

SMALL MEDIUM ENTERPRISES IN FOOD AND BEVERAGE INDUSTRY BEHAVIOURAL INTENTION TOWARDS HALAL AND FOURTH INDUSTRIAL REVOLUTION TECHNOLOGY

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Abstract: *The purpose of this study is to identify the impact of Small Medium Enterprises in Food and Beverage Industry Behavioural intention towards Halal and Fourth Industrial Revolution Technologies in Malaysia. This study is a quantitative descriptive study that uses questionnaires as a research instrument and uses unified theory of acceptance and use of technology (UTAUT) by Venkatesh, Morris, Davis, and Davis (2003) and theory of planned behaviour by Ajzen (1991) as a theoretical background. The expected findings of this study is there is a positive relationship in Halal and fourth industrial revolution technology acceptance toward small medium enterprises (SMEs) for food and beverage industries in Malaysia. Researchers view that there are some significant effects that may result from this study. However, it depends on the variables available and related to the present study*

Keywords: *Small Medium Enterprises (SMEs), Halal, Fourth Industrial Revolution Technology, Behavioural intention*

Introduction

Halal is derived from an Arabic word that is permissible or accepted by Islam. Halal products include poultry and meat, non-meat food, personal care, health products, cosmetics and pharmaceuticals. While services include Islamic finance, takaful, travel for pleasure, education, and healthcare (Basir et.al., 2018). According to Viverita & Rachmawati (2017) the demand for halal certified products has increased significantly mainly in food and beverage product. Furthermore, the food industry has paved the way toward interests in the growth of the market and the development of food products and, in particular, the SMEs of the Malaysian food industry (Azmi et al., 2019). Thus it provides local SMEs with an opportunity to step up their efforts to emphasize the Halal standard among SMEs because the industry is growing rapidly in local and global.

Moreover, the food industry in Malaysia have been dominated by SMEs (Ngah et al., 2017 ; Azmi et al., 2018). The halal food products have turned out to be progressively popular among consumers globally, as the idea of halal is related with good, healthy, safe and high quality assessment. However, entrepreneurs do not seriously picture the significance of halal and its power to attract consumers in which even MATRADE encourages halal entrepreneurs to utilize technology to enhance productivity and quality (Bernama, 2017).

Besides that, halal product in Industry 4.0 era becomes a sensitive discussion, especially in Muslim society(Ahmad, Tangngareng, Harun & Masr, 2019). Halal industry master plan 2030 (HIMP) which highlight on one of the key enables in HIMP 2030 are strong focus of encouraging halal innovation through the technological advancement of IR4.0, IoT, Blockchain, Fintech, and BigData to ensure halal product go through an entirely verified supply chain. However, Halal SMEs do not really understand the value of Halal and its ability to win over customers, where even Malaysia International Trade Development Corporation encourages Halal entrepreneurs to use innovation to boost productivity and quality (Azmi et al., 2019).

Furthermore, although the SMEs gross domestic product (GDP) growth is estimated to be sustained at 5.8% in 2018 and 2019, Malaysia government has urged Small Medium Enterprises (SMEs) to embark more on research and development especially in technology and explore new growth areas in the digital economy in the Fourth Industrial Revolution (IR4.0) for more sustainable growth (Bernama, 2019).Hence, this study seeks to determine the acceptance of halal technology fourth revolution and in implementing Halal food industry toward SME entrepreneurs in Malaysia.

Literature Review

Halal

Halal is taken from an Arabic word for permissible or approved, and is used to refer to everything that is permissible for a Muslim. It is also refers to permissible and lawful for consumption in accordance to syariah principles provided that it is safe and not harmful. It is in line with Department of Islamic Development (JAKIM) that defines halal food as food not made of, or contained any part of animal which is forbidden by Islam and free from any unlawful or impure element. Moreover, the main objective of the Syariah in Islamic law is the protection of human beings. The rules of “the basic of things is permissibility” as purported in the Quran such as in surah al- Baqarah2:168. ‘O mankind! Eat of that which is lawful and wholesome, and follow not the footsteps of the devil. He is an avowed enemy of you’ (Surah Al-Baqarah 2:168). This rule has also been contributively to the flexibility and applicability of the Islamic Law throughout the ages (Sabidin, 2015).

Small Medium Enterprises (SMEs)

According to Small and Medium Enterprise Corporations in Malaysia, an enterprise is considered as an SME based on the annual sales turnover or number of full time employees. Small enterprises are enterprises that have their sales turnover from RM300000 and not exceeding 3 million with the capacity of 5 to 30 fulltime staff. While the medium enterprises are those who had sales turnover from RM 3 million and not exceeding 20 million with the numbers of fulltime employee 30 and not exceeding 75 (SME annual reports, 2018-2019).

