



Contents lists available at ScienceDirect

Applied Computing and Informatics

journal homepage: www.sciencedirect.com

An integrated approach towards Sharia compliance E-commerce trust

Mohammed Bashir Ribadu^{a,b,*}, Wan Nurhayati Wan Ab. Rahman^a^a Faculty of Computer Science and Information Technology, Universiti Putra Malaysia, Serdang, Selangor, Malaysia^b Department of Information Technology, Modibbo Adama University of Technology Yola, Adamawa State, Nigeria

ARTICLE INFO

Article history:

Received 4 August 2017

Revised 6 September 2017

Accepted 10 September 2017

Available online xxxxx

Keywords:

E-commerce trust

Sharia compliance

Islamic law of contract

E-commerce trustworthiness

Muslim consumers

ABSTRACT

The Sharia compliance trust concerns over the conventional e-commerce systems among devoted Muslims causes reluctance and abstinence to partake in e-commerce transactions. Although e-commerce trust building mechanisms have been highlighted in the extant literature, there has not been any integrative or exhaustive solution to the Sharia compliance trust concerns of Muslims. Therefore, it became necessary to develop a framework that will provide a guide towards achieving Sharia compliance e-commerce trust (SCE-C). Consequently, relevant literature on e-commerce trust from a conventional perspective and the Sharia perspective were reviewed to gain a background. It provided the basis for proffering a framework for SCE-C trust with a view to enhancing e-commerce adoption and use by Muslims around the world. The framework for SCE-C Trust highlights that e-commerce vendor trustworthiness factors comprising of Sharia compliance, integrity, benevolence, competence, website quality, and third-party assurance if positively moderated by consumer trust propensity and religious commitment will ensure SCE-C trust.

© 2017 The Authors. Production and hosting by Elsevier B.V. on behalf of King Saud University. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Contents

1. Introduction	00
2. Literature review	00
2.1. E-commerce trust from a conventional perspective	00
2.2. E-commerce trust from an Islamic perspective	00
3. A framework for SCE-C trust	00
3.1. Religious commitment	00
3.2. Trust propensity	00
3.3. Third-party assurance	00
3.4. E-commerce trustworthiness	00
3.5. Sharia compliance	00
3.6. Integrity	00
3.7. Competence	00
3.8. Benevolence	00
3.9. SCE-C website quality	00
3.10. SCE-C trust	00
4. Conclusion	00
References	00

* Corresponding author at: Faculty of Computer Science and Information Technology, Universiti Putra Malaysia, Serdang, Selangor, Malaysia.

E-mail addresses: mb.ribadu@gmail.com (M.B. Ribadu), wnurhayati@upm.edu.my (W.N. Wan Ab. Rahman).

Peer review under responsibility of King Saud University.



<http://dx.doi.org/10.1016/j.aci.2017.09.002>

2210-8327/© 2017 The Authors. Production and hosting by Elsevier B.V. on behalf of King Saud University.

This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Please cite this article in press as: M.B. Ribadu, W.N. Wan Ab. Rahman, Applied Computing and Informatics (2017), <http://dx.doi.org/10.1016/j.aci.2017.09.002>

1. Introduction

There is a rapid increase in the acceptance and use of e-commerce by both traditional businesses trying to develop new online channels and new businesses that originate from the internet [12]. This development is primarily attributed to the benefits ascribed to e-commerce, especially in the business to consumer segment. However, issues of e-commerce trust have been a major constraint to its adoption and use by many consumers around the world [18,26]. There are recent clamor and research attention to resolve the e-commerce trust concerns from an Islamic view point which is guided by Sharia law [1,3,14,20]. It is therefore important to ensure that e-commerce trust from the Sharia perspective is developed in order to induce and cater the need of over 1.8 billion Muslim around the globe [3,5,20].

The concerns among Muslims over non-Sharia compliance of the conventional e-commerce system leads to reluctance and abstinence to patronize the prevailing e-commerce system [3,4,20]. Fundamentally, adherents of the Islamic religion are guided by the Sharia law in all their endeavors. Thus, Muslims are obligated to only patronize Sharia compliant goods and services. It is therefore essential that e-commerce systems must be in conformity with the Islamic law of contract which requires that it must be devoid of fundamentally prohibited elements of *riba* (usury), *gharar* (uncertainty), *haram* (forbidden) objects and *maysir* (gambling) to be deemed permissible to Muslims [17,20,22].

