

A model of intention to use official COVID-19 websites

Model of
intention

Sik Sumaedi, I. Gede Mahatma Yuda Bakti, Tri Rakhmawati,
Nidya J. Astrini, Tri Widiyanti, Sih Damayanti,
M. Azwar Massijaya and Rahmi K. Jati
Indonesian Institute of Sciences, Jakarta, Indonesia

249

Received 3 July 2020
Revised 28 August 2020
Accepted 23 September 2020

Abstract

Purpose – This research aims to test the effects of attitude, perceived behavioral control (PBC), subjective norm and perceived quality of official coronavirus disease 2019 (COVID-19) websites on intention to use official COVID-19 websites.

Design/methodology/approach – This study collected data using an online questionnaire. It involved 120 Indonesians who used official COVID-19 websites. The data were analyzed using the multiple regression analysis.

Findings – This research found that intention to use official COVID-19 websites is significantly and positively affected by the quality of the website, attitude and subjective norm. PBC does not influence intention to use official COVID-19 websites.

Research limitations/implications – This research was only conducted in the context of Indonesians. Furthermore, a convenience sampling technique was applied. Future research should be done in a different context with larger samples to test the generalization of this research's findings.

Practical implications – To improve intention to use official COVID-19 websites, people must be directed to have a positive attitude toward the website. The developer must ensure the quality of the website. It is also essential to involve leaders and public figures whose opinions might be able to sway citizens to use official COVID-19 websites consistently.

Originality/value – This research is the first one of its kind that studied citizens' intention to use official COVID-19 websites.

Keywords Behavior, COVID-19, Intention, Quality, TPB, Website

Paper type Research paper

Introduction

Background

Coronavirus disease 2019 (COVID-19) is currently a serious problem that is faced by many countries. It has infected more than 24 m people around the world as of August 27, 2020 (Worldmeters, 2020a). COVID-19 has also claimed more than 820,000 lives as of August 27, 2020 (Worldmeters, 2020a). Furthermore, the World Health Organization (WHO) has determined COVID-19 as a pandemic (Cucinotta and Vanelli, 2020).

COVID-19 was caused by a new strain of coronavirus (Sohrabi *et al.*, 2020). The spread was relatively fast (Rio and Malani, 2020). Furthermore, the strategy to minimize the spread might also be relatively hard because a number of patients did not show clear symptoms (Inui *et al.*, 2020). The efforts to flatten the curve depended heavily on the people's health-related behaviors, such as social distancing, hand washing and improving the immune system (World Health Organization, 2020b).

Health education is needed for people to conduct health-related behaviors effectively and efficiently. During a pandemic, health educations can be initiated through websites and other online media. Although web-based education could potentially reach a broad audience swiftly, the challenge was to encourage the usage of the website (Wall, 2007). Previous studies have confirmed that website usage depended on intention to use the website (Rana *et al.*, 2017;



Health Education
Vol. 120 No. 4, 2020
pp. 249-261

© Emerald Publishing Limited
0965-4283

DOI 10.1108/HE-07-2020-0048

All authors are the main contributors of this paper.

Valaei and Baroto, 2017; Xie *et al.*, 2017). Therefore, studies regarding intention to use educational websites related to COVID-19 become important.

Research gaps

In Indonesia, the central and local governments have provided official COVID-19 websites that contain information on health-related behaviors. For example, www.covid19.go.id (national portal), www.infeksiemerging.kemkes.go.id (health ministry), www.corona.jakarta.go.id (Indonesia's capital city), www.infocorona.bantenprov.go.id (Banten local government), www.pikobar.jabarpov.go.id (West Java local government) and www.corona.jatengprov.go.id (Central Java local government).

Regarding web-based health education during the COVID-19 pandemic, Indonesia is one of the countries that are important to be studied due to two main reasons. First, there are 160 165 people infected and 6,944 casualties in Indonesia as of August 27, 2020 (Worldmeters, 2020a). The death rate of Indonesia (4.3%) is higher than global death rate (3.4%) (Worldmeters, 2020a). Second, in Indonesia, the government used official COVID-19 websites as a tool for educating and informing citizens regarding COVID-19. The government promoted that the official COVID-19 website is the valid main source of information regarding COVID-19 for citizens, so that the other information that is obtained by citizens should be validated with the information in the website. Furthermore, in the social media platform, the government also directed the citizens to visit the official COVID-19 website in order to get the COVID-19 information.

