
The Impact of E-Commerce Platform Adoption Among MSME: A Literature Review

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Abstract - The spread of the COVID-19 pandemic has changed daily life greatly. As a result of the restrictions implemented during the spread of COVID-19, most transactions were undertaken online. All economic sectors, including the Micro, Small, and Medium Enterprises (MSME) sector, were affected by the new norms. At the beginning of the COVID-19 outbreak, online transactions were challenging to implement. Nevertheless, they are becoming easier and help entrepreneurs maintain consistent operations until the economic situation becomes stable. The MSME sector is crucial in comparison with other primary sectors in the acquisition of national income. This review article discusses the impact of the adoption of e-commerce platforms among MSME entrepreneurs based on three aspects of technology, organisation, and environment in a recovering economy after the spread of the COVID-19 pandemic. The three primary aspects of the technology, organisation, and environment (TOE) model are widely adopted in the study of e-commerce platform adoption. In the future, this study will continue with the methodology, findings, and discussion sections.

Keywords: “Impact”, “Electronic Commerce Platform”, “Micro, Small, and Medium-Sized Enterprises”.

1. Introduction

Since the beginning of the Coronavirus 19 (COVID-19) spread and the implementation of the Movement Control Order (MCO) to curb the virus from spreading (Alduaij, 2022 and Gao, 2023), the community has begun to engage in online activities to perform their daily routine, including online learning, online working, online business, and online purchasing from home (Gwala and Mashau, 2022, Lestari et al, 2021 and Oktora et al, 2020).

The high demand for online purchasing activities has boosted the delivery of goods (Gwala and Mashau, 2022 and Khan, 2020). From a positive perspective, the COVID-19 pandemic has opened good opportunities for e-commerce activities to grow as an alternative

to conventional activities for consumers, traders, and entrepreneurs (Oktora. 2020 and Religia, 2023).

Micro, Small and Medium-Sized Enterprises (MSME) entrepreneurs were also affected by the COVID-19 pandemic (Ali Hanafiah et al, 2022 and Religia et al, 2023). The implementation of MCO by the government throughout the country has negatively impacted total sales, income, and operating costs (Arsalan Hussain, 2022), especially in Selangor. Nevertheless, there are still MSME entrepreneurs who are able to maintain consistent total sales and earn a higher income despite operating solely online (Lian et al, 2022).

This situation gives confidence to the government in its efforts to create an innovative, inclusive and technologically integrated society in line with the goal of Malaysia 5.0 (Arsalan Hussain et al, 2020 and Chong Ke Wei et al, 2022). Therefore, MSME entrepreneurs need to transform their businesses and shift towards online marketing methods to improve conventional marketing methods in the post-COVID-19 pandemic era (Ali Hanafiah et al, 2022 and Chong Ke Wei et al, 2022). They can take advantage of all initiatives provided by the government (Omar et al, 2018).

1.1 COVID-19 Pandemic

In terms of readiness, there is a challenge that forces every country to work hard to control it, similar to the COVID-19 pandemic, which is similar to a huge tsunami hitting the whole world (Alduaij, 2022 and As'ad et al, 2022). The coronavirus (COVID-19) pandemic has resulted in millions of deaths and positive cases globally (Khan et al, 2020 and Oktora et al, 2020). The COVID-19 outbreak was first detected in mid-December 2019 in the city of Wuhan, Hubei, China. Subsequently, it was recognised as a pandemic by the World Health Organisation (WHO) on March 11, 2020 (Khan, 2020 and Smriti and Kumar, 2021).

The COVID-19 pandemic is unprecedented, and it remains unclear when it will completely recede. The entire world has learnt to accept and adapt to the new norm (Religia et al, 2023 and Ta and Lin, 2023). Governments worldwide have introduced various strategies as a new norm that must be followed to curb the COVID-19 pandemic (As'ad et al, 2022).

Although the MCO period has long ended, the COVID-19 pandemic continues to exert a huge impact on all business sectors, especially on the MSME sector, in terms of management, transactions, marketing, delivery, and revenue (Gao et al, 2023). Entrepreneurs are forced to adopt new business strategies, including implementing online marketing, encouraging online purchasing, and laying off employees (Religia et al, 2023).

Unfortunately, not all entrepreneurs are capable of adapting their business strategies to conform to new norms (Alduaij, 2022 and Gao et al, 2023). Changes have affected their income (As'ad et al, 2022), but some MSME entrepreneurs are still able to generate multiple incomes and profits online (Gao et al, 2023).

