 halal applicants and three (3) officers from JAKIM and JAIM. Three (3) problems were identified as operational problems, applicants' problems and technical problems. Besides, further investigation also revealed four (4) main factors, applicants, technology, guidelines and organisations which cooperatively influenced the usage of the MYeHALAL system. The detailed information of these factors were explained to get a clear understanding of their roles towards the online halal certification application. From that, this study developed a socio-technical model that can be used as a guidance for the policymaker in stressing on the crucial parts that required to be understood by the halal applicants in ensuring successful usage of the online halal certification. However, as this research was carried out specifically among halal food/beverages/food supplement manufacturers in Melaka, Malaysia and it is limited on the MYeHALAL system usage, it is suggested for further research to investigate on other scopes of certification schemes or in a wider context of national levels, or, on other online halal certification application systems developed by other halal certifier bodies worldwide.

PEMBANGUNAN PENDEKATAN SOSIO-TEKNIKAL BAGI MENAMBAH BAIK PENGUNAAN SISTEM MYeHALAL DI MELAKA, MALAYSIA

ABSTRAK

Objektif pembangunan sistem MYeHALAL adalah untuk memberi kemudahan kepada permohonan pensijilan halal di Malaysia. Namun begitu, objektif ini sukar dicapai kerana penerimaan yang kurang memberangsangkan dalam kalangan pengguna sistem MYeHALAL. Antaranya, sistem MYeHALAL dilihat sebagai sebuah sistem atas talian yang kompleks dan rumit untuk digunakan dan ianya telah melambatkan proses kelulusan permohonan pensijilan halal. Kesannya, pemohon terpaksa menggunakan khidmat konsultan luar bagi membantu membuat permohonan pensijilan halal dan menyebabkan mereka terpaksa membayar kos ke atas perkara yang tidak sepatutnya. Oleh itu, kajian ini telah dijalankan dengan tiga (3) objektif iaitu pertama, untuk mengkaji aktor/faktor yang menghalang dan memudahkan penggunaan sistem MYeHALAL, kedua, untuk meneroka bagaimana aktor-aktor tersebut mempengaruhi satu sama lain (memudahkan dan menghalang) dalam menambah baik penggunaan sistem MYeHALAL dan ketiga, untuk membangunkan model sosio-teknikal kepada pemohon sijil halal bagi menambah baik kompetensi mereka dalam menggunakan sistem MYeHALAL. Berdasarkan permasalahan tersebut dan dengan mengambil kira faktor sosial dan teknikal yang terlibat, kajian ini telah menggunakan pakai Actor-Network Theory (ANT), iaitu sebuah teori yang menganalisis kedua-dua elemen teknikal dan sosial secara sama rata menerusi Proses Terjemahan (translation process). Dengan bersandarkan ANT sebagai rangka, kajian ini menggunakan teknik temu bual separa berstruktur ke atas 14 orang pemohon halal dan tiga (3) pegawai dari JAKIM dan JAIM. Dapatan kajian mendapati terdapat tiga (3) masalah yang telah dikenal pasti membawa kepada kesukaran penggunaan sistem MYeHALAL iaitu masalah operasi, masalah pemohon dan masalah teknikal. Dapatan seterusnya telah mendapati empat (4) faktor yang sama-sama mempengaruhi keberkesanan sistem MYeHALAL iaitu pemohon, teknologi, garis panduan dan organisasi. Setiap faktor diperincikan bagi mendapatkan pemahaman yang jelas tentang peranan setiap daripadanya dalam memastikan kelestarian penggunaan sistem ini. Setelah itu, satu model sosio-teknikal telah dibangunkan untuk dijadikan panduan kepada pembuat dasar dalam menekankan elemen-elemen yang penting untuk difahami oleh pemohon bagi membantu mereka dalam menjayakan permohonan sijil halal atas talian ini. Namun begitu, oleh kerana kajian ini hanya dilakukan dalam kalangan pengusaha skim pensijilan halal makanan/minuman/makanan tambahan di Melaka, Malaysia dan terhad kepada penggunaan sistem MYeHALAL, pengkajian terhadap skim pensijilan halal yang lain dalam konteks yang lebih besar atau pengkajian terhadap sistem permohonan halal lain dicadangkan sebagai kajian lanjutan.