For the official COVID-19 websites to be effective educational outlets, citizens must be encouraged to use them. The websites would be fruitless if no one reads them. Therefore, it is essential to understand the factors that influence intention to use official COVID-19 websites. Unfortunately, there was no study that specifically investigated the influencing factors of intention to use official COVID-19 websites.

Using official COVID-19 websites can be categorized as a health-related behavior. In the literature, researchers have been discussing health-related behaviors, including the use of health-related websites (Wall, 2007; Whitten *et al.*, 2008; Czaja *et al.*, 2013). However, there is no researcher that has investigated intention to use official COVID-19 websites.

One of the most used theories to explain health-related behaviors is the theory of planned behavior (TPB). Based on the TPB, intention to use official COVID-19 websites may be affected by three factors: attitude, perceived behavioral control (PBC) and subjective norm (Ajzen, 1991). Aside from those factors, perceived quality also may play a vital role in influencing intention to use official COVID-19 websites. Several researchers have identified the significant impact of perceived quality on intention to use a website (e.g. Delone and McLean, 2003; Lee and Lin, 2005; Kim and Niehm, 2009; Valaei and Baroto, 2017). Therefore, it is important to study the effects of attitude, PBC, subjective norm and perceived quality on the intention to use official COVID-19 websites. Previous studies have not discussed this.

Research's objectives

To fill the knowledge gap, this research seeks to test the effects of attitude, PBC, subjective norm and perceived quality on intention to use official COVID-19 websites. More specifically, this research aims to answer the questions below:

- (1) Does attitude affect intention to use official COVID-19 websites?
- (2) Does PBC affect intention to use official COVID-19 websites?
- (3) Does subjective norm affect intention to use official COVID-19 websites?
- (4) Does perceived quality affect intention to use official COVID-19 websites?

Literature review and hypotheses

Intention to use official coronavirus disease 2019 websites

Intention is an important concept in the literature that discussed health-related behaviors, including behaviors to use health-related websites. In the TPB, intention is a key factor that formed a behavior (Ajzen, 1991). Generally, intention could be defined as “the motivational factors that influence behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior” (Ajzen, 1991). Thus, intention to use official COVID-19 websites can be defined as a tendency that represents the strength of one’s motivation to use the website.

In the health-related behaviors literature, intention can be affected by many factors. Based on the TPB and the literature on health-related behaviors, including the literature on the use of health-related websites, this research proposed four determining factors of intention to use official COVID-19 websites, which are attitude, PBC, subjective norm and perceived quality of official COVID-19 websites. Visually, the conceptual model of this research can be seen in Figure 1.

Attitude

Attitude is a vital factor in forming one’s intention to perform a behavior (Ajzen, 1991). The two critical behavior theories, the TPB and the theory of reasoned action (TRA), have uncovered the importance of attitude (Ajzen, 1991). Attitude, in the original articles of the TPB, was defined as “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991). In this research, attitude is one’s favorable or unfavorable evaluation of the use of official COVID-19 websites.

According to the TPB, attitude has a positive impact on intention (Ajzen, 1991). In the context of website usage studies, several researchers have found a positive impact of attitude on intention to use a website (Lee, 2009; Limbu *et al.*, 2012; Xie *et al.*, 2017). Thus, this research proposed that attitude toward the use of official COVID-19 websites positively affects intention to use official COVID-19 websites. The first hypothesis is as follows:

- H1. Attitude toward the use of official COVID-19 websites positively influences intention to use official COVID-19 websites for people in Indonesia.