According to Viverita& Kusumastuti (2017), Small and medium-sized enterprises (SMEs) play a significant role in a nation's economic survival, especially during times of crisis. This sector contributes to about 55 percent of GDP in Asian countries such as Indonesia, Malaysia, Philippines, Thailand, and Vietnam; this sector also helps the government minimize unemployment by helping to absorb 70 percent of the labor force (Jinjarak et al., 2014).

4.0 Revolution Industries Technologies in Malaysia

According to Ooi et al. (2018), in its exploration of Industry 4.0, Malaysia has been sluggish because most of them still stick to the 2.0 and 2.5 structures, and tend to use foreign labour rather than invest in automation and IT. Malaysia is also in the early stages of automation in terms of the production sector. Furthermore, the application of modern artificial intelligence (AI) and ICT in smart agriculture in Malaysia is still at an early stage (Wan Ab Karim Ghani et al., 2019). Industry 4.0 is also described as using computers and internet technology for a process of generating economic value more efficiently and effectively. Digitization is a trend that affects all markets, where conventional goods are either replaced by digital elements or complemented at least by new digital features (Horvath & Szabo, 2019). According to Tarmizi (2019), Halal food industry emerging as a significant business in Malaysia is primarily to offer the quality and value of halal food to consumers. Nonetheless, the current state of digitalisation in the Malaysian small and medium-sized enterprises market, where almost all have touched the surface of using digital technology systems as a source of productivity growth and market gains(Huawei report, 2018).

Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003) is one of the most popular technologies in the field of acceptance models. This theory emphasizes that the four main constructs (performance expectations, expectation of effort, social influence, and ease of provision) are bases of intention and behavior (Venkatesh et al., 2003). Besides that, Yoo , Han & Huang (2012) stated UTAUT describes performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) as four central frameworks for forecasting user behavioural intentions (BI) and real user behaviours (UB) in the adoption of work- technology. Furthermore, several researchers used UTAUT to describe the adoption of technology by various groupings of entrepreneurs. The explanation for using UTAUT for this form of research is that it is known as the social framework of technical acceptance and usage that involves not only hierarchical organisational structures such as project teams, functional groups, business divisions and the entire enterprise, but also informal social organisations, such as user communities and other informal social networking. (Venkatesh et al., 2016).

Theory of Planned Behaviour (TPB).

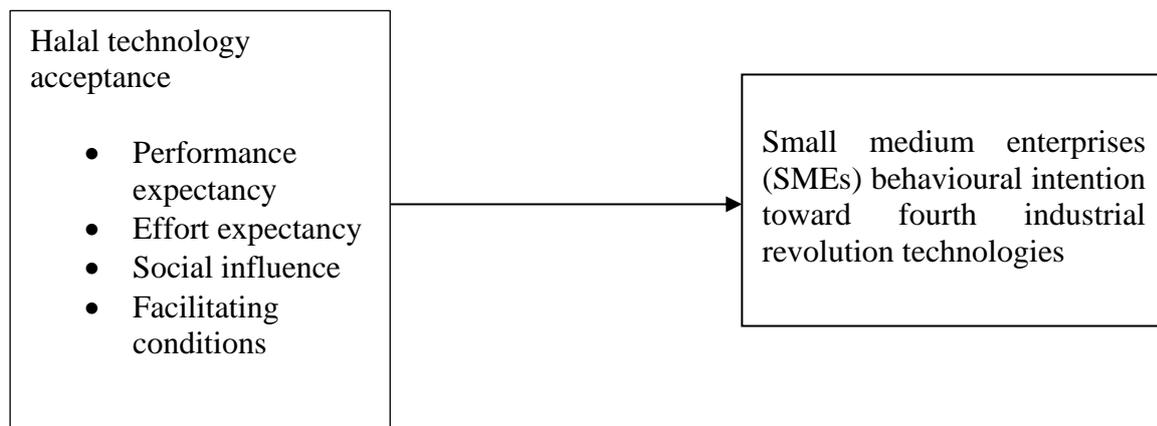
Ajzen (1991) developed Theory of Planned Behaviour which is about one factor that determines behavioural intention of the person's attitudes toward that behaviour Jaffar and Musa (2013) has discussed that TPB model is one of the most powerful and common frameworks in studies related to behaviour prediction from variables of attitude. Moreover, past research has shown that the TPB offers an excellent mechanism for determining predictors of the intention to buy automotive related technologies (Afroz et al., 2015), and determinants of Halal buy intention (Afendi et al., 2014). Besides that, Ajzen, (1991) indicated that TPB is ideal for describing any behaviour that involves planning, such as entrepreneurship. Furthermore,

there is a lot of area in which TPB has only been seen on a few occasions. One of them is internationalization of the business. To explain the cross-border business activities, several theories have been established.

