

Halal E-Commerce Measure of Success: A Consideration of Sharia Compliance Business Practice

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Abstract: Halal e-commerce platforms are developed to address the loopholes in other e-commerce websites through compliant with Sharia requirement in products or services offered, payment gateways, warehouses and logistics management to ensure that products remain halal throughout the trading processes. The Sharia requirements in halal e-commerce include avoidance of *riba*, *gharar*, *maysir* and *haram* elements. This is a research in progress paper that is centred on information system success literature with aim to improve the online business practice that comply with Islamic law or Sharia' in the context of halal e-commerce operations. Thus, based on DeLone and McLean Information System Success Model, this study proposed a conceptual framework of Sharia compliant e-commerce practice that would be used to measure the success or effectiveness of halal e-commerce platforms. Even though previous literatures have validated the model in other conventional e-commerce, this study adopt the Sharia framework as a guide for Muslim consumers, vendors and other halal e-commerce stakeholders to ascertain the right platform to be used.

Key words: Information system success • Information quality • Systems quality • Service quality • Sharia compliance • Halal e-commerce • E-commerce success model

INTRODUCTION

The halal e-commerce industry is growing stronger and bigger as a result of the increase in the global Muslim consumers' spending on this segment [1]. E-commerce in halal industry also has remarkable impact on national economy as the new generation of Muslim consumers are looking for products and services that address their religious preferences and their digitally connected lives. Generally, e-commerce makes life more convenient for consumers and opens up all kinds of new opportunities for businesses. It allows consumers to access information of the products or services and purchase them online. It helps small businesses to compete with larger businesses and broaden market reach by breaking up their geographic isolation. In other words, online presence enables global market access even for small businesses and provides wider coices of products and services for consumers.

The halal e-commerce utilizes the advancement of technology to provide information about the halal status of the products or services and perform transactions over the internet. Using attractive and interactive website to introduce the products or services [2-4] email or other type of social media to further communicate, reliable payment processing method [5] and trusted mode of delivery are among the benefits brought by latest technology to e-commerce [6]. Additionally, the compliant to Shariah and adherence to Islamic law of conduct in performing the transaction between both parties need to be maintained, in order to uphold the 'halal e-commerce' title.

Yet, there are two main issues concerning the effectiveness of halal e-commerce marketplace that has become a key challenge for many halal business. Firstly, there appear to be a lack of understanding on what is lawful and unlawful in carrying out a trading as governed

by Sharia and Islamic business practice [7]. For example, it was reported where e-commerce site that claims to be halal but offers non-halal products in a halal section in the website [8]. Secondly, the issue of trust in conducting online transaction which may affect consumers decision to use the system [9]. If the platform has the mechanism to verify the authenticity of halal status provided by sellers and convincing online payment method, the customers may choose to use the e-commerce platform.

In short, the effectiveness and success of halal e-commerce platform may become the central issue for halal industry to address. This is because the halal market is currently valued at USD2.3 trillion annually and the government projected this segment can contribute 8.7 per cent to Malaysia's gross domestic product (GDP) by 2020. Thus, a robust and highly accessible halal e-commerce ecosystem can help to achieve the target (New Straits Times, 2017). Therefore, there are questions whether existing halal e-commerce have made significant contribution to halal industry and how they do so in compliance with Sharia and Islamic law of contract. For that reason, the aim of this study is to explore the best practice of Sharia compliant e-commerce which determine its effectiveness and success.

The following sections will present the overview of the literature and the proposed conceptual model. The discussion of the proposed model ended the theoretical part of the paper. Then, it is followed by a brief description of methodology, the next research step to be taken, the expected outcome and contribution and conclusion.

Literature Review

Halal Industry: The halal industry has increasing the extent beyond Muslim countries and consumers. The potential of the halal industry are the result of the rising of Muslim populations which is comprised of 1.7 billion people in 2014 and is expected to increase to 2.2 billion by 2030 [1]. Besides, the increase in the awareness among non-Muslim consumers to consume clean and quality products has also contributed to increased expectations when making purchases which cause the surge in demand for halal products. For example, in 2013, the size of the global halal food industry worth USD1.292 billion and is expected to become as high as USD2.537 billion by 2019 [1].