Subjective norm

Subjective norm is an essential factor in the literature related to behaviors. The importance of it is highly considered in the TRA and the TPB. Subjective norm represents how one’s

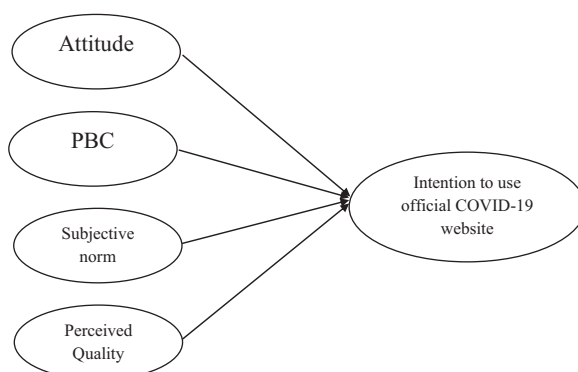


Figure 1.
The conceptual model

behavior is influenced by the people around him/her (Venkatesh and Davis, 2000). According to Ajzen (1991), subjective norm is “the perceived social pressure to perform or not to perform the behavior.” In this research, subjective norm refers to one’s perception of social pressure in utilizing official coronavirus disease 2019 websites.

According to the TPB, subjective norm has a positive impact on intention (Ajzen, 1991). Empirically, previous studies have proven the positive impact of subjective norm on intention to use website (Nasri and Charfeddine, 2012; Rana *et al.*, 2017; Xie *et al.*, 2017). A similar effect is also predicted in the case of the official COVID-19 website. Therefore, the second hypothesis is as follows:

- H2. Subjective norm positively affects intention to use official COVID-19 websites for people in Indonesia.

Perceived behavioral control

PBC is deemed vital in forming one’s behavior (Ajzen, 1991). PBC represents the ability and resources needed to perform a particular behavior (Venkatesh *et al.*, 2003). PBC is defined as “the perceived ease or difficulty of performing the behavior” (Ajzen, 1991). In this study, PBC is defined as one’s perception of his/her ability and resources to use official COVID-19 websites.

Based on the TPB, PBC positively influences intention. In the context of website usage, previous researchers have revealed the positive relationships between PBC and intention to use websites (Hansen *et al.*, 2004; Wu and Chen, 2005; Xie *et al.*, 2017). This research proposed a similar relationship; PBC is presumed to have a positive effect on intention to use official COVID-19 websites. Therefore, the third hypothesis is as follows:

- H3. PBC positively affects intention to use official COVID-19 websites for people in Indonesia.

Perceived quality of official coronavirus disease 2019 websites

Perceived quality is one’s cognitive valuation of a product’s performance (Wilcox *et al.*, 2011; Sumaedi *et al.*, 2014). Zeithaml (1988) defined perceived quality as “the consumer’s judgment about a [service]’s overall excellence or superiority.” This definition has also been adapted in the context of a website’s quality (Kim and Niehm, 2009; Connolly *et al.*, 2010). Therefore, perceived quality in this research is seen as one’s valuation of the overall performance of official COVID-19 websites.

It has been generally accepted that perceived quality is a multidimensional concept (Brady and Cronin, 2001; Clemes *et al.*, 2008). This understanding also applies in the context of website usage (Yoo and Donthu, 2001; Barnes and Vidgen, 2002; Connolly *et al.*, 2010). More specifically, by modifying a website quality concept by Boon-itt (2019), this research used four dimensions to represent perceived quality, which are the content of the websites, the authority of the source, the design and user supports.

In the literature, perceived quality has a positive effect on intention in many contexts (Olorunniwo *et al.*, 2006; Brochado, 2009; Widiianti *et al.*, 2015; Al-Kilani and Twaissi, 2017). In the context of website usage, this finding also has been confirmed (Delone and McLean, 2003; Lee and Lin, 2005; Kim and Niehm, 2009; Valaei and Baroto, 2017). This research utilized this previous finding as the fourth hypothesis.

- H4. Perceived quality positively influences intention to use official COVID-19 websites for people in Indonesia.

The research methodology

Variables and measures

There were five variables used in this research: perceived quality, attitude, PBC, subjective norm and intention to use. To ensure content validity, those variables were measured using indicators taken from previous studies (Sekaran and Bougie, 2010). Indicators for each variable can be seen in Table 1. Each indicator was measured using a five-point Likert scale ranging from 1 (extremely disagree) to 5 (extremely agree).

