Published in the the USA
International Journal of Media and Information Literacy
Has been issued since 2016.
E-ISSN: 2500-106X
2021. 6(2): 387-395

DOI: 10.13187/ijmil.2021.2.387
https://ijmil.cherkasgu.press

The Study of Perceived Risk and E-Service Convenience Towards Satisfaction and Trust of Online Academic Users in Indonesia

Ramadania Ramadania [a, *], Titik Rosnani [a], Rizky Fauzan [a], Dio Caisar Darma [b]

[a] Tanjungpura University, Indonesia
[b] Sekolah Tinggi Ilmu Ekonomi Samarinda, Indonesia

Abstract

The modernization in information technology (IT) has influenced the changes in the education industry. IT Utilization has provided users with many benefits. There are issues of security and privacy arising. This exploration examines the perceived risk and the e-service convenience of the satisfaction and trust of academic-online users at the University of Indonesia. Data collected by distributing the questionnaires to 220 respondents at two state universities and one private university in Indonesia. The sampling method applied from the convenience and purposive sampling technique, which is distributed to users, namely students, lecturers, and administrative staff. The data analyzed using path analysis. A results show that decision convenience, transaction convenience, and post-benefit convenience have a significant effect on academic-online user satisfaction. There is no influence of other factors such as perceived risk, access convenience, and benefit convenience on user satisfaction academic-online at college. This research also proves that satisfaction has a positive influence on user trust.

Keywords: e-service, convenience, perceived risk, satisfaction, trust, Indonesia.

1. Introduction

Information technology (IT) enables universities as educational institutions to develop internet-based businesses. The Internet has transformed the education industry to establish the basic characteristics of core services and products on how to transform services to consume, distributed, and packaged with professionals (Sathye, 1999). Colleges and companies in this modern era are jointly using IT to improve service quality, attract new customers, and business efficiency (Kannabiran, Narayan, 2005). This industry has a great responsibility to renew Indonesian society by entering the era of science in the 21st century (Nath et al., 2001). In the advancement of IT, one part that stands out is influencing the level of progress, prosperity, and competitiveness of a nation. This technology in the University is very important (Vail, Agarwal, 2007).

In the framework of managing the customer relationship, the information systems of which use is relatively accepted by the users (customers) will increase the value of services provided by the institution in the eyes of its customers. The most well-known and frequently used approach in measuring digitalization civilization is the Technology Acceptance Model (TAM). Highlights the context in the actualization of IT, as someone will suck the sophistication of the computer if this technology provides significant convenience. The Theory of Reasoned Action (TRA) practices TAM through two components (Davis, 1989). These components perceived usefulness and perceived ease of used to see people's desire to use computer technology.

* Corresponding author
E-mail addresses: ramadhania@ekonomi.untan.ac.id (R. Ramadania)

Recently, the quality of electronic services with the level of customer satisfaction is positive (Carlson, O'Cass, 2010). In addition, consumer attitudes toward websites and intentions to behave towards service contexts (such as specific content-driven) also significantly related. Interestingly, the that service factors are very important for consumers to consider through a series of stages, such as access, decision, benefit, reliability, and convenience (Colwell et al., 2008). The presence of convenience in the service positively affects satisfaction (eg internet and cell phone use).

It developed TAM based on psychological theories that explain user behavior ranging from beliefs, attitudes, intentions, and user behavior relationships (Davis, 1993). With TAM, people expect it to help project individual acceptance and attitudes toward technology. TAM also provides vital information related to the dimensions of supporting individual attitudes (Lee, 2010; Rose, Fogarty, 2006). This model concentrates on users of information systems.

The paradigms that address their decisions about when and how to adopt information systems determined by their own agility. Measures in the performance of information systems from the user side which is divided into two parts, namely user information satisfaction and system usage by employees in completing their work to manage financial data into information (Jhong-Min, 1996).

Respond to customer satisfaction because of the accumulation of consumers who have benefited from services and products. As a real comparison, consumer perception as a reaction to individual trust in technology (Irawan, 2003; Jogiyanto, 2009). Here, there is an effort from them to actualize the convenience and confidence in the decision-making process.