This paper proposes a framework that integrates the generic antecedents of e-commerce trust with the Sharia compliance requirements for e-commerce systems highlighted in the literature. It is aimed to foster Sharia compliance e-commerce (SCE-C) trust in order to enhance acceptance and use of e-commerce by Muslim faithfuls around the world. Furthermore, it is envisaged to bridge the gap between studies on e-commerce trust from a conventional perspective [5,9,10,15,26] and e-commerce trust from a Sharia perspective [6,14,17,22,23]. The next section of this paper highlights related studies on e-commerce trust from a conventional perspective and also, an Islamic perspective to e-commerce trust. The subsequent sections present the framework for SCE-C trust, then conclusion.

2. Literature review

2.1. E-commerce trust from a conventional perspective

To adequately understand the concept of trust, Chopra and Wallace [7] articulated three elements of trust as, a trustee to whom it is directed, the confidence that trust will be upheld, and the willingness to act in that direction. Similarly, Limbu et al. [13] highlighted the concept of trust based on trustor willingness to rely on a trustee due to confidence and belief that the trustee will uphold trust. It is also perceived as a trust relationship that interpersonally exists between trustors and trustees. Trust is therefore central to the success of commerce and its impact has been felt across market structures, processes, and relationships over the years [22]. However, despite a shift in the business paradigm from the traditional market frameworks to e-commerce, it is important to consider and improve all the underlying trust mechanisms to effectively build trust in e-commerce systems.

McKnight & Chervany [15] considered the typology of e-commerce trust by analyzing and distilling numerous definitions of trust and coming up with the major trusting beliefs as competence, benevolence, integrity, and predictability. These trusting beliefs have been exhaustively reviewed and adopted by various studies over the years [1,26,28,27]. In an evaluation of the effect of social presence (SP) on e-commerce trust, Weisberg et al. [30]

focused on understanding and highlighting the e-commerce customer experience with a view to predicting factors that influence them. They found that participants with prior e-commerce purchasing experience showed a higher perception of SP and have a higher degree of trust.

Azam [4] highlights that perception-based factors, experience-based factors, knowledge-based factors, and attitudes are the antecedents of trust in e-commerce and subsequently e-loyalty. The study revealed that e-commerce experiences are significantly influenced by perception-based factors in developing trust. The dominant factors are Perceived familiarity, perceived similarity, perceived control, word of mouth, and information received from family and friends. Nonetheless, perceived similarity and perceived control manifest as the most dominant factors for trust, while its absence justifies the low trust levels attributed to persons with no e-commerce experience.

Fang et al. [9] while emphasizing the impact of trust on online repurchase, they expressed that it is usually influenced by the context. Consequently, this motivated researchers to further explore e-commerce institutional context and its moderating effect on trust and online repurchase. The institutional context is the formal regulatory mechanism put in place to ensure that the e-commerce transaction environment is safeguarded. The online repurchase intention of e-commerce customers is determined by the level of trust they have on an e-commerce vendor. Furthermore, online customers evaluate their trust on e-commerce vendors based on first-hand information they receive.

Abdulgani & Suhaimi [1] stressed that many consumers abstain from e-commerce due to trust-related concerns which negatively influence their perceived risk of buying online. The factors that determine e-commerce trust are e-commerce vendor trustworthiness factors and their third party assurances, the trust propensity of consumers and their religious commitment. Thus, these factors negatively affect the perceived risk of e-commerce while influencing a consumer's intention to purchase online in a positive manner. Therefore, e-commerce trust is ascertained to be essential in developing or sustaining any relationship between customers and vendors [10]. It is because online customers are more prone to patronize trusted vendors of whom they have knowledge about or who have earned the seal of trust from trusted third parties and use secure payment systems [26].