Construct validity and reliability

A factor analysis was used to test the construct validity of the indicators. The cut-off values for construct validity testing are (1) the value of Kaiser-Meyer-Olkin (KMO) is 0.5 or above, (2) *p*-value of Bartlett's test of sphericity is 0.05 or below and (3) factor loading values for each indicator is 0.5 or above (Malhotra and Birks, 2007; Hair *et al.*, 2010). To examine the reliability, Cronbach's alpha test was conducted with a threshold value of 0.6 (Malhotra and Birks, 2007; Hair *et al.*, 2010). The results of validity and reliability tests are provided in Table 2.

Data collection

Data were collected through an online survey. The technique was chosen because of two reasons. First, the restrictions in place during the COVID-19 pandemic were making it hard to collect the data physically. Second, this technique has been used by previous studies on human behavior (Wu and Wang, 2011; Deshbag and Mohan, 2020).

The population of this research is all Indonesians that used official COVID-19 websites for accessing information regarding COVID-19. The samples were gathered through convenience sampling with three considerations. First, the number of users and the population characteristics were unknown (Sekaran and Bougie, 2010). In this condition, the use of convenience sampling is acceptable (Calder *et al.*, 1981 in Park and Sullivan, 2009; Sekaran and Bougie, 2010). Second, this study had very limited resources and the researchers were physically restricted by the government policy during the COVID-19 pandemic. Third, previous studies on behavioral model testing, not unlike this research, also used convenience sampling (*e.g.* Sumaedi *et al.*, 2016).

The number of samples is 120 Indonesians that used official COVID-19 websites for accessing information regarding COVID-19. The number was considered adequate for the statistical tools needed, the multiple regression analysis, which required the number of samples to be at least five times larger than the indicators (Hair *et al.*, 2010). Furthermore, based on the power analysis using G*Power software, in order to achieve the power of 80%, our study sample size should be at least 85. The sample size of this research fulfilled it.

We selected Indonesians who lived in the outer side of greater Jakarta – Jabodetabek – as the samples because Jabodetabek was the epicenters of COVID-19 in Indonesia during the survey we performed. We expected that the people who lived in the outer side of greater Jakarta – Jabodetabek – need to be educated in order to prevent massive COVID-19 transmission. In order to obtain the respondents, we distributed the link of online questionnaire into the WhatsApp Group (WAG). The link of online questionnaire was also distributed to the researchers' friends personally. They were asked to distribute the survey into their networks. We asked the respondents to join the survey voluntarily. Table 3 shows the demographic profile of the respondents.

The data analysis

This study used the multiple regression analysis because of two considerations. First, this study involved one dependent variable and four independent variables. Thus, it matches with

Variables	Indicators	Adapted from	
Content	WQ1	Information given by the COVID-19 website matches my needs	Boon-itt (2019)
	WQ2	Information given by the COVID-19 website is up to date	
Authority of the source	WQ3	Information given by the COVID-19 website is correct	Boon-itt (2019)
	WQ4	The writers/the source of information in the COVID-19 website is clear	
	WQ5	The writers/the source of information in the COVID-19 website can be trusted	
	WQ6	The writer/the source of information in the COVID-19 website has an appropriate field of expertise	
Design	WQ7	The website is easy to use	Boon-itt (2019)
	WQ8	The website layouts are good and logical	
User supports	WQ9	The writings are easy to read	Boon-itt (2019)
	WQ10	The COVID-19 website provides communication lines/means, so that I can easily contact the website management	
	WQ11	The COVID-19 website gives opportunities for me to correct and/or convey suggestions easily	
	WQ12	The COVID-19 website quickly responded to corrections and/or suggestions I have made regarding information given in the website	
Attitude	ATT1	Using COVID-19 websites to gather information related to COVID-19 is a good idea	Bao <i>et al.</i> (2017)
	ATT2	Using COVID-19 websites to gather information related to COVID-19 is satisfying	
	ATT3	Overall, I have a positive evaluation toward the use of official COVID-19 websites for gathering information	
Perceived behavioral control	PBC1	I have adequate access to the Internet to use the official COVID-19 website	Bao <i>et al.</i> (2017)
	PBC2	I have access to appropriate facilities, such as laptop, PC and smartphones to access official COVID-19 websites	
	PBC3	I have knowledge and skills to use official COVID-19 websites	
Subjective norm	SN1	People who are important for me think that I should use official COVID-19 websites to gather information related to COVID-19	Bao <i>et al.</i> (2017)
	SN2	People who have influence in my life think that I should use official COVID-19 websites to gather information related to COVID-19	
	SN3	People whose opinions matter for me think that I should use official COVID-19 websites to gather information related to COVID-19	
Intention to use	ITU1	I plan to use the official COVID-19 website to gather information related to COVID-19 in the future	Boon-itt (2019)
	ITU2	I will recommend the official COVID-19 website to others when they need information regarding COVID-19	
	ITU3	I intend to keep preferring the official COVID-19 website compared to other sources when I collect information regarding COVID-19	