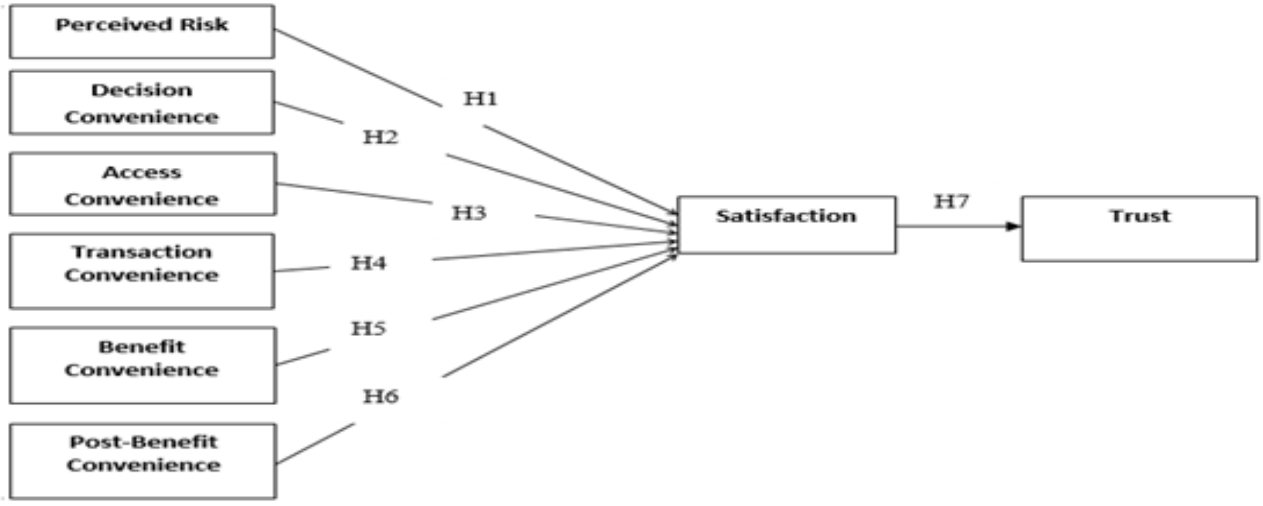

Fig. 1. Research model (*Source:* author's elaboration)

We need a study that aims to identify and test the TAM model in universities in Indonesia covering the perception of risk and convenience of e-service on the satisfaction and trust of online-academic users. The development of IT in the education industry, on the one hand, provides many benefits for service users, but on the other hand, the issues of security and privacy can arise. Both of these can affect customer satisfaction and trust. The hypothesis in this study is based on the following framework (see Fig. 1). We summarize the seven vital points that were considered for this study:

RQ-1. Does perceived risk affect the user satisfactionin a positive-significant way?;

RQ-2. Does decision convenienceaffect the user satisfactionin a positive-significant way?;

RQ-3. Does access convenience affect user satisfactionin a positive-significant way?;

RQ-4. Does transaction convenience affect the user satisfaction in a positive-significant way?;

RQ-5. Does benefit convenience affect user satisfaction in a positive-significant way?;

RQ-6. Does post-benefit convenienceaffect the user satisfactionin a positive-significant way?;

RQ-7. Does user satisfactionaffect user trust positive-significantly way?.

2. Material and methods

This research is field research, which is conducted through the survey method. The data collected are primary. The primary data were collected through the distribution of questionnaires and interviews concerning the variables studied and the characteristics of respondents. The population in this study are internal customers (students, administrative staff, and lecturers) who have used the information technology services from three universities in Indonesia (2 State Universities and 1 Private University).