2.2. E-commerce trust from an Islamic perspective

Islamic law denotes the same connotation to e-commerce as the traditional commerce [3,20,28,31]. It is obligatory for e-commerce systems and the transactions they carry out to comply with the fundamental requirements of Islamic law of contract. This is indeed aimed at protecting people from harm and ensuring the mutual good of all transacting parties. Thus, e-commerce systems are required to fulfill the form (offer and acceptance), the contracting parties (buyer and seller) and the subject matter (object and price) requirements stipulated by the Islamic law of contract to be adjudged Sharia compliant. Furthermore, it has been critically highlighted that Sharia compliance requirements for e-commerce systems must be devoid of the fundamentally prohibited elements of *riba*, *gharar*, *haram* objects, and *maysir* [20,24,31].

Contextually, an e-commerce offer is considered to be the initial proposal made by either party (buyer or seller) in a contract and the acceptance refers to the consent of the other party expressing his or her agreement to the terms of the offer. Traditionally, offer and acceptance is done verbally but Muslim scholars also acknowledge its validity through writing or through an electronic medium as applicable in e-commerce [17,20,22,31]. However, the process of offer and acceptance must be connected, clear and consistent throughout the transaction session. Muhammad & Muhammad

[22] highlighted that the meeting session in an e-commerce transaction begins when sellers advertisement of products on their website, whereas a customer acknowledges acceptance after selecting products of interest and reviewing features, prices, and delivery information, and consequently proceeding to checkout. The numerous capabilities, functionalities, and the interactive nature of e-commerce further enhance e-commerce fulfillment of the Sharia compliance requirements for offer and acceptance as evident from a review of Amazon.com [20].

The second requirement for compliance with the Islamic law of contract in both traditional and e-commerce systems is to ensure free and mutual consent by both contracting parties [3,20]. Furthermore, they must have the legal capacity and authority to execute a contract. It implies the seller must be the rightful owner with the right to transfer ownership to a buyer. Both the buyer and the seller must also be of a sane mind and must attain the age of puberty. Although it is argued that, the legal capacity of an e-commerce customer to engage in a transaction can simply be determined by the possession of debit or credit card which is the predominant payment method used [2,3,19,20]. Because it is a universal norm for bank customers to be determined to have attained the legal age (puberty age) and of sane mind to be issued a banking card.

The Sharia compliance requirements for the subject matter (object and price) in e-commerce entails the subject of the contract to be lawful, valuable, existent, deliverable and precisely determined [19,20,22]. Any ambiguity over the object of a contract, its price, or deliverability can lead to *gharar* which is a fundamentally prohibited element in Sharia. However, advances in e-commerce have tackled these concerns through clear products displays, descriptions, reviews, prices, and delivery options. Therefore, conventional e-commerce systems that adhere to best practices usually fulfill these stipulated Sharia compliance requirements except where goods or services are *haram*, where *ribawi* items such as currency, gold, and silver are sold based on deferred delivery and/or using a *riba*-based medium of payment [20]. A critical and comprehensive review of the Sharia compliance requirements for e-commerce systems from extant literature by Ribadu & Wan Ab. Rahman [24] is depicted in Table 1.

Adhering to these Sharia compliance requirements is very fundamental in ensuring e-commerce trust among devoted Muslims around the world. Muhammad et al. [20] explained that all forms of business transactions (e-commerce inclusive) are permissible in Islam unless where the clearly violate Sharia principles. Furthermore, all transactions must ensure justice to all parties and the processes involved must be free from fundamentally prohibited elements of *riba*, *gharar*, *maysir*, and *haram* objects. Literally, *riba*

means to increase or a practice of lending money at a fixed interest [11,17]. *Riba* is a fundamentally prohibited element that is clearly forbidden by Islam [3,20,24,31]. Therefore, it is forbidden to utilize any *riba* credit card or any other interest-bearing medium of payment for both offline and online use.