Realising the importance of the industry, the Malaysian government has embarked on various initiatives to transform the country into a major global halal hub [10]. This includes the establishment of

numerous agencies such as Halal Development Corporation (HDC) to focus on various activities and issues related to halal development. To strengthen the development of local halal small and medium enterprises (SMEs) in halal market, countless interventions have been made by HDC. Among the responsibilities that receives important focus are to increase the number of home-grown SMEs exporting to global halal market and encourage them to meet the requirements in the global markets by promoting them to follow the halal standards and comply with audit and certification [11].

The Department of Islamic Development Malaysia (JAKIM), as the country's sole halal certification body, has the authority to issue halal certificates and halal logos for products produced locally. Meanwhile, for products produced overseas require certification by a JAKIM's recognised body in the respective country. It does this through inspections at typical audit sites such as the manufacturing factory, food premises or abattoirs. Using the Malaysian Halal Standard as a guideline, the audit involves inspections on all aspects of the operations including documents, processes, handling, tools, storage, cleanliness, packaging or labelling. The country's reputation in halal industry has further strengthened following recognition by the Organisation of the Islamic Conference (OIC) on the nation's halal certification issued by JAKIM. Proudly to say, Malaysian halal certification is one of the most recognised halal logos in the world.

As halal market is growing and gaining momentum, there is a wide opportunity for businesses to expand into this sector. According to the Minister of International Trade and Industry, Datuk Seri Mustapa Mohamed, the Malaysian SMEs contribute 32.7% to national GDP in 2012 and expected to increase to more than 40% in 2020. He said the target can be achieved, at least when the SMEs constantly become suppliers to larger and multinational companies in the global supply chain. Also, through e-commerce, it will provide SMEs an interesting platform to expand their business outside of domestic borders and entering international markets.

E-Commerce in Halal Industry

E-commerce Definition: E-commerce is the online process of buying and selling of goods or services. In e-commerce researches, the term e-commerce has many definitions. It depends on the perspective of researchers, academicians, or practitioners to suit their studies. According to Grandon & Pearson [12], e-commerce has been defined in several ways depending on the context and research objective of the author. For example, Simpson & Docherty [13] defined

-commerce as the use of the Internet for buying and selling activities such as advertising, negotiations and contracts. Turban *et al.* [14] defined e-commerce as the process of selling, buying, transferring, or exchanging products, services and/or information through the Internet. While Rahayu & Day [3], in their studies defined e-commerce as the use of networked information and communication technologies (ICT), especially Internet technology, in any business activities.

Even though e-commerce has different definitions from various point of view, it brings together two most important elements. First, business activities such as sharing of information, marketing, customer services and other related activities are conducted through electronic medium. Second, these business activities are supported by technology applications such as email, website, online banking and payment gateway. Despite these diverse conceptions of e-commerce, it can be understood that the technology comprises digitally enabled commercial transactions between and among organizations and individuals [15].

In this study, e-commerce is focused in the context of e-marketplace in halal industry, or halal e-commerce platforms. Since halal industry operates in different settings and principles as compared to general business, it has a different, even unique set of factors that determine the firm's e-commerce requirement [10]. For example, sellers of the halal products need to ensure that the products they offered are halal from its source. The receipts and payments of money are free from interest. Then, the distribution of products may require the use of halal logistics and warehouse to certify that there is no contamination with non-halal elements, until they reached end customers. Thus, all the processes throughout the supply chain are strictly required to follow Shariah laws and proper compliance with Islamic principles. That's mean, these unique aspects of halal industry influence the distinctiveness of the business process in halal e-commerce.

Therefore, halal e-commerce is defined as the process of buying, selling, transferring products or services and information via the internet [14] in accordance with Islamic law of contract and Sharia principles [5, 16-18]. In other words, the requirements to conduct online business through halal platform must conform to Islamic law of contract which include compliant with form (offer and acceptance), contracting parties (buyer and seller) and subject matter (object and price) as well as the prohibition of *riba* (usury or interest), *gharar* (uncertainty), *haram* (unlawful) and *maysir* (gambling) elements [5, 16, 17, 19].