Table 1. Measurement of variables

No.	Construct-Items and References
PR	Perceived Risk (Belkhamza, Azizi, 2009; Tong et al., 2019)
PR-1	Utilizing the onlinenacademic service can bring about the financial loss
PR-2	Friends and colleagues relatively think it's not right for me to use the online academic service
PR-3	The security of my Personal Information is not guaranteed
PR-4	There is a high risk of using online academic service
DC	Decision Convenience (Maqableh et al., 2021; Setiawan, Widanta, 2021)
DC-1	The information received makes it easy for me to choose the online academic services I will use
DC-2	It is easy for me to decideon the online academic service that I will use
DC-3	Information is very clear and easy to read
DC-4	This service provider/college allows me to find out the exact costs or special offers
AC	Access Convenience (Balina et al., 2020)
AC-1	Onlineacademic service is always ready when I need it
AC-2	Onlineacademic service is easy to use in many ways
AC-3	Hours / Operating Times / online academic services provide convenience
AC-4	it is easy to make contact with college employees related to online academic service
TC	Transaction Convenience (Miandari et al., 2021)
TC-1	Online academic services make me easy to do activities in college
TC-2	Online academic services can help complete the activities quickly
TC-3	There is no problem in increasing the time to use online academic services
BC	Benefit Convenience (Berry et al., 2002; Colwell et al., 2008)
BC-1	Achieving benefits with minimal effort
BC-2	Onlineacademic service can help solve the problem I have
BC-3	The time needed to receive the benefits of online academic services is feasible
PBC	Post-Benefit Convenience (Berry et al., 2002; Colwell et al., 2008)
PBC-1	Online academic services have resolved the problems I face rapidly
PBC-2	It's easy to reach the next online academic service
PBC-3	Information technology services in online academics can solve the problems I face
US	User Satisfaction (Colwell et al., 2008)
US-1	I am satisfied with my decision to use online academic service
US-2	My choice to use the online academic service is a wise choice
US-3	I think I have done something right in using the online academic service
T	Trust (Reid, Levy, 2008)
T-1	I strongly believe in the technological capabilities of the online academic service system on my campus
T-2	I trust the reputation of my faculty
T-3	I strongly believe in online academic internet transactions on my campus because it is not risky

We based the sample method applied on convenience sampling or accidental sampling to collect accurate information by chance (Churchill, 1999) and purposive samples according to the research needs. This research uses path analysis (e.g. Wijaya et al., 2021; Wijayanti, Darma, 2019).The variables analyzed in this study can be divided into 2 parts, namely: independent variables and dependent variables. We perceive variables in this research: risk, e-service convenience, satisfaction, and trust (see Tab. 1).

3. Discussion

Initially, the emergence of TAM focused on computer acceptance. Then, the explanation for translating end-user behavior in IT (Yang, Wang, 2019). Theoretically, it is in line with the concept was developed (Lai, 2017). TAM focuses on the perceived usefulness of the core concept that represents the user's subjective perception of IT in the performance capacity of completing various tasks (Alam et al., 2020). Individual subjective perceptions of the ease of IT systems impact profits, which indirectly have a rapid impact on technology users.

The Theory of Reasoned-Actions (TRA) simulates TAM, where the combined behavior of personal attitudes and beliefs broadly influences beliefs between individuals (Nguyen et al., 2018). The basic concept of TRA adopts individual attitudes and behaviors to guide a positive mission.

The TAM method is useful in calculating attitudes in the user's domain and technology adaptation, including in the educational environment. Proposals for implementing TAM vary widely, depending on IT-based services (Chen et al., 2017). An consistently investigated extensively selecting the benefits of TAM to revise and continuing to predict IT acceptance by users (Chao, 2019).

On the other hand, the speculated that TRA classified human behavior. Finally, reasoned that something based on the TRA technique on two factors (subjective behavior and norms) as determinants of individual attitudes (Mi et al., 2018). The attitudes symbolized as negative or positive feelings from individuals to respond to behavior. The emergence of subjective norms as individual perceptions in responding to social pressures. Behavior converted through TRA, has widely applied as an original and extended form to project individual intentions in online purchases (Tommasetti et al., 2018; Taherdoost, 2018). Recently, TRA applied to identify items that influence the desire of those who purchase services over the internet.

The TRA very aligned in exploring various indicators that influence the attitudes of internet banking users in Finland and Indonesia (Yang et al., 2021). In addition, they have used TRA as a basis for developing the theory of planned behavior (TPB) as well as for modifying the TAM model with SN. It is important to note that the ability of TRA to explain the behavior in question is because of the effect of SN inconsistencies in modeling technology acceptance of information systems (IS). In a comparative study of IB adoption in Singapore and South Africa, the results showed SN did not affect IB adoption in both Singapore and South Africa as a hypothesis in their model (Hanafizadeh et al., 2014). In other findings also show that SN is not a significant determinant in other studies (Buabeng-Andoh, 2018).

Assume of Theory Planned Behavior (TPB) is an elaboration of TRA and escalated to legitimize conditions, where individuals do not have full control over their behavior (Asih et al., 2020). We believe TPB to confirm the intentions and behavior of consumers in deciding. As for the TPB are attitudes and behavior, the same is the case with TRA. However, this model also reaches out to behavioral control as a perceived construct. Therefore, TPB gained three constructs in determining user intention, such as behavior, attitude, and Post-Benefit Convenience (PBC). The theory has gone on over time to study different IT systems, such as computer resource centers, electronic securities, spreadsheets, and negotiation support systems.