Today, Muslims can conveniently do away with *riba* prone mediums of payment, especially with the rise of Islamic banks and the option for Sharia-compliant credit cards, use of debit cards, pay on delivery and other non-interest payment options. Whereas *gharar* is associated with uncertainties and risk associated with a system or transaction. Therefore, it is unlawful to engage in any kind of transaction with a high uncertainty or excessive risk [3,17,22,29,31]. For that reason, it is mandatory to ensure that both buyers and sellers have adequate information of the terms, values, existence, obtainability, quantity, quality, and attributes should be identified and its deliverability must be guaranteed [20,21]. Islam also forbids *maysir*, which means the acquisition of wealth by chance [3]. This is meant to ensure justice and to promote industry among individuals and societies. Similarly, it is forbidden to produce, sell, buy, advertise or engage in any form of *haram* product or service. These include items such as alcohol, pork, musicals and phonographic materials.

3. A framework for SCE-C trust

Based on the typology of e-commerce trust [15], the model for building e-commerce trust from an Islamic law of contract perspective [22] and the Muslim-intention-to-purchase-online framework [1], we proffer a framework for developing SCE-C trust. The Framework for SCE-C trust is proposed to bridge the gap between studies on conventional e-commerce trust and e-commerce trust from a Sharia perspective. This confluence is bound to provide a contextual understanding in developing SCE-C trust among Muslim consumers. Unlike previous e-commerce trust frameworks, a dual approach is carried out to ensure that Sharia compliance requirements are fulfilled at the same time addressing the traditional e-commerce trust concerns customers.

The SCE-C trust framework postulates Sharia compliance, integrity, competence, benevolence, and SCE-C web quality as factors that will positively influence e-commerce vendor trustworthiness. These factors are moderated by the third party assurances of vendors, and the religious commitment and trust propensity of consumers towards SCE-C trust. Therefore, this study postulates a positive moderating relationship between consumer religious commitment, trust propensity, and third party assurances of a site and consumer's perception of e-commerce trustworthiness (Sharia compliance, integrity, benevolence, competence, SCE

Table 1
Requirements for Sharia compliance e-commerce transaction.

Sharia compliant e-commerce Requirements		Reference
Islamic Law of Contract (Compliance)	Form Contracting Parties Subject Matter	Offer Acceptance Buyer Seller Object Price [3,17,19,20,22,24]
Devoid of <i>Riba</i> (Usury)	<i>Riba</i> medium of payment (Mainly <i>riba</i> credit card) <i>Riba al-Buyu</i> (Items such as gold, silver & other usurious items)	[3,17,19,20,22,31] [20,22]
Devoid of <i>Gharar</i> (Uncertainty)	Uncertainty over product or service Uncertainty over price and payment Uncertainty over delivery and deferment	[3,17,22,29,31]
Devoid of <i>Haram</i> (Forbidden) Products & Services	Sharia prohibited goods or services	[3,17,22,24,31]
Devoid of <i>Maysir</i> (Gambling)	Acquisition of wealth by chance	[3,20–22]

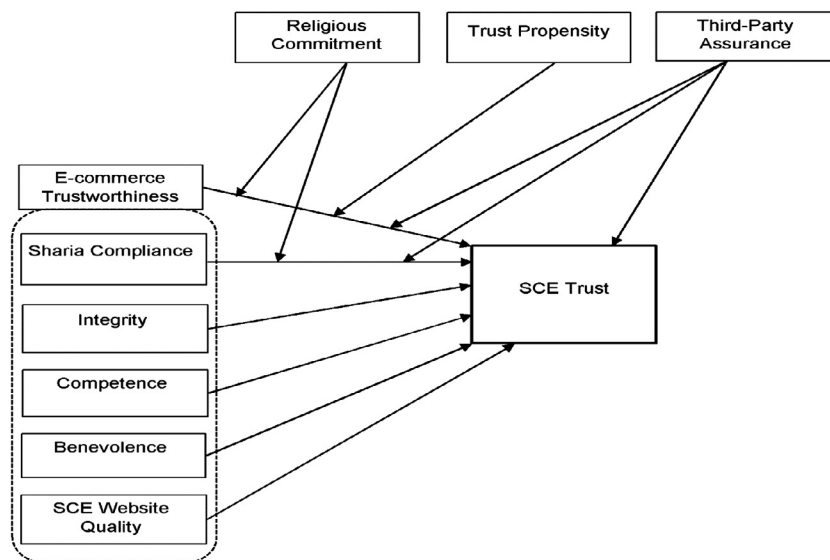


Fig. 1. A framework for SCE-C trust.

website quality and third party assurance) and consequently SCE-C trust. These relationships are depicted in the framework for SCE-C Trust (Fig. 1).