1.2 Micro, Small, and Medium-Sized Enterprises

According to SME Corp. Malaysia (SME Corp, 2019), a business is classified as a Small and Medium-Sized Enterprise (SME) if it meets all the requirements based on eligibility criteria, type of establishment, and shareholder structure. The criteria used to define SMEs are based on total annual sales and the number of full-time employees (SME Corp, 2019). The definition of SME for the manufacturing sector is that the annual sales of the enterprise do not exceed RM50 million, and the number of full-time employees does not exceed 200 people (SME Corp, 2019). For the service sector and other sectors, the total annual sales do not exceed RM20 million, and the number of full-time employees does not exceed 75 people (SME Corp, 2019). Nowadays, SMEs are also referred to as MSMEs (SME Corp, 2019), although SME Corp defines both establishments similarly (SME Corp, 2019).

At the beginning of the post-independence era, the government relied primarily on several sources, including large-scale industrial products such as tin and rubber production left over by British colonialists, which was supplemented by additional sources from small industries. Nevertheless, the output from small industries was minimal due to heavy reliance on traditional methods and limited scale of operations (Omar et al, 2018). In addition to small industries, rural industries have been widely cultivated in rural areas, and they have provided additional income or regular income to residents who previously relied heavily on agricultural sources (Albert Feisal Ismail et al, 2017).

The early development of business and trade was the basis for the establishment of the MSME sector in Malaysia, and it continues to develop today. The government previously encountered several challenges in its efforts to promote MSME growth, particularly among Malay entrepreneurs (Arsalan Hussain et al, 2020). Nevertheless, the current main challenge is focused on efforts to maintain the enterprise's performance to ensure long-term competitiveness, especially after the COVID-19 pandemic, to avoid operational failure and being forced to close (Gao et al, 2023).

Alongside large-scale industries, MSMEs are also classified as an important sector (Gao et al, 2023). Various initiatives are available for MSME entrepreneurs to enhance the competitiveness of their businesses in the long term (Ali Hanafiah et al, 2022 and Lian et al, 2022). The initiatives provided by the government, including technology adoption such as the Internet, can develop the MSME sector and enable the sector to be more competitive in the local and global market, increase productivity efficiently, and build good relationships between customers and suppliers (Chong Ke Wei et al, 2022).

1.3 Electronic Commerce Platform

Transaction activities have been ongoing since the dawn of commerce, with the primary challenge historically being long-distance trade (Albert Feisal Ismail et al, 2017). In order to expand their business network, entrepreneurs need to expand their market presence. The market expansion involves high costs, including transportation, maintenance, and labour (Arsalan Hussain et al, 2020 and Lestari et al, 2021). In addition, time factors must also be taken into account when international trade is involved in different time zones. This issue further complicates trade deals for MSME entrepreneurs (Chong Ke Wei et al, 2022).

Adopting the electronic commerce (e-commerce) platform is the best method for overcoming various issues MSME entrepreneurs face (As'ad et al, 2022). Religia et al (2023) explained that the e-commerce platform is a mechanism that can solve marketing issues that are often faced by MSME entrepreneurs.

SME Corp (2019) stated that e-commerce platforms can be classified into four main categories, namely business-to-consumer (B2C), business-to-business (B2B), consumer-to-consumer (C2C), and consumer-to-business (C2B). An e-commerce platform facilitates virtual electronic transactions without the limitations of distance and time, utilising the Internet (As'ad et al, 2022). In fully virtual or semi-virtual environments, enterprises establish websites accessible to customers at any time (operating 24 hours) and from flexible locations (Oktora et al, 2020).

2. Literature Review

This study aims to determine the impact of e-commerce platform adoption by Malay MSME entrepreneurs after the COVID-19 pandemic in Selangor. The findings of previous studies reveal that studies on the impact of the use of e-commerce by Malay MSME entrepreneurs in Selangor who are involved in the food sector remain at a moderate level (Albert Feisal Ismail et al, 2017).

In addition, the findings of previous studies (Arsalan Hussain et al, 2020) imply that most studies on e-commerce adoption are based on several important models, such as the environment model (TOE), the technology acceptance model (TAM), the planned behaviour model (TPB), the innovation diffusion model (DOI), and a unified model for technology acceptance and use (UTAUT).

Based on several past studies, it was found that the TOE model developed by Tornatzky and Fleischer (1990) is highly suitable to be used as a basis for research since it has a combination of internal and external aspects to study the impact of using the e-commerce platform.

There are three variables in the TOE model, namely, technology, organisation, and environment. The variables are a combination of external and internal aspects that can help produce a better study (Baker, 2011). Currently, the TOE model has been widely used to identify factors that can influence the impact of e-commerce adoption. The research model used in this study is the TOE model introduced by Tornatzky and Fleischer (1990). The TOE model is related to aspects of innovation that depend on the development of the latest technology, the state of efficient organisational management, and an effective industrial environment (Effendi et al. 2020).