A decomposition of the TPB model through a new format that is useful for better understanding the relationship between intention antecedents and belief structures (Zahid, Din, 2019). Several researchers have examined the approach to the decomposition of beliefs into multidimensional constructs. They inspires the TPB Decomposition Model. This model provides three sets of belief structures in a multi-dimensional belief construct. These beliefs can refer to as attitude beliefs, normative beliefs, and control beliefs and related to attitude, SN, and PBC, respectively (Dhagarra et al., 2020). The decomposition of the TPB model has many valuable advantages as a representation of the TRA core construct. It also provides an attitude belief dimension derived comprising the five innovation attributes instead of the two ease-of-use and usability factors proposed in the TAM model.

About the importance of information security and privacy in the TAM system in online banking (Satsios, Hadjidakis, 2018). Online services in financial institutions are trust-oriented. Identify of consumers who make online decisions based on trust. A higher level of trust certainly plays an important role in the use and acceptance of IT. In developing countries (such as Indonesia), it is very real empirically (Asih et al., 2020).

Consumer trust shapes it where aspects of security and privacy are key factors in influencing users to adopt IT. Presented of security and privacy widely discussed in practical and academic

fields (Skvarciany, Jurevičienė, 2018). Privacy as an ability to regulate and control individuals. From a consumer perspective, security constructs and protects potential threats. They have proven its ability to protect consumer information from fraud (Ikbal et al., 2020).

4. Results

Table 2 shows the results of the validity test using Pearson product-moment correlations. Here, the instrument, through the assumption of validity referring to the Pearson correlation, concludes that all items in the variable have good reliability and validity.

Table 2. Test of validity and reliability

Variables	Pearson Correlation	Cronbach's Alpha (CA)
Perceived Risk (PR)		0.659
PR-1	0.691**	
PR-2	0.709**	
PR-3	0.659**	
PR-4	0.757**	
Decision Convenience (DC)		0.754
DC-1	0.770**	
DC-2	0.825**	
DC-3	0.699**	
DC-4	0.748**	
Access Convenience (AC)		0.819
AC-1	0.844**	
AC-2	0.817**	
AC-3	0.804**	
AC-4	0.769**	
Transaction Convenience (TC)		0.677
TC-1	0.766**	
TC-2	0.835**	
TC-3	0.738**	
Benefit Convenience (BC)		0.709
BC-1	0.755**	
BC-2	0.838**	
BC-3	0.795**	
Post-Benefit Convenience (PBC)		0.809
PBC-1	0.879**	
PBC-2	0.858**	
PBC-3	0.824**	
User Satisfaction (US)		0.793
US-1	0.856**	
US-2	0.872**	
US-3	0.801**	
Trust (T)		0.791
T-1	0.889**	
T-2	0.809**	
T-3	0.827**	

Source: calculations from SPSS, *Note:* **p <0.10.

SPSS software supports calculations in the influence's model of e-service convenience and perceived risk on the satisfaction and trust of online academic users in Indonesian universities (see Table 3). *H1:* perceived risk has a negative and insignificant impact on user satisfaction, where risk perception has an effect of -0.053 and p> 0.05. *H2:* decision convenience has a positive and significant impact on user satisfaction, where the path coefficient is 0.139 with p < 0.10. *H3:* access

convenience actually has a positive but not significant effect on user satisfaction because the path coefficient is -0.058 with p > 0.05. *H4:* transaction convenience has a positive and significant effect on user satisfaction. We can see this from the coefficient value reaching 0.409 with p < 0.05. *H5:* benefit convenience has a positive and significant impact on user satisfaction because the path coefficient is 0.097 with p > 0.05. Equally interesting, the output of SPSS also presents the impact of the post-benefit convenience that affects the user satisfaction in a positive and significant way. *H6:* through the probability criterion of 0.10, the result is p <0.10 and the path coefficient is 0.143. Finally, *H7:* user satisfaction againsttrust showed by the coefficient reaching 0.510 and p < 0.05. Thus, user satisfaction has a significant influence on trust.

Table 3. Hypothesis testing

Hypothesis	Std. Coef.Beta	T	Sig.	Explanation
H1:PR – US	-0.053	-0.982	0.327*	Not Sig.
H2:DC – US	0.139	1.892	0.060**	Sig.
H3: AC –US	-0.058	-0.632	0.528*	Not Sig.
H4: TC – US	0.409	4.609	0.000*	Sig.
H5: BC – US	0.097	1.273	0.204*	Not Sig.
H6: PBC – US	0.143	1.772	0.078*	Sig.
H7: US-T	0.510	8.750	0.000**	Sig.