Conceptual Framework

Independent variable (IV)

Dependent Variable (DV)



The study framework is developed to give more understanding about all the variables used in this study. The framework is adapted from the theory framework by the unified theory of acceptance and use of technology (UTAUT) by Venkatesh, Morris, Davis, and Davis (2003) and theory of Planned Behaviour by Ajzen (1991) as guidelines. Based on the literature review discussed Halal technology acceptance traits are being as the independent variables. Meanwhile Small medium enterprises (SMEs) behavioural intention toward fourth industrial revolution technologies is the dependent variable.

Methodology

This study is quantitative and develops in the form of a survey that uses a questionnaire. The use of questionnaires aims to obtain a lot of important and more accurate information from the respondents, so that more respondents can be collected. In addition, this approach also allows researchers to combine traditional statistical analysis based on classical theory tests and advanced statistical analysis such as Structural Equation Modelling (SEM). Therefore, the survey method that uses the questionnaire is the most suitable method for this study. For each study, the same set of questionnaires was used for all respondents. In order to meet the objectives of this study, the researcher formed this research instrument in line with the research questions. These dimensions are measured through five point scales. The target population for this research was SME Companies that produce halal product for food and beverage.

Conclusion

In summary, this study was conducted to identify the relationship between Halal technology acceptance and Malaysia Small medium enterprises (SMEs) in food and beverage industry behavioural intention toward implementing fourth industrial technologies. In addition, this study uses UTAUT theories to integrate as a complement to the objectives of the study that tests

Malaysia Small medium enterprises (SMEs) behavioural intention toward implementing Halal and fourth industrial technologies. Thus, halal technology acceptance is assumed to have an impact on Malaysia Small medium enterprises (SMEs) in food and beverage industry behavioural intention toward implementing Halal and fourth industrial.

References

- Afendi, N., Azizan, F. & Isa Darami, A. (2014). Determinants of Halal Purchase Intention: Case in Perlis. *International Journal of Business and Social Research*, 4(5), 118-123. doi:<http://dx.doi.org/10.18533/ijbsr.v4i5.495>
- Afroz, R., Masud, M. M., Akhtar, R., Islam, M. A. & Duasa, J. B., (2015). Consumer purchase intention towards environmentally friendly vehicles: an empirical investigation in Kuala Lumpur, Malaysia. *Environmental Science and Pollution Research*, 22(20), 16153-16163
- Ahmad. A., Tangngareng, T., Harun, A., & Masri, M. (2019). Halal product: New market opportunity in challenging the industrial revolution 4.0. In 1st International Conference on Science and Technology, ICOST 2019. Sidoarjo, Indonesia: European Alliance for Innovation (EAI)
- Ajzen, I. (1991). The Theory of Planned Behaviour. *Organizational Behaviour and Human Decision Processes*, 50, 179-211.
- Azmi, F., Abu, A., Bakri, M & Musa, H. & Jayakrishnan, M. (2018). The adoption of halal food supply chain towards the performance of food manufacturing in Malaysia. *Management Science Letters*. 8. 755-766. 10.5267/j.msl.2018.5.010.
- Azmi, F., Abdullah, A., Yahaya, S., Woźniak, M. & Purnomo, M. (2019). Adoption of Halal Standard in Malaysian Food Industry: A Case of Small and Medium Enterprises. *Journal of Advanced Manufacturing Technology (JAMT)*, 13(3). Retrieved from <https://jamt.utm.edu.my/jamt/article/view/5736>
- Abdul Basir, N & Tamby Chik, C & Bachok, S & Baba, N & Hamid, R & Salleh, M.. (2018). Motivational factors for halal certification adoption among small and micro enterprises in Malaysia. *International Journal of Supply Chain Management*. 7. 391-396.
- Bernamea (2017). "MATRADE Gesa PKS Halal Manfaatkan Teknologi Bagi Meningkatkan Produktiviti," BERNAMA, Kuala Lumpur
- Bernamea (2019). Government allocating significant resources to support SMEs. Retrieve from <https://www.mida.gov.my/home/8800/news/government-allocating-significant-resources-to-support-smes/>
- Department of Islamic Development of Malaysia (2014). Manual Procedure for Malaysia Halal Certification, Third Revision. Retrieve from <http://www.halal.gov.my/v4/images/pdf/MPPHM2014BI.pdf>
- Halal Development Corporation portal (2020). Halal Industry Master Plan 2030. Retrieve from <http://www.hdcglobal.com/wp-content/uploads/2020/02/Halal-Industri-Master-Plan-2030.pdf>
- Horváth, D. & Roland, Z.S. (2019). "Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities?", *Technological Forecasting and Social Change*, 146, 119-132.
- Jaffar, M. A. & Musa, R. (2013). Determinants of attitude towards islamic financing among Halal-certified micro and SMEs: A proposed conceptual framework. In *International Journal of Education and Research* (Vol. 1, pp. 1-10).