2.1 TOE Model

The TOE model comprises three aspects that are used to determine the level of acceptance and implementation of innovation in business, which are aspects of technology, organisation, and environment (Rawash, 2021). The TOE model is one of the most complete study models due to the combined internal aspects and external aspects (Oktora et al, 2020).

The technology aspect concerns the level of technology adoption from the company's internal and external aspects, such as the level of appropriateness of using the latest technology (operation and production), the level of difficulty of using technology (attempts for appropriateness), and observation (benefits of using technology).

On the other hand, the organisational aspect is a description of company management aspects such as support from management at the top level, a good management culture, and management structure based on employee quality and work issues (Arsalan Hussain et al, 2020).

Environmental aspects related to company operations include competition pressures, customer demands for quality and after-sales service, consideration of socio-cultural issues for consumers, government incentives for business advancement, and access to the latest technology infrastructure, such as online consultation services (Gutierrez et al, 2015).

2.2 Technology

Technological variables pertain to behavioural control, encompassing cognitive skills in technology adoption, such as proficiency in the latest technology and vendor support, necessary for exploring the potential of new systems (Religia et al, 2023). The technology aspect relates to the level of technology use at the internal and external levels of the organisation.

According to the findings of other research, the technology aspect is related to three indicators: relative advantage, perceived difficulty, and compatibility in use. The perception of relative advantage implies that the use of the latest innovation has an advantage in creating sales strategy effectiveness (increasing sales revenue), operational effectiveness (reducing the company's operating costs), and receiving incentives (Setiyani and Rostiani, 2021).

The perception of difficulty refers to the level of acceptance of the latest innovation, which is perceived as challenging to use. This definition implies that the latest innovation requires technical knowledge for efficient utilisation. The perception of perceived compatibility refers to the level of appropriateness of technology use, which is a crucial factor in the acceptance and use of the latest technology in company operations (Ali Hanafiah et al, 2022).

2.3 Organisation

Organisational variables refer to company characteristics such as company size, number of employees, company structure, and communication processes within the company (Setiyani and Rostiani, 2021). Previous studies have shown that organisational variables are the most frequently used variables to determine the level of innovation adoption in companies such as MSMEs.

Organisational aspects are related to several indicators, such as company size, top management support, and technology use in operations (Religia et al, 2023). The support

from superiors is crucial in the effort to use the latest technology in the company since it is closely related to the allocation of high operational resources, the restructuring of the company's operations, and highly efficient production.

Top management that recognises all the benefits of e-commerce adoption will likely provide high capital resources for e-commerce adoption. It is also an effort by employees to implement positive changes in the company (Chong Ke Wei, 2022). In addition, the level of knowledge among employees regarding the use of technology is crucial for a company to utilise an e-commerce platform successfully. Employees' knowledge is vital as the use of technology will cause many changes in the company's operations, and the employees must adapt to the new norms.

Previous studies indicate that larger companies tend to adopt the latest technology more rapidly than smaller ones. This trend is influenced by the company's ability to access various resources, including capital and skilled ICT workers.

2.4 Environment

The pace at which organisations adopt technology is significantly influenced by environmental factors. The environment in which businesses operate exerts a significant impact on MSMEs in terms of using the latest technology. Companies will be more likely to use e-commerce platforms in competitive activities since competitors employ similar technology to gain a competitive advantage.

Previous studies have revealed that environmental variables consist of pressure from competitive activities, business partners, and vendors. Pressure from competitors causes companies to utilise the same technology to be competitive in an increasingly challenging environment. When competitors utilise e-commerce platforms, companies are also encouraged to adopt e-commerce platforms more efficiently to gain a competitive advantage.

The level of competition within the same industry directly correlates with the perceived importance of using e-commerce platforms among MSMEs. Supplier pressure is evident in the impact of e-commerce platform usage on companies, influenced by suppliers who also utilise such platforms. Currently, the increase in online customer transactions necessitates companies to adopt e-commerce platforms to fulfil customer demands.

2.5 Impact of Technology on E-Commerce Platform Adoption

Technology variables are related to three perceptions, namely relative advantage, difficulties faced, and perceived compatibility. The perception of relative advantage reflects the degree of acceptance of innovation, specifically the adoption of e-commerce platforms, believed to offer superior benefits to companies compared to their pre-COVID-19 operational strategies. Previous studies have empirically identified the relative advantages of perception of the impact of the use of e-commerce platforms.

The perception of difficulties faced refers to the adoption of the latest technology that is considered difficult to use in the company's operations. The lack of technical knowledge regarding e-commerce platforms can hinder adoption if users find it challenging

to use and understand the concept. Nevertheless, if the platform is easy to understand and use, the level of difficulty encountered will be reduced.

The perception of perceived compatibility refers to the company's level of readiness with past experience, provision of technological infrastructure, and work practices required in the company. It is crucial for management to assess whether the use of new technology will meet the needs of the company's internal and operational aspects.