3.1. Religious commitment

Religious commitment is an individual's level of devotion to the teachings and practice of Islamic religion in this context [1]. For the Muslims, it is obligatory to patronize only products and services that are deemed Sharia compliant. Therefore, a Muslim with high religious commitment will be hesitant to engage in an e-commerce transaction that is perceived to be non-Sharia compliant [19,20]. Thus, the higher the religious commitment of a Muslim consumer, the more likely he or she will perceive a SCE-C platform to be trustworthy and inclined towards SCE-C trust. Similarly, when an e-commerce platform is deemed not Sharia compliant, the less it will be perceived as trustworthy or be trusted by consumers.

3.2. Trust propensity

Trust propensity is a factor of an individual willingness to depend on the commitment of others [1,28]). Therefore, the influences of e-commerce trust factors are positively moderated by a consumer's propensity to trust. Because, an individual's propensity to trust can be influenced by attributes such as cultural and religious background, personality, and experience [1,25], whereas Azam [4] articulated them as perception-based factors (PBFs), experience-based factors (EBFs), knowledge-based factors (KBFs) and attitude. Trust propensity is a consumer trait that moderates the perception of e-commerce trustworthiness of online vendors. Therefore, it can positively influence consumer perception of e-commerce trustworthiness and SCE-C trust. It moderates the relationship between e-commerce trustworthiness of a site and SCE-C trust such that, the higher the trust propensity, the stronger the positive relationship between e-commerce trustworthiness of a site and SCE-C trust.

3.3. Third-party assurance

Third-party assurance is provided to customers as an assurance and advisory service that aid an independent view of the controls

and processes of a web vendor. It is carried out based on certain principles and criteria regarding the assurance offered. The third-party assurance provides an endorsement of e-commerce vendors through seals of approval, trust marks, directories of trusted sites, trust intermediaries and label bureaus [1]. Islamic religious authorities can also serve as a third-party assurance body to certify the Sharia compliance status of e-commerce systems is advocated [3,20]. Therefore, we propose third-party assurance to encompass assurances on Sharia compliance, process, and technology which will ensure privacy for customers, security of transactions, and SCE-C trust.

3.4. E-commerce trustworthiness

E-commerce trustworthiness is a factor of integrity, competence, benevolence and web quality inherent in an e-commerce system [1,15,28,27]. McKnight et al. [16] validated integrity, competence, and benevolence as factors that influence e-commerce trust. Basically, trust reveals a trustee to whom trust is focused on, the confidence that trust will be upheld and the disposition to act on that basis [7]. Therefore, the perception of e-commerce trustworthiness is moderated by the religious commitment and trust propensity of consumers and the third-party assurances of an e-commerce site on SCE-C trust. E-commerce trustworthiness of a site has a positive effect on SCE-C trust which is positively influenced by Sharia compliance, integrity, competence, benevolence and SCE-C website quality.

3.5. Sharia compliance

Sharia compliance denotes obedience to Sharia Law. Therefore, e-commerce systems are required to work in conformity with the principles of Islamic law of contract and to be devoid of fundamentally prohibited elements (*riba*, *gharar*, *maysir* and *haram objects*) as a prerequisite for Sharia compliance [20,22,24,32]. Islamic law of contract defined and set the principles for fulfilling form (offer and acceptance), contracting parties (buyer and sellers) and subject matter (object and price) requirements by an e-commerce system. These requirements are primarily aimed at ensuring cohesion and the mutual of vendors, customers, and the society. Therefore, Sharia compliance of an e-commerce site is positively related to Muslim consumer's perception of SCE-C trust.