E-commerce Background: E-commerce has a rich history, starting in the 1960s with primitive computer networks to perform electronic transactions and the creation of ARPAnet in early 1970s by US military to send important information. Then, in 1982 ARPAnet switched to Transmission Control Protocol and Internet Protocol (TCP/IP) and utilized the same type of technology that powers the internet of today. The internet has revolutionized the way people doing business transactions. The first commercial online buying and selling of products or services began in 1995 with the launches of Amazon.com and eBay. Amazon started its first full-scale business models for online retail by selling books to shoppers to over 45 countries. Now, Amazon continues to expand its inventory beyond books and sells almost anything users can think of, from electronics to clothing, movies and more.

In the late 1990s and during year 2000s until now, the e-commerce growth has shown tremendous impacts around the globe. The e-commerce giants such as Amazon and eBay expanding their operations by opening branches abroad. Then, the establishment of many other dot coms such as Alibaba.com, Zalora and Taobao has made the penetration of online buying and selling activities flourished in Asia region. E-commerce adoption is not only limited to large businesses but also successfully implemented by many small enterprises. Its operations has extended beyond developed countries to developing regions in all around the world.

The Growth of e-Commerce in Malaysia: The increase in Internet usage and e-commerce spending in Malaysia is a result of government's initiatives by providing various supports, programs and subsidies. Among the biggest government's investment in enhancing telecommunication services in this country is via the creation of the Multimedia Super Corridor (MSC). The MSC provides low telecommunication tariffs, better speed of the Internet and well developed IT infrastructure of fibre optic cabling. This helps to complement the rise and growth of the Internet and E-Commerce activities. Recently, the government had launched Digital Free Trade Zone (DFTZ) and National e-Commerce Strategic Roadmap (NeSR) initiatives, in the effort to boost e-commerce's contribution to national GDP [20].

The milestone of e-commerce development in Malaysia begins attentively since late 1990s, where the introduction of first commercial e-commerce website by Lelong.my taken place. Then, in 2001 AirAsia launched its website that gives passengers convenient to book and pay for ticket online. In 2004, eBay Malaysia was

launched to cater its growing number of Asian consumers. PayPal also began to support Ringgit Malaysia (RM) in their online transactions since 2009. Later on, from 2010 until now, the tremendous growth of online commerce has seem unstoppable with the emergence of numerous new e-commerce sites that receive much attention from consumers such as Zalora, Qoo10, Lazada, Astro GoShop, 11th Street, Tesco and many more. In addition to those well-known companies, online businesses formed by individual entrepreneurs which sell food, clothes, etc. are also grown remarkably. Apart from offering commercial products or services, there are also websites or e-commerce players that offer businesses and consumers platforms for information exchange, community awareness and social commerce.

Since halal products and services received a great demand from global consumers, it became an area that many emerging e-commerce platforms are seeking to address. According to data shared by halal B2B e-commerce site DagangHalal during the Halal Congress at Spain's industry trade fair Alimentaria in April 2016 and based on WTO statistics, the value of halal products traded via e-commerce was estimated at USD123 billion in 2015 and is expected to reach over USD230 billion in 2020. DagangHalal, Zilzar and Aladdinstreet have emerged as Malaysian halal e-commerce platforms in the last few years to offer Shariah-compliant solutions to further cater to the Muslim market [8]. Among the key function that halal e-commerce platforms must carry out are checking authenticity of halal certification, providing confidence and facilitating trade between consumers and sellers.

Malaysian first halal e-commerce platform DagangHalal.com was founded in December 2007. It's main objective is to provide a single platform for the ease of worldwide Muslims to source and promote for quality halal products and services. It introduced the first and innovative Halal Trade Manager, which is a trading management tool linking up all the Halal merchants, products and services with the worldwide Muslim market of 1.8 billion consumers. Following the success of DagangHalal, in 2014 Zilzar.com emerged as the world's first global Muslim lifestyle marketplace e-commerce platform. The business's aim to connect Muslim consumers and make it easier for halal traders around the world to conduct business online. The platform handles content regarding Islamic societies and products that deals with the compliance of the Islamic Sharia law. Then, Aladdinstreet as the newest Malaysia-based halal e-commerce site has already launched its branch in Singapore. It provides both B2B and B2C platform and aims to address what the company perceives as

weaknesses or loopholes in other e-commerce websites by being selective in its merchants and providing backend services via partnering with local logistics, payment gateways and warehouses and retail management companies to ensure that products remain halal throughout their export process [8].