Table 1.
Variables and indicators

the requirement of the multiple regression analysis (Hair *et al.*, 2010). Second, this method was also used in previous studies on human behavior (Sumaedi *et al.*, 2016; Yarmen *et al.*, 2016).

Since the perceived quality variable was a multidimensional variable, the value of the variable was calculated from the average value of its dimensions. The dimension value was calculated from the average value of its indicators. This technique was adapted from Lai and

Variables and indicators	KMO	Bartlett's test for sphericity (significance)	Factor loading	Cronbach's α
Content	0.669	0.000		0.765
WQ1			0.757	
WQ2			0.853	
WQ3			0.864	
Authority of the source	0.688	0.000		0.847
WQ4			0.907	
WQ5			0.909	
WQ6			0.806	
Design	0.744	0.000		0.897
WQ7			0.918	
WQ8			0.924	
WQ9			0.891	
Users' supports	0.721	0.000		0.881
WQ10			0.865	
WQ11			0.910	
WQ12			0.928	
Attitude	0.708	0.000		0.847
ATT1			0.850	
ATT2			0.908	
ATT3			0.867	
Perceived behavioral control	0.678	0.000		0.827
PBC1			0.861	
PBC2			0.920	
PBC3			0.833	
Subjective norm	0.740	0.000		0.946
SN1			0.933	
SN2			0.969	
SN3			0.948	
Intention to use	0.711	0.000		0.812
ITU1			0.832	
ITU2			0.857	
ITU3			0.870	

Table 2.
Results of validity and reliability tests

Chen (2011). The regression analysis was done through two steps. First, *F*-test was conducted to see the goodness of fit. Second, a *t*-test was done to see the effect of each independent variable on the dependent variable and to test the hypotheses. This study used 0.05% of significance level. Data were analyzed through SPSS.

Results and discussion

Results

The multiple regression analysis results can be seen in Table 4. The *F*-test value is 51.868 with *p*-value 0.0000 (lower than 0.05). Thus, the model has good goodness of fit. From Table 4, it can be discerned that three independent variables, which have a significant and positive impact on intention to use official COVID-19 websites are perceived quality, attitude and subjective norm. Their *p*-values fell below 0.05. Thus, this research found that perceived quality influences intention to use official COVID-19 websites significantly and positively. The second finding of this research revealed that attitude influences intention to use official COVID-19 websites significantly and positively. The third finding of this research indicated that subjective norm influences intention to use official COVID-19 websites significantly and

HE 120,4	Categories		%
Sex	Male		42.5
	Female		57.5
Status	Not married		36.7
	Married		60.8
	Widowed		2.5
Age	18–20 years		8.3
	21–30 years		23.3
	31–40 years		58.3
	41–50 years		5.0
	≥51 years		5.0
Education	High school		15.8
	Bachelor's degree		5.0
	Bachelor's degree (hons.)		47.5
	Master's degree		25.8
	Doctoral degree		5.8
Monthly income	No income		21.7
	≤Rp2,500.000		13.3
	Rp2,500.001–Rp5,000.000		24.2
	Rp5,000.001–Rp10,000.000		30.0
	>Rp10,000.000		10.8