Source: calculations from SPSS, *Note:* *p <0.05 and **p <0.10.

Actualize of risk perception is the first concept that focuses on symptoms such as reference groups, brand loyalty, pre-purchase considerations, and information seeking (Chau, Ngai, 2010; Bauer, 1964). The phenomenon that highlights consumer behavior in involving one risk of all these actions is unpleasant (Cox, 1967; Ho, Ng, 1994; Stone, Gronhaug, 1993; Peter, Ryan, 1976). From the investigated two types of risk in IT including personal risk and performance risk. Personal risks, such as losses to consumers because of behavior in using online systems (Jarvennpaa, Todd, 1996). Second, the performance risk discusses the service or product. Does it meet their expectations?. Of course, this is the primary concern of the system provided by consumers.

Interventions on the user's perceived risk prove that the findings have resulted in a perceived risk that does not have a real impact on users of the online academic system. In fact, there is no expectation from service users in the academic system (Chu et al., 2016). They will continue to use the online academic system services, because they have no other choice to contribute.

The second to sixth hypothesis testing has a relationship with the concept of e-service convenience on user satisfaction. Designed in the conceptual service convenience was proposed if consumers' perceptions of effort and time related to the use and purchase of a service (Kong et al., 2021). The dimensions of effort and time as an advantage in consumer convenience stimulate this. Indirectly, they experience reduced time while controlling work related to service consumption and acquisition (Zeithaml, Bitner, 2000). In the end, the convenience of service leads to added value by reducing the effort and duration of consumers' time in using the service.

The convenience and multidimensional construction lead to service convenience through effort and time that must agree on the activities experienced by consumers during the service use and purchase process (Berry et al., 2002). The five aspects of service convenience include access, transaction, benefit, decision, and post-benefit (Malhotra, Galletta, 1999). These five sections reflect the stages of their activity towards purchasing.

5. Conclusion

The point in this study is to map how the role of the user satisfaction affected byperceived risk, decision convenience, access convenience, transaction convenience, benefit convenience, and post-benefit convenience. In addition, the extent of the relationship between user satisfaction and trustfor online academic users at three universities in Indonesia. We found that of the seven hypotheses developed, four proposals accepted, and the remaining three rejected. Therefore, decision convenience, transaction convenience, and post-benefit convenience have a significant effect onuser satisfaction. While still in the first line, perceived risk, access convenience, and benefit convenienceactually have an insignificant effect on theuser satisfaction. In particular,

on the second track, user satisfactionhas had a significant impact ontrust. Subsequent research can include the intention variable to use as an intermediary variable before the user feels satisfied with online academic service.

These findings are relevant and have been in line with studies discussing satisfaction that is influenced by the quality of electronic services and desire and attitude influenced the desire to use a website. Web quality explores the quality of electronic services (Carlson, O'Cass, 2010; Loiacono et al., 2002). A scale in Web quality, including thirty-six items classified on four constructs (convenience, complementary relationships, benefits, and entertainment). The result found a systematic relationship between attitudes, desires, and satisfaction with the quality of e-service on the website.

For operational purposes and future managerial considerations, the object can be expanded by submitting external parties as respondents. Thus, it can be seen to what extent aspects of satisfaction and aspects of trust can be built in two directions.

References

Alam et al., 2020 – *Alam, T., Rababah, B., Ali, A., Qamar, S.* (2020). Distributed intelligence at the edge on iot networks. *Annals of Emerging Technologies in Computing*. 4(5): 1-18. DOI: 10.33166/AETiC.2020.05.001

Asih et al., 2020 – *Asih, D., Setini, M., Soelton, M., Muna, N., Putra, I., Darma, D., Judiarni, A.* (2020). Predicting green product consumption using theory of planned behavior and reasoned action. *Management Science Letters*. 10(14): 3367-3374. DOI: 10.5267/j.msl.2020.5.042

Balina et al., 2020 – *Balina, T., Dagaeva, E., Novi, I.* (2020). Research of the informational needs of state and municipal employees in the University environment. *International Journal of Media and Information Literacy*. 5(2): 134-144. DOI: 10.13187/ijmil.2020.2.134