3.6. Integrity

Integrity is a quality of honesty and uprightness that is guided by moral principles [28]. Therefore, it reflects the expectation of an e-commerce vendor to act in good faith, with absolute honesty and be guided by ethical obligations from initiation to the fulfillment of an e-commerce transaction. Integrity is mainly centered around the character of the trustee and the ability to fulfill promises and obligations to the trustor. Furthermore, it is an important component of e-commerce vendor trustworthiness and a prerequisite for SCE-C trust. Therefore, the integrity of an e-commerce site is positively related to a consumer's perception of e-commerce trustworthiness and SCE-C trust.

3.7. Competence

Competence depicts the ability of a trustee to serve the needs of a trustor [15]. It reflects the ability to successfully initiate and accomplish e-commerce transaction by a vendor and the capacity to produce desired results or effect in a system [1]. Furthermore, it is a motivating force that reduces uncertainty and enhances understanding, forecasting, and control of people's behavior. The competence of an e-commerce vendor is tested base on the ability to ensure a hitch-free transaction experience. Therefore, the competence of an e-commerce system is positively related to consumer's perception of SCE-C trust.

3.8. Benevolence

Benevolence is the general belief of extending goodwill to others. It is seen as the concern and motivation of a trustee to act in the interest of the trustor [15]. Therefore, benevolence is the deliberate effort by an e-commerce vendor to serve the best interest of his or her customers without any prejudice of their knowledge. The extent of benevolence will reflect on the level of trust a consumer has in a vendor [1]. Thus, the perception of e-commerce vendor benevolence is positively related to SCE-C trust.

3.9. SCE-C website quality

The concept of SCE-C website quality is a convergence of conventional e-commerce website quality attributes of system quality, information quality and service quality [8], in addition to ensuring that Sharia compliance requirements are fulfilled. It entails the desired characteristics of e-commerce systems such as reliability, usability, assurances, empathy, and effective online support capabilities. Furthermore, fulfilling the requirements of Islamic law of contract which must be devoid of any fundamentally prohibited element [3,22]. The concept of SCE-C website quality is postulated considering the influence of web quality on consumer's online purchasing decisions and experience. Therefore, it is fundamental to redress e-commerce quality concerns and ensure that e-commerce systems provide operations, services, and information in consonance with Sharia prescriptions.

3.10. SCE-C trust

SCE-C trust is posited to be a convergence of traditional antecedents of e-commerce trust and Sharia compliance requirements. There is a consensus among researchers that SCE-C must fulfill the obligations of Islamic law of contract and be free from any fundamentally prohibited element (*riba*, *gharar*, *haram* objects and *maysir*) [20,22,24]. Siala [25] highlighted that, Muslim consumers are inclined to trust and patronize only systems that fulfill Sharia requirements and other ethical obligations. Therefore, SCE-C trust

is a factor of e-commerce system trustworthiness and third-party assurance which is necessary to influence Muslim consumer intention to engage in e-commerce. It is also critical in ensuring e-commerce inclusiveness of Muslims to accord them the sanctity and benefits of engaging e-commerce.

4. Conclusion

The most fundamental aspect in developing SCE-C trust is to ensure adherence to the requirements of Islamic law of contract and avoidance of any fundamentally prohibited element of *riba*, *gharar*, *haram* objects, and *maysir*. These Sharia requirements are hypothetically interwoven with some of the generic antecedents of e-commerce trust such as, integrity, competence, quality and ensuring the mutual good of contracting parties. Therefore, a convergence of Sharia requirements and generic antecedents of e-commerce trust is envisaged to bolster SCE-C trust. This will enhance Muslim consumer's intention to engage in an SCE-C transaction. It will also foster e-commerce inclusion for a huge number of devoted Muslims around the world and guide future researchers and other e-commerce stakeholders in the development processes of SCE-C systems. The framework for SCE-C trust bridges the gap between previous studies on e-commerce trust in a conventional setting and recent studies that scrutinized e-commerce trust from an Islamic perspective. Therefore, Sharia compliance, integrity, competence, benevolence, website quality and third party assurance of e-commerce systems will bring about SCE-C trust. While these assertions stand to be very potent when put into the perspective of existing literature, further empirical studies need to be carried out to validate the proposed framework.