Table 3.
Thedemographic
profile

Independent variables	Unstandardized coefficients		Standardized coefficients	<i>T</i>	Significance	<i>R</i> ²	<i>F</i> (<i>p</i> -value)
	<i>B</i>	SE	Beta				
Constant	0.153	0.329		0.465	0.643	0.643	51.868 (0.000)
Perceived quality	0.262	0.091	0.246	2.899	0.004		
Attitude	0.316	0.083	0.324	3.798	0.000		
PBC	0.120	0.071	0.100	1.683	0.095		
Subjective norm	0.282	0.059	0.322	4.769	0.000		

Table 4.
The results of the
multiple regressions
analysis

positively. However, the fourth finding of this research revealed that one of the variables, PBC, does not significantly influence intention to use official COVID-19 websites. In other words, H1, H2 and H4 were supported by data, while H3 was not. The R^2 was 0.643, which meant the independent variables could explain 64.3% of the dependent variable's variance.

Theoretical implications

Currently, the world is facing a global pandemic. During this trying time, web-based education websites have a role in providing information to curb the disease. Unfortunately, studies that explored the usage of health-related websites in the context of COVID-19 information were hard to find. This research filled the gap by developing and testing a model that could explain people's intentions to use official COVID-19 websites. The model involves four factors, which are attitude, PBC, subjective norm and perceived quality.

The first finding was that attitude has a positive and significant impact on intention to use official COVID-19 websites. This finding is aligned with previous studies on website usage (Lee, 2009; Limbu *et al.*, 2012; Xie *et al.*, 2017). This finding indicated that if someone has a favorable evaluation of the website, then he or she would be more likely intended to use the website.

The second finding was that subjective norm positively and significantly affects intention to use official COVID-19 websites. This finding was supported by the findings of previous

studies on website usage (Nasri and Charfeddine, 2012; Rana *et al.*, 2017; Xie *et al.*, 2017). This finding indicates that when one felt the social pressure from his/her important person to use the official COVID-19 website, he or she would be more likely to conform to that pressure and intent to use the website.

The third finding indicated that perceived quality positively and significantly affects intention to use official COVID-19 websites. This finding is similar to previous studies on website usage (Delone and McLean, 2003; Lee and Lin, 2005; Kim and Niehm, 2009; Valaei and Baroto, 2017). This finding implies that if one perceives the quality of the website to be good, he or she would be more likely intend to use it.

The last finding was that PBC does not influence intention to use official COVID-19 websites significantly. This finding is different from the previous studies on website usage (Hansen *et al.*, 2004; Wu and Chen, 2005; Xie *et al.*, 2017). This might be due to the high Internet usage of Indonesians. Hootsuite (2018) revealed that in terms of online time using mobile Internet, Indonesia sat in the third place worldwide. It indicated that control, in terms of resources and efforts, was no longer a hindrance for most Indonesians. Consequently, this variable did not significantly affect people's intentions to use official COVID-19 websites.

Managerial implications

Aside from theoretical implications, the results of this research also provided several managerial implications. First, the research instrument used in this study could be used by official COVID-19 websites' managers to monitor the performance of their websites. The results should be used as inputs to improve their performances.

Second, the findings indicated that intention to use official COVID-19 websites was significantly affected by attitude, subjective norm and perceived quality of the website. Therefore, those factors must be closely monitored. More specifically, there are three strategies recommended by this research to increase people's intentions to use official COVID-19 websites. First, the government must ensure that people have a favorable evaluation of the website. To achieve this, the website should be built by considering people's emotional state. The website should contain trusted and useful information with positive features that could lift up the readers' spirit. Second, the government should create a positive social environment or community that encourages the use of official COVID-19 websites. The government needs to manage and monitor people's perceptions of the website continuously. The government could also ask public figures or leaders, whose opinions are heard by the people for promoting the use of official COVID-19 websites. Third, the quality of the websites must be maintained. There are, at least, four things that need to be appropriately managed to maintain the quality of the websites. They are (1) the content of the websites, (2) the authority of the source, (3) the design and (4) users' supports.