Belkhamza, Syed, 2009 – *Belkhamza, Z., Syed, A.* (2009). The effect of perceived risk on the intention to use e-commerce: the case of Algeria. *Journal of Internet Banking and Commerce*. 14(1): 1-10. DOI: 10.1.1.299.1386

Berry et al., 2002 – *Berry, L.L., Seiders, K., Grewal, D.* (2002). Understanding service convenience. *Journal of Marketing*.66(3): 1-17. DOI: 10.1509/jmkg.66.3.1.18505

Buabeng-Andoh, 2018 – *Buabeng-Andoh, C.* (2018). Predicting students' intention to adopt mobile learning: a combination of theory of reasoned action and technology acceptance model. *Journal of Research in Innovative Teaching & Learning*. 11(2): 178-191. DOI: 10.1108/JRIT-03-2017-0004

Carlson, O'Cass, 2010 – *Carlson, J., O'Cass, A.* (2010). Exploring the relationships between e-service quality, satisfaction, attitudes and behaviors in content-driven e-service web sites. *Journal of Services Marketing*. 24(2): 112–127. DOI: 10.1108/08876041011031091

Chao, 2019 – *Chao C.M.* (2019). Factors determining the behavioral intention to use mobile learning: an application and extension of the UTAUT model. *Frontiers in Psychology*. 10: 1652. DOI: 10.3389/fpsyg.2019.01652

Chau, Ngai, 2010 – *Chau, V.S., Ngai, L.W.* (2010). The youth market for internet banking services: perceptions, attitude, and behavior. *Journal of Services Marketing*. 24(1): 42-60. DOI: 10.1108/08876041011017880

Chen et al., 2017 – *Chen, H., Rong, W., Ma, X., Qu, Y., Xiong, Z.* (2017). An extended technology acceptance model for mobile social gaming service popularity analysis. *Mobile Information Systems*. 3906953: 01-12. DOI:10.1155/2017/3906953

Chu et al., 2016 – *Chu, S.K., Lau, W.W., Chu, D.S., Lee, C.W., Chan, L.L.* (2016). Media awareness among Hong Kong primary students. *Journal of Librarianship and Information Science*. 48(1): 90-104. DOI: 10.1177/0961000614551448

Churchill, 1999 – *Churchill, G. A.* (1999). Marketing research. Ney York: The Dryden Press.

Colwell et al., 2008 – *Colwell, S.R., Aung, M., Kanetkar, V., Holden, A.L.* (2008). Toward a measure of service convenience: multiple-item scale development and empirical test. *Journal of Services Marketing*. 22(2): 160-169. DOI: 10.1108/08876040810862895

Davis et al., 2009 – *Davis, J.M., Lee, L.S., Yi, M.Y.* (2009). Time-user preference and technology acceptance: measure development of computer polychronicity. *American Journal of Business*.24(2): 23-31. DOI: 10.1108/19355181200900008

Davis, 1989 – *Davis, F.D.* (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*. 13(3): 319-340. DOI: 10.2307/249008

Davis, 1993 – *Davis, F.D.* (1993). User acceptance of information technology: system characteristics, user perceptions, and behavioral impacts. *International Journal of Man-Machine Studies*. 38(3): 475-487. DOI: 10.1006/imms.1993.1022

Dhagarra et al., 2020 – *Dhagarra D., Goswami, M., Kumar, G.* (2020). Impact of trust and privacy concerns on technology acceptance in healthcare: an Indian perspective. *International Journal of Medical Informatics*. 141: 104164. DOI: 10.1016/j.ijmedinf.2020.104164

Hanafizadeh et al., 2014 – *Hanafizadeha, P., Keating, B.W., Khedmatgozar, H.R.* (2014). A systematic review of Internet banking adoption. *Telematics and Informatics*. 31(3): 492-510. DOI: 10.1016/j.tele.2013.04.003

Ikbal et al., 2020 – *Ikbal, M., Irwansyah, I., Paminto, A., Ulfah, Y., Darma, D.C.* (2020). Explores the specific context of financial statement fraud based on empirical from Indonesia. *Universal Journal of Accounting and Finance*. 8(2): 29-40. DOI: 10.13189/ujaf.2020.080201

Illias et al., 2009 – *Illias, A., Razak, M.Z., Yasoa', M.R.* (2009). Taxpayers' attitude in using e-filing system: is there any significant difference among demographic factors?. *Journal of Internet Banking and Commerce*.14(1): 1-13. URL: https://www.icommercecentral.com/peer-reviewed/taxpayers-attitude-in-using-efiling-system-is-there-any-significant-difference-among-demographic-factors-38304.html

Irawan, 2003 – *Irawan, H.* (2003). 10 prinsip kepuasan pelanggan [The 10 principles of customer satisfaction]. Jakarta: Gramedia.