These halal e-commerce marketplaces facilitate and offer sellers and buyers a trading of halal goods and services on the Shariah-compliant platforms. In order to increase confidence of the halal status of the products, they provide databases which can check the authenticity of halal certification by using halal validating tools or services such as Halal Verified Engine (HVE), GlobalHalal Data Pool and working closely with JAKIM and HDC. For example, Aladdinstreet's Business Integrity Task Force, which is an international panel of experts on halal and Shariah matters, performs due diligence on each participating partner in its platform to ensure compliance to halal standards [8].

However recently, the encouraging development of halal e-commerce were challenged with the incidence of e-commerce site that claims to be halal but offers non-halal products in a section of halal category, such as labelled 'halal pork' or 'halal beer' [8]. This indicates a lack of understanding on what is halal and caused by nonexistence of mechanism to verify the authenticity of halal status provided by sellers. Also, the e-commerce sites that are available now have too many products and incomplete information that make it difficult for consumers to find quality ones. Even worst, the online payment method is inconclusive and unconvincing.

DeLone and McLean IS Success Model: The DeLone & McLean Information System Success Model (D&M IS Success Model) was first published in 1992 by DeLone and McLean. As the role of IS has changed and progressed during the last decade, the wide popularity of the model is strong evidence of the need for a comprehensive framework in order to integrate IS research findings [21]. Therefore, the authors come with the updated version of their D&M IS Success Model in 2003. This updated version is argued can be adapted to the comprehensive measurement challenges of the new e-commerce world. Also, this model is used in this study because it is one of the best and most-cited model used to evaluate the success of information systems especially in the context of e-commerce [16]. This model measures the success of information systems using six variables, including information quality, system quality, service quality, intention to use, user satisfaction and net benefits.

Nonetheless, since this study is focused on the issue of e-commerce in halal industry, the Islamic law of contract or Sharia compliance framework will be considered. In Islam, the success and goal of every business, other than profit maximization, is to achieve *al-falah* (success) or *al-maslahat* (welfare or well-being) for the parties involved [19]. Besides, the prerequisites for Sharia compliance in halal e-commerce must include the conformity to the principles of Islamic law of contract, form (offer and acceptance), contracting parties (buyer and seller) and the subject matter (object and price) and to avoid of any prohibited element of *riba* (usury or interest), *gharar* (uncertainty), *haram* (unlawful) and *maysir* (gambling) [8, 16, 17, 19].

The application of the new D&M IS Success Model can be seen from the following recent studies. For instance, Kim & Niehm [22] claimed that system quality influences the level of satisfaction that users feel towards the technical and functional performance of shopping websites. Xin [23] showed the important role of text and image in a banner in certain website that influence shopping experience. System quality is an essential condition of e-commerce systems. Usability, availability, reliability, adaptability and response time (such as, download time) are important indicators of website system quality [21, 24, 25].

Information quality describes the value of information presented by websites as perceived by users [26]. Users want the information provided displays completeness, ease of understanding, personalization, relevance and security, so that to increase their confidence in doing the transactions, thus will enhance their satisfaction [21, 25]. A website offering good information quality will be able to attract consumers with a unique image [23]. Furthermore, Xin [23] stressed, the businesses with apprehension of the quality information will be able to enhance consumer understanding regarding products, enabling them to quickly make informed purchasing decisions and enjoy a pleasant shopping experience.

While, the measurement of e-service quality often involves many aspects of the interaction between corporations and consumers, including the overall experience gained by consumers from before the purchase until after, encompassing information accessibility, order fulfillment, guidance in product use, personal privacy, after-sales services and problem handling [27-29]. Parasuraman *et al.* [29] claimed that e-service quality (e-SQ) broadly encompasses all phases of customer interaction with a website, defining it as the extent to which a website facilitates efficient and effective shopping, purchasing and delivery.

A Proposed Conceptual Model:

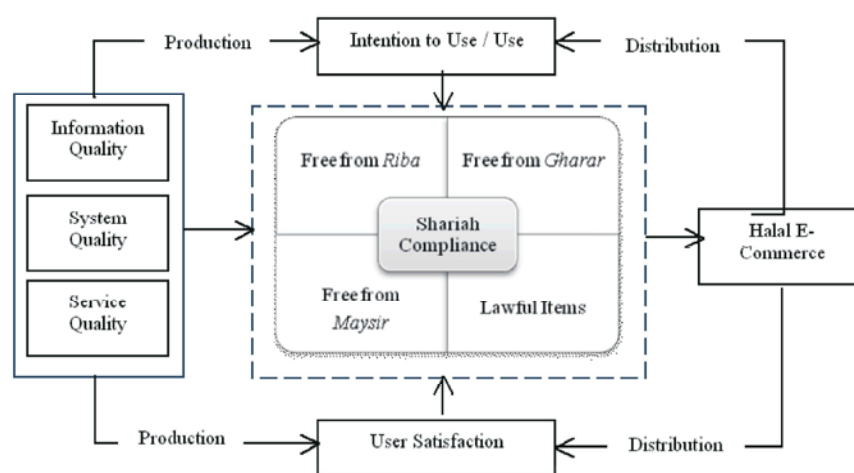


Fig. 1: Proposed conceptual model of halal ecommerce business practice

Discussion and Operationalization of Model: The purpose of developing the conceptual model is to suggest a guideline to measure the success of halal e-commerce, with considering the Sharia requirements of avoidance of *riba*, *gharar*, *maysir* and *haram*. It also encompasses the

discussion on the function of buyer and seller, offer and acceptance and also object or price involve in e-commerce transaction. Although abundant researches have tested, measured and validated the D&M IS success model [24, 25, 30], very little is known to be applied to

Sharia compliance context of information systems [17, 18, 31]. Therefore based on the literature, this paper proposes a conceptual model (refer to Figure 1) which use both D&M IS success model and Sharia compliance e-commerce framework to develop the conceptual model.

Referring to the above model, “system quality” denotes the network environment, including the Internet speed, hardware and software in use. In other words, it may represent the website, payment gateway and mode of delivery involved. The quality required by users are the usability, availability, reliability, adaptability and response time of the system [21]. In adherence to Sharia requirement, the halal e-commerce must not offer *haram* products, gambling elements in pricing, uncertainty in products to be sold or delivered and interest in the method of payment. In today’s online commerce, the use of conventional credit cards can be replaced by non-*riba* medium such as debit card, or cash on delivery. Meanwhile, *gharar* can be reduced when website displaying the real image of the product, ability to read other users’ review and reliable third party assurance [9].

Another important measure is “information quality”. According to DeLone & McLean [21], the web content should be complete, relevant, easy to understand and secure to attract users or consumers. Normally, returning consumers will initiate purchase if they regards the website provide complete information. For instance, halal e-commerce should disclose all the terms and condition if there is any, and not post fake information as it is deemed *haram* and may violate Sharia requirement [19]. Trust is a most influencing factor in the whole e-commerce transactions [32]. The security of information is also crucial that consumers will only gave their personal information to the trusted sites only.

“Service quality” is the overall quality valued by users or consumers in using the systems. They require assurance, empathy and responsiveness from the support service providers [21]. If companies fail to deliver a good customer support and guidance, they will eventually lost customers and sales. As suggested by Sharma & Lijuan [33], e-commerce providers can enhance service quality by ensuring user friendliness, responding to customer sensitivity and complaints and upholding sufficient security levels in communication and data protection. In Islam, the business practice must concern about *maslaha* or welfare of the parties involved [34]. Therefore, the responsibility of both sellers and buyers are not accomplished until the transactions completed.

“Intention to use” or actual “usage” measures everything starting from a visit to a website, to navigation within the website, to retrieval of information, until the

execution of a transaction [21]. The usage is influenced by previous mentioned elements such as system quality, information quality and service quality. Here, companies can monitor consumers’ navigation patterns, number of site visits and transactions executed in order for future improvement. However in doing so, consumers’ privacy must be concerned.

Almost similar to the Theory of Planned Behavior by Ajzen [35] and Technology Acceptance Model [36], “user satisfaction” describes the behavioral aspects of consumer’s experience. It is an important means to measure customers opinion of the systems and to know their final decision whether to continue or return to the website. It can be shown through repeat purchases and visits and also user surveys. Nevertheless, user satisfaction denotes the biggest turning point for every business.

The most important success measures to be analyzed is “net benefits”, which is in this study, determined by the context of halal e-commerce success. If only all the three elements, i.e system quality, information quality and service quality satisfy the Sharia requirements, net benefits can be achieved, thus lead to usage and customer satisfaction.