Conclusions, limitations and future research

Web-based health-related education is one of the efforts to curb COVID-19. This research has developed and tested a model that could explain intention to use official COVID-19 websites. The research study revealed that people's intention to use official COVID-19 websites was significantly and positively influenced by attitude, subjective norm and perceived quality of the websites. PBC does not significantly affect people's intention to use official COVID-19 websites.

Even though this research has presented interesting findings, three limitations need to be addressed. First, the samples were taken through convenience sampling. Second, the number of samples and the regions represented by those samples were fairly limited. More

specifically, we focused on the users who lived in the outer side of the Greater Area of Jakarta. This was because the Greater Area of Jakarta was the epicenter of COVID-19 in Indonesia when this research was performed. Thus, people outside this area were expected to access the official COVID-19 websites, so that they could prevent COVID-19 in their area. Third, this research only focused on the use official COVID-19 websites. However, someone may search and get the COVID-19 information from other media, especially social media. Based on these limitations, future research should use more samples that cover wider geographic regions to test the stability and the generalization power of these findings. Future research should address the role of social media in informing COVID-19 and educating people.

References

- Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50 No. 2, pp. 179-211, doi: [10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).
- Al-Kilani, M.H. and Twaissi, N. (2017), "Perceived quality of administrative services and its consequences on students' behavioral intentions", *International Journal of Quality and Service Sciences*, Vol. 9 No. 1, pp. 103-119, doi: [10.1108/IJQSS-09-2016-0064](https://doi.org/10.1108/IJQSS-09-2016-0064).
- Bao, Y., Hoque, R. and Wang, S. (2017), "Investigating the determinants of Chinese adult children's intention to use online health information for their aged parents", *International Journal of Medical Informatics*, Vol. 102, pp. 12-20.
- Barnes, S.J. and Vidgen, R.T. (2002), "An integrative approach to the assessment of e-commerce quality", *Journal of Electronic Commerce Research*, Vol. 3 No. 3, pp. 114-127, available at: <http://web.csulb.edu/journals/jecr/issues/20023/paper2.pdf>.
- Boon-itt, S. (2019), "Quality of health websites and their influence on perceived usefulness, trust and intention to use: an analysis from Thailand", *Journal of Innovation and Entrepreneurship*, Vol. 8 No. 4, doi: [10.1186/s13731-018-0100-9](https://doi.org/10.1186/s13731-018-0100-9).
- Brady, M.K. and Cronin, J.J. (2001), "Some new thoughts on conceptualizing perceived service quality: a hierarchical approach", *Journal of Marketing*, Vol. 65 No. 3, pp. 34-49, available at: <https://doi.org/10.1509/JM.2001.65.3.34>.
- Brochado, A. (2009), "Comparing alternative instruments to measure service quality in higher education", *Quality Assurance in Education*, Vol. 17 No. 2, pp. 174-190, doi: [10.1108/09684880910951381](https://doi.org/10.1108/09684880910951381).
- Calder, B.J., Phillips, L.W. and Tybout, A.M. (1981), "Designing research for application", *Journal of Consumer Research*, Vol. 8 No. 2, pp. 197-207.
- Clemes, M.D., Gan, C., Kao, T.H. and Choong, M. (2008), "An empirical analysis of customer satisfaction in international air travel", *Innovative Marketing*, Vol. 4 No. 2, pp. 49-62, available at: https://businessperspectives.org/images/pdf/applications/publishing/templates/article/assets/2229/IM_en_2008_2_Clemes.pdf.
- Connolly, R., Bannister, F. and Kearney, A. (2010), "Government website service quality: a study of the Irish revenue online service", *European Journal of Information Systems*, Vol. 19 No. 6, pp. 649-667, doi: [10.1057/ejis.2010.45](https://doi.org/10.1057/ejis.2010.45).
- Cucinotta, D. and Vanelli, M. (2020), "WHO declares COVID-19 a pandemic", *Acta BioMedica: Atenei Parmensis*, Vol. 91 No. 1, pp. 157-160, doi: [10.23750/abm.v91i1.9397](https://doi.org/10.23750/abm.v91i1.9397).
- Czaja, S.J., Sharit, J., Lee, C.C., Nair, S.N., Hernández, M.A., Arana, N. and Fu, S.H. (2013), "Factors influencing use of an e-health website in a community sample of older adults", *Journal of the American Medical Informatics Association*, Vol. 20 No. 2, pp. 277-284, doi: [10.1136/amiajnl-2012-000876](https://doi.org/10.1136/amiajnl-2012-000876).
- Delone, W.H. and McLean, E.R. (2003), "The DeLone and McLean Model of information systems success: a ten-year update", *Journal of Management Information Systems*, Vol. 19 No. 4, pp. 9-30, doi: [10.1080/07421222.2003.11045748](https://doi.org/10.1080/07421222.2003.11045748).