Jhong-Min, 1996 – *Jhong-Min, C.* (1996). The relationship among performance of accounting information systems, influences factors, and evolution level of information systems. *Journal of Management Information Systems*. 12(4): 215-239. DOI: 10.1080/07421222.1996.11518107

Jogiyanto, 2009 – *Jogiyanto, H.M.* (2009). Sistem informasi teknologi [Technology information system]. Yogyakarta: Andi Offset.

Kannabiran, Narayan, 2005 – *Kannabiran, G., Narayan, P.C.* (2005). Deploying Internet banking and e-commerce – case study of a private-sector bank in India. *Information Technology for Development*. 11(4): 363-379. DOI: 10.1002/itdj.20025

Kong et al., 2021 – *Kong, Q., Lai-Ku, K., Deng, L., Yan-Au, A.* (2021). Motivation and perception of Hong Kong university students about social media news. *Comunicar*. 29(67): 35-45. DOI: 10.3916/C67-2021-03

Lai, 2017 – *Lai, P.C.* (2017). The literature review of technology adoption models and theories for the novelty technology. *Journal of Information Systems and Technology Management*. 14(1): 21-38. DOI: 10.4301/s1807-17752017000100002

Lallmahamood, 2007 – *Lallmahamood, M.* (2007). An examination of individuals perceived security and privacy of the internet in Malaysia and the influence of this on their intention to use e-commerce: using an extension of the technology acceptance model. *Journal of Internet Banking and Commerce*. 12(3): 1-26. [Electronic resource]. URL: https://scirp.org/reference/referencespapers.aspx?referenceid=1177304

Lee, 2010 – *Lee, M.* (2010). Explaining and predicting users' continuance intention toward e-learning: An extension of the expectation–confirmation model. *Computers & Education*. 54(2): 506-516. DOI: 10.1016/j.compedu.2009.09.002

Malholtra, Galletta, 1999 – *Malhotra, Y., Galletta, D.F.* (1999). Extending the technology acceptance model to account for social influence: theoretical bases and empirical validation. *Proceedings of the 32nd Annual Hawaii International Conference on Systems Sciences*. HICSS-32: 1–14. DOI: 10.1109/HICSS.1999.772658

Maqableh et al., 2021 – *Maqableh, M., Abuhashesh, M., Dahabiyeh, L., Al Nawayseh, M.K., Masadeh, R.* (2021). The effect of Facebook users' satisfaction and trust on stickiness: The role of perceived values. *International Journal of Data and Network Science*. 5(3): 245-256. DOI: 10.5267/j.ijdns.2021.6.009

Mi et al., 2018 – *Mi, C., Chang, F., Lin, C., Chang, Y.* (2018). The theory of reasoned action to CSR behavioral intentions: the role of CSR expected benefit, CSR expected effort and stakeholders. *Sustainability*. 10(12): 4462. DOI: 10.3390/su10124462

Miandari et al., 2021 – *Miandari, G.K., Yasa, N.N., Wardana, M., Giantari, I.G., Setini, M.* (2021). Application of technology acceptance model to explain repurchase intention in online shopping consumers. *Webology*. 18(1): 247-262. DOI: 10.14704/WEB/V18I1/WEB18087

Nath et al., 2001 – *Nath, R., Shrick, P., Parzinger, M.* (2001). Bankers perspectives on internet banking. *e-Service Journal*.1(1): 21-36. DOI: 10.2979/ESJ.2001.1.1.21

Nguyen et al., 2018 – *Nguyen, Q.A., Hens, L., MacAlister, C., Johnson, L., Lebel, B., Tan, S.B., Nguyen, H.M., Nguyen, T.N., Lebel, L.* (2018). Theory of reasoned action as a framework for communicating climate risk: a case study of schoolchildren in the Mekong Delta in Vietnam. *Sustainability*. 10(6). DOI: 10.3390/su10062019