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LIST OF ABBREVIATIONS

ANT	-	Actor-Network Theory
AT	-	Activity Theory
DHH	-	Department of Halal Hub, JAKIM
DOI	-	Diffusion of Innovation Theory
DoS	-	Department of Standards
ICT	-	Information Communications and Technology
IT	-	Information Technology
JAIM	-	Jabatan Agama Islam Melaka
JAKIM	-	Jabatan Kemajuan Islam Malaysia
MAMPU	-	Malaysian Administrative Modernization and Management Planning Unit
MoH	-	Ministry of Health
MPMHC	-	Manual Procedure of Malaysia Halal Certification
MS	-	Malaysian Standards
OE	-	Organisational Effectiveness
OPP	-	Obligatory Passage Point
SIRC	-	State Islamic Religion Council
TAM	-	Technology Acceptance Model

LIST OF PUBLICATIONS

Abu Bakar, N., Arif, S., Sidek, S., 2020. Overview of Online Halal Certification: Practice and Issues. *International Journal of Advanced Science and Technology*, 29(4s), pp.3624-3638.

Arif, S., Abu Bakar, N., and Sidek, S., 2019. A Framework to Investigate the Use of MYeHALAL Online System in Malaysia. *International Journal of Human and Technology Interaction*, 3 (2), pp.1–10.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The purpose of this research is to gain an understanding of the facilitation and limitations of an online platform service that is currently offered by a particular government body. Specifically, this study investigated the usage of the MYeHALAL system, owned by the Jabatan Kemajuan Islam Malaysia (JAKIM), that functions as a platform to manage and facilitate the halal certification application in Malaysia. This system is currently used for the application of halal certificate (new and renew), addition and disposal of products' ingredients information and checking the status of their application.

This chapter presents an overview of the whole thesis. It consists of nine (9) sections that include the introduction, research background, problem statement, research objectives and research questions. Further, the details of the research framework are explained, followed by the research scope, significance of the research and definitions of terms that significance to this thesis.

1.2 Background

Information communications and technologies (ICT) has been a part of everyone's life, and it has continuously created new types of markets and enabled a new pattern of industry dynamics (Lee et al., 2015). The drastic development of ICT has brought to the creation and adoption of many online technologies worldwide, particularly in the development of e-government, e-banking/finance, e-health, e-learning and many others. The

adoption of an information system or information technology has opened many opportunities and benefits for better information flow, better execution of policy development as well as better coordination and enforcement (Ahmad, 2006).

The potential benefits of the information system advancement have convinced Malaysia to develop many branches of e-government system, including a system to accommodate the halal certification application. This move is also driven by the pledge made in the Third Industrial Master Plan (IMP3), 2006-2020 (Chapter 21) and the 11th Malaysia Plan (RMK-11) (Chapter 8 and 18) that aim to make Malaysia as the global halal hub for the production and trade of halal goods and services. One of the efforts to make Malaysia as the global halal hub is to strengthen the capabilities of its halal certification and auditing bodies by building a credible, reliable and efficient system for halal certification. Responding on that matter, JAKIM has obtained the ICT expertise from Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) to develop an online halal certification application, leading to the first e-halal application that was launched on 2007. This online system is responsible for facilitating online halal certification application in the industry and providing a database of halal companies and products (Md. Sawari et al., 2015).

The Department of Halal Hub (DHH), JAKIM rebranded the Malaysia halal certification application system from e-Halal to MYeHALAL system in 2014. The rebranding involved an improvement in the application form, which was classified into seven (7) certification schemes, namely: (1) food, beverages or food supplements products; (2) applied products; (3) food premises; (4) slaughterhouse; (5) logistics; (6) pharmaceuticals; and (7) cosmetics and toiletries (Jabatan Kemajuan Islam Malaysia (JAKIM), 2014). The rebranding also involved the obligation to use the online system for the halal certification application with authority given to the State Islamic Religion Council (SIRC) to have direct access to process the submitted online application. The MYeHALAL system acts as a

medium of communication between JAKIM or SIRC with halal applicants can update their application status and as a platform for the halal business, and manufacturers to declare or modify any ingredients information of their products. The submission of the online form via MYeHALAL system is considered as the first stage of the halal certification application, and complete submission of documentation must be made before the online application can be approved.

The responses from the MYeHALAL system users have been varied. Despite the successful usage of the system, some reported that there are still on-going issues that needed to be effectively handled by the system administrator. The common issues raised related to the technical issues of the online halal certification system are limited languages, lack of a standardised system for updates and maintenance and unorganised display of the webpage (Mohamad Husny et al., 2014; Noordin et al., 2014). The external technical factors such as incapability of the gadget or devices and poor internet connection are also identified to have negative influences on the online halal system usage (Md. Sawari et al., 2015). Besides that, problems pertaining operational problem and applicant's problem have been highlighted by other researches, particularly on lengthy application, inconsistent information delivery, poor communication, lack of knowledge on existing halal rules and guidelines, and poor skills in using online technology, contributed to the unsuccessful usage of MYeHALAL system (Noordin et al., 2014; Md. Sawari et al., 2015).