- Jinjarak, G., Mutuc, P.J. & Wignaraja, Y. (2014), "Does finance really matter for the participation of SMEs in international trade? Evidence from 8,080 East Asian firms. Asian Development Bank Institute Working Paper Series, No. 470.
- Ngah, A. H., Zainuddin, Y. & Thurasamy, R. (2017). "Applying the TOE framework in the halal warehouse adoption study", *Journal of Islamic Accounting and Business Research*, vol. 8, no. 2, pp. 161–181.
- Ooi, K.B, Voon, H.L., Garry, W.H., Tan, T.S., Hew, J.J. & Hew (2018). "Cloud computing in manufacturing: The next industrial revolution in Malaysia?", *Expert Systems with Applications*, 93, 376-394.
- Qureshi, S. & York, A.S. (2008). Information Technology Adoption by Small Businesses in Minority and Ethnic Communities. *Proceedings of the 41st Annual Hawaii International Conference on System Sciences (HICSS 2008)*, 447-447.
- Ramdani, B., Chevers, D., & Williams, D. (2013). SMEs' adoption of enterprise applications: A technology-organisation-environment model. *Journal of Small Business and Enterprise Development*. 20. 10.1108/JSBED-12-2011-0035.
- Sabidin, F. (2015). Halal Hotels In Malaysia: Certification, Issues and Challenges. *Journal of Tourism and Hospitality Essentials (THE) Journal*, Vol. No.2.2015-897. Retrieve from <http://ejournal.upi.edu/index.php/thejournal/article/viewFile/2000/1382>
- Small and Medium Enterprises official website (2020). SME Definitions .Retrieve from <http://www.smecorp.gov.my/index.php/en/small-and-medium-sized-enterprises>
- Tarmizi, H. & Kamarulzaman, N.H. & Rahman, A. & Atan, R. (2019). Adoption of internet of things among Malaysian halal agro-food SMEs and its challenges. *Food Research*. 4. 256-265. 10.26656/fr.2017.4(S1).S26.
- Venkatesh, V., Morris, M.G., Davis, G.B. & Davis, F.D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), pp. 425-478.
- Venkatesh, V., Thong, J.Y., & Xu, X. (2016). Unified Theory of Acceptance and Use of Technology: A Synthesis and the Road Ahead. *J. Assoc. Inf. Syst.*, 17, 1.
- Viverita, & Kusumastuti, R. D. (2017). Awareness of halal certification of micro and small enterprises in Jakarta. *International Journal of Economics and Management*, 11(2 Special Issue), 459-471.
- Viverita, Kusumastuti, R. D., & Rachmawati, R. (2017). Motives and Challenges of Small Businesses for Halal Certification: The Case of Indonesia. *World Journal of Social Sciences*, 7(1), 136-146. <http://wjsspapers.com/static/documents/March/2017/11.%20Viverita.pdf>
- Wan Ab Karim Ghani, W. A., Salleh, M. A. M., Adam, S. N., Mohd Shafri, H. Z., Shaharum, S. N., Lim, K. L., Rubinsin, N. J., Lam, H. L., Hasan, A., Samsatli, S., Tapia, F., Khezri, R., Jaye, I. F. M. & Martinez-Hernandez, E. (2019). Sustainable bio-economy that delivers the environment-food-energy-water nexus objectives: the current status in Malaysia. *Transactions of the Institution of Chemical Engineers Part C: Food and Bioproducts Processing*, 118, 167-186. <https://doi.org/10.1016/j.fbp.2019.09.002>
- Yoo, S. & Han, S.H. & Huang, W. (2012). The roles of intrinsic motivators and extrinsic motivators in promoting e-learning in the workplace: A case from South Korea. *Computers in Human Behavior*. 28. 942–950. 10.1016/j.chb.2011.12.015.