Reid, Yair, 2008 – *Reid, M., Yair, L.* (2008). Integrating trust and computer self-efficacy with TAM: an empirical assessment of customers' acceptance of banking information systems (BIS) in Jamaica. *Journal of Internet Banking and Commerce*. 12(3): 1-18. DOI: 10.1.1.180.3089

Rise, Fogarty, 2006 – *Rose, J., Fogarty, G.* (2006). Determinants of perceived usefulness and perceived ease of use in the technology acceptance model: senior consumers adoption of self-service banking technologies academy of world business. *Marketing & Management Development*. 2(10): 122-129. DOI: 10.1.1.510.4777

Sahut, 2008 – *Sahut, J-M.* (2008). The adoption and diffusion of electronic wallets: the case of Moneo. *Journal of Internet Banking and Commerce*. 13(1): 1-10. [Electronic resource]. URL: https://www.icommercecentral.com/peer-reviewed/the-adoption-and-diffusion-of-electronic-walle tsthe-case-of-moneo-38412.html

Sathye, 1999 – *Sathye, M.* (1999). Adoption of Internet banking by Australian consumers: an empirical investigation. *International Journal of Bank Marketing*.17(7): 324-334. DOI: 10.1108/02652329910305689

Satsios, Hadjidakis, 2018 – *Satsios, N., Hadjidakis, S.* (2018). Applying the theory of planned behaviour (TPB) in saving behaviour of Pomak households.*International Journal of Financial Research*. 9(2): 122-133. DOI: 10.5430/ijfr.v9n2p122

Setiawan, Widanta, 2021 – *Setiawan, P.Y., Widanta, A.A.* (2021). The effect of trust on travel agent online use: Application of the technology acceptance model. *International Journal of Data and Network Science*. 5(3): 173-182. DOI: 10.5267/j.ijdns.2021.6.015

Skvarciany, Jurevičienė, 2018 – *Skvarciany, V., Jurevičienė, D.* (2018). Factors influencing individual customers trust in internet banking: case of Baltic States. *Sustainability*. 10(12): 4809. DOI: 10.3390/su10124809

Taherdoost, 2018 – *Taherdoost, H.* (2018). A review of technology acceptance and adoption models and theories. *Procedia Manufacturing*. 22: 960-967. DOI: 10.1016/j.promfg.2018.03.137

Thulani et al., 2009 – *Thulani, D., Tofara, C., Langton, R.* (2009). Adoption and use of internet banking in Zimbabwe: an exploratory study. *Journal of Internet Banking and Commerce*. 14(1): 1-13.

Tommasetti, 2018 –*Tommasetti, A., Singer, P., Troisi, O., Maione, G.* (2018). Extended theory of planned behavior (ETPB): investigating customers' perception of restaurants' sustainability by testing a structural equation model. *Sustainability*. 10(7): 2580. DOI: 10.3390/ su10072580

Tong et al., 2019 – *Tong, W.T., Islam, M.A., Low, W.Y., Choo, W.Y., Abdullah, A.* (2019). Prevalence and determinants of pathological internet use among undergraduate students in a public university in Malaysia. *The Journal of Behavioral Science*. 14(1): 63-83. [Electronic resource]. URL: https://so06.tci-thaijo.org/index.php/IJBS/article/view/141412

Vail, Agarwal, 2007 – *Vail, P.J., Agarwal, N.* (2007). Disruptive innovation offers far-reaching solutions. *IEEE Potentials*. 26(2): 25-33. DOI: 10.1109/MP.2007.343054

Wijayanti, Darma, 2009 – *Wijayanti, T.C., Darma, D.C.* (2019). The role of investment and government expenditure on grdp and human development in East Kalimantan. *International Journal of Scientific and Technology Research*. 8(9): 1232-1237.

Yang et al., 2021 – *Yang, M., Mamun, A.A., Mohiuddin, M., Nawi, N.C., Zainol, N.R.* (2021). Cashless transactions: a study on intention and adoption of e-wallets. *Sustainability*. 13(2): 831. DOI: 10.3390/su13020831

Yang, Wang, 2019 – *Yang, Y., Wang, X.* (2019). Modeling the intention to use machine translation for student translators: An extension of Technology Acceptance Model. *Computers & Education*. 133: 116-126. DOI: 10.1016/j.compedu.2019.01.015

Zahid, Din, 2019 – *Zahid, H., Din, H.B.* (2019). Determinants of intention to adopt e-government services in Pakistan: an imperative for sustainable development. *Resources*. 8(3): 128. DOI: 10.3390/resources8030128