This research advocates that the understanding of the usage of online technology, namely the MYeHALAL system involves both the social and technical aspects. This will help this research to provide a holistic and comprehensive understanding of the multi-categories of issues pertaining to the usage of MYeHALAL system mentioned earlier in the previous paragraph. In this case, this study applies the ANT as the underlying theory of investigation. The theory, Actor-Network Theory (ANT) enables equal treatment of both

social and technical elements, which provides the construction of a comprehensive and holistic understanding of the MYeHALAL system problems and the research gap that will be highlighted later in the next section of this chapter.

1.3 Problem statement

In line with the efforts to make Malaysia as the international halal hub, the government has mandated that all companies must apply their halal certificate online via MYeHALAL system. Consistent with the common understanding and agreement among citizen, online technology should provide efficient and fast service. Thus, MYeHALAL system was introduced to fasten and simplify the halal certification process. However, there are still ongoing issues encountered by some applicants, leading to many severe issues, such as delay in acquiring halal certificates (Mat Isa and Mohd, 2014). The difficulties are rooted from various issues, such as IT knowledge, proficiency in using gadgets and application system, the size of the business, the number of products applied and its ingredients which have been partly highlighted by previous research (Md. Sawari et al., 2015). Further, these problems have forced applicants to hire an external consultant agency to apply for the halal certification on behalf of the company, which requires the companies to spend unnecessary additional charges. As such, there is a need to investigate the ways in which MYeHALAL system is used to tackle these issues.

Many efforts have been made to solve these addressed problems, but they tend to focus on the certification process rather than investigating the reasons for the limited usage of the online system. Firstly, most efforts only focus on the certification processes, and minimum discussions were made on the use of online halal certification system (Noordin et al., 2009, 2014; Ilyas Tan et al., 2015). These studies have positively contributed to the understanding of the whole process in applying for halal certification, as they have provided

the information on the related bodies and its functions, key activities in the halal certification process, regulations, standards and requirements in halal certification. However, they did not contribute to understanding the usage of the online system.

Besides that, there were only a few papers that emphasised on the adoption of technology in halal certification (Mohamad Husny et al., 2014; Kadir et al., 2015; Suleiman et al., 2017). These studies discussed the usage of current technologies used in assisting halal industry (Mohamad Husny et al., 2014) and suggested that other possible technologies or systems should be applied as one of the efforts to improve and upgrade the halal industry and to keep up with current technological development (Kadir et al., 2015; Sulaiman et al., 2017). However, none of the papers has made an extensive discussion specifically focusing on the usage of the online system in halal certification application. This is the gap that this research intends to address. Therefore, this research is motivated to investigate the usage of the MYeHALAL system, particularly in providing a nuanced understanding of the use of the MYeHALAL system. For this purpose, this research adopts a new perspective of investigating the use of MYeHALAL system drawn from ANT. It is believed that ANT will provide the nuanced understanding of the multi-elements of problems and provide fair and equal treatment given to the multiple and fluid actors that influence the use of technology.

1.4 Research questions

This research aims to address the following research questions.

1. What are the factors (actors) that are related to the limited usage and interest of MYeHALAL system?
2. How do these agents (factors) interact and influence each other when using the MYeHALAL system?

3. How do the actors facilitate their relationship (network) in using the MYeHALAL system based on the ANT model?

1.5 Research objectives

This research is conducted to achieve three (3) main objectives as below:

1. To investigate the actors/factors that limit and facilitate the use of the MYeHALAL system.
2. To explore how actors influence each other (facilitate and hindrance) in enhancing the usage of MYeHALAL system.
3. To develop socio-technical model for the applicants to improve their competencies towards an enhanced usage of MYeHALAL system.

1.6 Research framework

This research focuses on deriving an understanding of the MYeHALAL system usage. As the MYeHALAL system combines the social and technical factors, the interaction between the heterogeneous actors is important to be highlighted and understood. This research is an interpretative research that applies a qualitative approach to address the research objectives and obtain answers for the research questions. The qualitative approach helps to explore the usage and implementation of MYeHALAL system. Prominently, ANT plays an important role as the lens for interpretation of the process of data and analysis. As an introduction to ANT, ANT is a theory that has been developed by Bruno Latour, Michel Callan and John Law in the 1980s (Crawford, 2004). It is a well-known theory in the socio-technical studies which adopt the interpretative approach to both human and non-human elements, enabling an equal treatment and multi-perspective view of analysis (Arif et al.,