Methodology: This is a research in progress paper that proposes a conceptual model to improve the online business practice that comply with Islamic law or Sharia’ in the context of halal e-commerce operations. The first step taken was databases search. Databases such as Science Direct, SpringerLink, Emerald, EBSCOhost and Scopus were used to search for peer-reviewed articles, chapters and conference proceedings [37]. The keywords used included “e-commerce”, “halal”, “information systems success”, “information quality”, “information management”, “ethics”, “Sharia compliance” and “Islamic business”. Some of the keywords are found from information system, communication and consumer behavior literatures.

Second, the key terminology found from the articles were defined to determine if there are other similar words or phrases that have a similar meaning were used in the literature. Those papers that relevant to the study were then compiled. Third, the full text of the downloaded papers were read and analysed based on the objective of the study. All the keywords, abstracts and the full text from relevant articles were screened to identify definitions, research methods and theory used. Besides, other potential papers that were considered relevant for this study were also cross-referenced from the

bibliographies of the paper found [38]. Following this process, a comprehensive review of the literature relating to halal, e-commerce and Sharia compliance has been undertaken to develop a succinct conceptual model of Sharia compliance e-commerce practice.

This research intends to be conducted using multiple case studies method. As proposed by previous literature, the use of more than one case studies can help to better understand the various stages involved in the deployment of B2B or B2C e-commerce and to develop or improved existing theory [39]. The case studies will be selected among the e-commerce providers based on their willingness to participate in the study. For this qualitative study, data will be collected through face-to-face interviews of business owners or managers or IT officers, documents review and also through unstructured observation.

Next Research Step: This conceptual model is intended to be used in future research to answer the research questions. By examining the combination and interaction of the elements in the conceptual model, it will lead to the identification of the best practice that halal e-commerce providers use in attaining business goals and conformance to Sharia requirements. Notwithstanding the conceptual model above, this study will continue to improve through continuous review of the literature as well as gathering actual data from qualitative in-depth interview with halal e-commerce providers.

Expected Outcome and Contribution: This study is expected to contribute to theory and practice in several ways. From the theoretical perspective, system quality, information quality and service quality is crucial to halal studies because the reliability and assurance of the halal status greatly rely on the credibility of the information provided in the website (system). Based on Information System Success Model by DeLone and McLean [21], systems quality, information quality and service quality are among the determinants of measures for information systems (IS) effectiveness. Nonetheless, the theory would be expanded through the addition of framework of Sharia compliance e-commerce to better measure and understand halal e-commerce business practice [17, 18].

This study is also significant because it is an area of high importance for development and growth of halal SMEs and GDP in Malaysia. It provides an excellent introduction to businesses which are encountering the halal e-commerce market for the first time by giving them deeper understanding whether there are specific factors to

be acknowledged, or requirements to be fulfilled, for them to succeed in the halal environment. This is important so that their investment in implementing e-commerce will be worthwhile. For those who are already e-commerce players, it is to improve the way they manage information to enhance consumers trust towards halal products. At the same time, the study aims to increase the understanding of many of the complex issues that are particular to the halal sector and in doing so, allows SMEs, policymakers and related agencies to have a comprehensive view of the halal e-commerce market.

CONCLUSION

Trading and commerce are highly encouraged by Islam. However, the advent in technology has transformed the way people conduct the transaction from traditional commerce to online commerce. The technology takes along a reach for new type of products and services, processes, opportunities and challenges to buyers and sellers through e-commerce platforms. Islam permits all kind of commerce as long as it is in compliant with Sharia requirement i.e. free from *riba*, *gharar*, *maysir* and *haram* elements. Therefore, halal e-commerce platforms' objective is to address loopholes in conventional e-commerce websites by offering Muslims consumers to choose halal products or services through processes that are permissible by Sharia law. Even though abundant literature have previously evaluated e-commerce success using D&M IS Success Model, the proposed conceptual framework suggest the alternative way of evaluation on how effective the halal platforms has been doing in providing halal marketplace and provides the necessary guide for ascertaining a Sharia compliant e-commerce transaction. It also provides Muslim consumers a guide for identifying e-commerce platforms to use. Furthermore, e-commerce vendors, businesses and other stakeholders can be guided in their effort to develop and provide Sharia compliant e-commerce platforms. However, this study is still at early stage and needed further validation by reputable scholars and experts in the field to enhance its credibility. Thus, the issue will be explored in-depth through a qualitative study.

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