Perceived compatibility has a positive influence on the acceptance and use of e-commerce platforms by MSME entrepreneurs, especially during the COVID-19 pandemic. Technological variables have a significant influence on the impact of e-commerce adoption by MSME entrepreneurs. Although many studies state that technology variables have a significant impact on the use of e-commerce platforms, several studies mentioned that technology variables do not have a significant impact on the use by MSME entrepreneurs.

2.6 Impact of Organisation on E-Commerce Platform Adoption

Organisational variables are used as determinants for perceptions of top management support, technological knowledge, and organisational size. The perception of top management support is based on the level of knowledge of top-level leaders in the organisation regarding e-commerce adoption. Support from top management ensures that the company receives financial resources and adequate equipment for the adoption of e-commerce.

Previous research findings found that support from top management is significantly related to the adoption of e-commerce by MSMEs. In addition to top-level management support, the perception of technological knowledge is crucial for the ability of MSMEs to accept e-commerce adoption in transactions. The findings of previous studies discovered that the perception of technological knowledge among employees is crucial in the successful impact of e-commerce adoption by MSMEs.

As for the perception of the size of the organisation (company), the findings of previous studies state that companies of all sizes can use technology (e-commerce platforms) to improve the image of the company and be more competitive. Company size assessment is also considered one of the three most important perceptions in the use of e-commerce platform technology among MSME entrepreneurs. The findings of previous studies revealed that organisational variables have a significant influence on the use of e-commerce platforms among MSME entrepreneurs.

Nevertheless, a previous study stated that organisational variables do not have a significant influence on the use of e-commerce platforms by MSME entrepreneurs. Since the findings of previous studies indicate such findings, new studies are needed to clarify the gaps in the findings of this study.

2.7 Impact of Environment on E-Commerce Platform Adoption

Environmental variables comprise three perceptions, namely the perception of competitive pressure, pressure from business partners (suppliers) and customers, and government support. Perception of competitive pressure is the level of pressure from competitors in the MSME sector.

When competitors start using e-commerce platforms, companies will be encouraged to use the same technology extensively to earn better and be more competitive [9,11,21]. If the level of competition in the industry is high, the probability of MSME entrepreneurs using the e-commerce platform increases.

The perception of pressure of business partners (suppliers) and customers is the effect of pressure caused by transactions with suppliers and customers who first use the e-commerce platform. The perception of pressure from business partners and customers emerges as the primary predictor of the impact of e-commerce platform utilisation by MSME entrepreneurs, exerting significant influence. Similarly, the perception of government support emerges in various forms, such as financial assistance, advisory services, and facilities provision, aimed at aiding MSME entrepreneurs in leveraging e-commerce platforms effectively.

It has a significant influence on the impact of e-commerce adoption by MSME entrepreneurs (Effendi et al, 2020). The findings of previous studies stated that environmental variables (factors) have a significant influence on the acceptance of the use of e-commerce platform technology. Nevertheless, the findings of previous studies revealed that environmental variables do not affect the use of e-commerce platforms. The findings of previous studies also state that environmental variables or factors do not have a significant impact on the impact of MSME entrepreneurs using e-commerce platforms (Omar et al, 2019).

3. Conclusion and Future Study

In conclusion, the TOE model can be used as a variable to determine the factors that can impact the use of e-commerce platforms by Malay MSMEs, especially after the COVID-19 pandemic (Chong Ke Wei et al, 2022). The findings of previous studies indicate that technological variables can be measured as determinants of the perception of relative advantage, the perception of difficulties encountered, and the perception of perceived compatibility.

Organisational variables can be measured as determinants of top management support, technological knowledge, and organisational size (Chong Ke Wei et al, 2022). On the other hand, environmental variables can be measured as determinants of the perception of competitive pressure, pressure from business partners and vendors, and government support (Lian et al, 2022).

This study reveals that the findings of previous studies indicate a significant influence of all three variables, namely technology, organisation, and environment found in the TOE model on the impact of the use of e-commerce platform usage by Malay MSME entrepreneurs in the food industry after the COVID-19 pandemic (Ali Hanafiah et al, 2022).

Nevertheless, previous research findings state that none of the three variables, namely technology, organisation, and environment from the TOE model, have a significant influence on the use of e-commerce platforms by Malay MSME entrepreneurs in the food industry after the COVID-19 pandemic (Arsalan Hussain et al, 2020).

The findings of previous studies yield different results, with some supporting and others refuting the findings of this study (Omar et al, 2018). Despite the different research findings, it is hoped that new research endeavours will emerge to investigate further the influence of the three variables (technology, organisation, and environment) in the TOE model on e-commerce adoption within the MSME sector (Ali Hanafiah et al, 2022).

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