References

- [1] M.A. Abdulgani, M.A. Suhaimi, Exploring factors that influence Muslim intention to purchase online, the 5th International Conference on Information and Communication Technology for the Muslim World, ICT4M 2014, 2014.
- [2] M.N. Alotaibi, M. Asutay, Islamic banking and Islamic e-commerce: principles and realities, Int. J. Econ. Commer. Manag. (2015), United Kingdom III.
- [3] T. Amboala, A.H.A. Mokhtar, M.Z. Muhammad, M.F. bin Noordin, R. Othman, Development method for Shariah compliant e-Commerce payment processing, Int. J. Comput. Theory Eng. 7 (2015) 408–415, <http://dx.doi.org/10.7763/IJCTE.2015.V7.995>.
- [4] A. Azam, Investigation of psychological dimensions of trust on e-loyalty: a case of Saudi Arabia consumers, J. Islam. Mark. 6 (2015) 224–249, <http://dx.doi.org/10.1108/JIMA-12-2013-0083>.
- [5] A. Azam, F. Qiang, S. Sharif, Personality based psychological antecedents of consumers' trust in e-commerce, in: WEI International Academic Conference Proceedings, Antalya Turkey, 2013, pp. 70–78.
- [6] M.M. Butt, M. Aftab, Incorporating attitude towards Halal banking in an integrated service quality, satisfaction, trust and loyalty model in online Islamic banking context, Iss Int. J. Bank Mark. 31 (2013) 6–23.
- [7] K. Chopra, W.A. Wallace, Trust in electronic environments, in: 36th Annual Hawaii International Conference on System Sciences, 2003. Proceedings of the. IEEE, 2003, p. 10. <http://dx.doi.org/10.1109/HICSS.2003.1174902>.
- [8] W.H. DeLone, E.R. Mclean, Measuring e-Commerce success: applying the DeLone & McLean information systems success model, Int. J. Electron. Commer. 9 (2004) 31–47.
- [9] Y. Fang, I. Qureshi, H. Sun, P. Mccole, E. Ramsey, K.H. Lim, Trust, satisfaction, and online repurchase intention: the moderating role of perceived effectiveness of e-commerce institutional mechanisms, MIS Q. 38 (2014) 407–427.
- [10] J. Ingham, J. Cadieux, A. Mekki Berrada, E-Shopping acceptance: a qualitative and meta-analytic review, Inf. Manage. (2015), <http://dx.doi.org/10.1016/j.im.2014.10.002>.
- [11] D. Jamshidi, N. Hussin, A conceptual framework for adoption of Islamic Credit Card in Malaysia, Kuwait Chap. Arab. J. Bus. Manage. Rev. 2 (2012).
- [12] D. Ke, A. Chen, C. Su, Online trust-building mechanisms for existing brands: the moderating role of the e-business platform certification system, Electron. Commer. Res (2016), <http://dx.doi.org/10.1007/s10660-016-9217-8>.
- [13] Y.B. Limbu, M. Wolf, D. Lunsford, Perceived ethics of online retailers and consumer behavioral intentions, J. Res. Interact. Mark. 6 (2012) 133–154, <http://dx.doi.org/10.1108/17505931211265435>.
- [14] M. Lubis, M. Kartiwi, Privacy and trust in the Islamic perspective: implication of the digital age, in: 2013 5th International Conference on Information and

- Communication Technology for the Muslim World, ICT4M 2013, 2013. <http://dx.doi.org/10.1109/ICT4M.2013.6518898>.
- [15] D.H. McKnight, N.L. Chervany, What trust means in E-Commerce customer relationships: an interdisciplinary conceptual typology, *Int. J. Electron. Commer.* 6 (2001) 35–59.
- [16] D.H. McKnight, V. Choudhury, C. Kacmar, Developing and validating trust measures for e-Commerce: an integrative typology, *Inf. Syst. Res.* 13 (2002) 334–359, <http://dx.doi.org/10.1287/isre.13.3.334.81>.
- [17] A.H. Mokhtar, T. Amboala, M.Z. Muhammad, M.S. E-Alam, Bai As-salam and e-Commerce: a comparative analysis from Shariah perspectives 7–8, 2013.
- [18] J. Mou, D.S. Jason, Trust and risk in consumer acceptance of e-services, *Electron. Commer. Res.* 17 (2017) 255–288, <http://dx.doi.org/10.1007/s10660-015-9205-4>.
- [19] M. Muhammad, R. Muhammad, K.M. Khalil, Towards Shari'ah compliant E-Commerce transactions: a review of Amazon.com, *Middle-East J. Sci. Res.* 15 (2013) 1229–1236, <http://dx.doi.org/10.5829/idosi.mejsr.2013.15.9.11176>.
- [20] M.R. Muhammad, M. Muhammad, M.A. Suhaimi, H. Hussin, M. Jalaldeen, M. Razi, K. Abdullah, Building trust in e-commerce from an Islamic perspective: a literature review, *Am. Acad. Sch. Res. J.* 5 (2013).
- [21] M.Z. Muhammad, T. Amboala, G. Fahmi, H.Z. Mohd, Journal of Internet banking and commerce comprehensive approach for Sharia' Compliance E-Commerce transaction his areas of interest are Islamic Banking, Islamic Finance, Takaful, Banking Services and Trade Financing and Islamic Financial System, *J. Internet Bank. Commer.* 16 (2011) 1–2.
- [22] R.M. Muhammad, M. Muhammad, Building trust in E-Commerce: a proposed Shari'ah compliant model, *J. Internet Bank Commer* 18 (2013).
- [23] N.A.M. Rashid, N. Jailani, R. Sulaiman, Z. Abdullah, Multi-agent security architecture for a Sharia compliant e-auction, *J. Theor. Appl. Inf. Technol.* (2014).
- [24] M.B. Ribadu, W.N. Wan Ab. Rahman, A generic framework for e-commerce requirements to comply with Sharia in business-to-consumer perspective, in: *Proceedings of 2016 SAI Computing Conference, SAI 2016, 2016.* <http://dx.doi.org/10.1109/SAI.2016.7556064>.
- [25] H. Siala, Religious influences on consumers' high-involvement purchasing decisions., *J. Serv. Mark. J. Islam. Mark. Iss Hamza Khraim J. Econ. Adm. Sci. J. Islam. Mark.* 27 (2013) 579–589.
- [26] S. Srinivasan, R. Barker, Global analysis of security and trust perceptions in web design for E-Commerce, *Int. J. Inf. Secur. Priv.* 6 (2012) 1–13.
- [27] M.A. Suhaimi, M.J. Mohamed Razi, H. Hussin, M.R.M. Muhammad, M.R.M. Muhammad, K. Abdullah, Conceptualizing trust-based online behavior model for Muslim consumers, in: *2013 5th International Conference on Information and Communication Technology for the Muslim World, ICT4M 2013, 2013.* <http://dx.doi.org/10.1109/ICT4M.2013.6518905>.
- [28] M.A. Suhaimi, M.J.M. Razi, H. Hussin, M.R.M. Muhammad, M.R.M. Muhammad, Muslim consumers' perceived behavior in E-commerce environment, in: *Proceedings – 2013 International Conference on Advanced Computer Science Applications and Technologies, ACSAT 2013, 2014.* <http://dx.doi.org/10.1109/ACSAT.2013.107>.
- [29] Y. Suzuki, A Post-Keynesian perspective on Islamic prohibition of *Gharar*, *Int. J. Islam. Middle East. Financ. Manage.* 6 (2013) 200–210, <http://dx.doi.org/10.1108/IMEFM-Sep-2012-0086>.
- [30] J. Weisberg, D. Te'eni, L. Arman, K.-P. Hung, A.H. Chen, N. Peng, C. Hackley, R.A. Tiwsakul, C.-L. Chou, Internet Research past purchase and intention to purchase in e-commerce: the mediation of social presence and trust, *Internet Res. Echo Huang Internet Res. J. Indian Bus Res. Iss J. Prod. Brand Manage.* 21 (2012) 82–96.
- [31] N. Zainul, F. Osman, S.H. Mazlan, E-Commerce from an Islamic perspective, *Electron. Commer. Res. Appl.* (2004), <http://dx.doi.org/10.1016/j.elerap.2004.01.002>.