- Deshbag, R.R. and Mohan, B.C. (2020), "Study on influential role of celebrity credibility on consumer risk perceptions", *Journal of Indian Business Research*, Vol. 12 No. 1, pp. 79-92, doi: [10.1108/JIBR-09-2019-0264](https://doi.org/10.1108/JIBR-09-2019-0264).
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis. A Global Perspective*, 7th ed., Pearson Education, New Jersey.
- Hansen, T., Jensen, J.M. and Solgaard, H.S. (2004), "Predicting online grocery buying intention: a comparison of the theory of reasoned action and the theory of planned behavior", *International Journal of Information Management*, Vol. 24 No. 6, pp. 539-550, doi: [10.1016/j.ijinfomgt.2004.08.004](https://doi.org/10.1016/j.ijinfomgt.2004.08.004).
- Hootsuite (2018), "Digital in 2018 essential insights into internet, social media, mobile, and ecommerce use around the world (Internet), digital in 2018", available at: <https://issuu.com/hubtype/docs/digital-in-2018-001-global-overview> (accessed 5 May 2020).
- Inui, S., Fujikawa, A., Jitsu, M., Kunishima, N., Watanabe, S., Suzuki, Y., Umeda, S. and Uwabe, Y. (2020), "Chest CT findings in cases from the cruise ship "diamond princess" with coronavirus disease 2019 (COVID-19)", *Radiology: Cardiothoracic Imaging*, Vol. 2 No. 2, pp. 1-17, doi: [10.1148/ryct.2020200110](https://doi.org/10.1148/ryct.2020200110).
- Kim, H. and Niehm, L.S. (2009), "The impact of website quality on information quality, value, and loyalty intentions in apparel retailing", *Journal of Interactive Marketing*, Vol. 23 No. 3, pp. 221-233, doi: [10.1016/j.intmar.2009.04.009](https://doi.org/10.1016/j.intmar.2009.04.009).
- Lai, W.T. and Chen, C.F. (2011), "Behavioral intentions of public transit passengers-The roles of service quality, perceived value, satisfaction and involvement", *Transport Policy*, Vol. 18 No. 2, pp. 318-325, doi: [10.1016/j.tranpol.2010.09.003](https://doi.org/10.1016/j.tranpol.2010.09.003).
- Lee, M.C. (2009), "Factors influencing the adoption of internet banking: an integration of TAM and TPB with perceived risk and perceived benefit", *Electronic Commerce Research and Applications*, Vol. 8 No. 3, pp. 130-141, doi: [10.1016/j.elerap.2008.11.006](https://doi.org/10.1016/j.elerap.2008.11.006), Elsevier B.V.
- Lee, G.-G. and Lin, H.-F. (2005), "Customer perceptions of e-service quality in online shopping", *International Journal of Retail and Distribution Management*, Vol. 33 No. 2, pp. 161-176, doi: [10.1108/09590550510581485](https://doi.org/10.1108/09590550510581485).
- Limbu, Y.B., Wolf, M. and Lunsford, D. (2012), "Perceived ethics of online retailers and consumer behavioral intentions: the mediating roles of trust and attitude", *Journal of Research in Interactive Marketing*, Vol. 6 No. 2, pp. 133-154, doi: [10.1108/17505931211265435](https://doi.org/10.1108/17505931211265435).
- Malhotra, N. and Birks, D. (2007), *Marketing Research: An Applied Approach 3rd European Edition*, 3rd ed., Pearson Education, Harlow.
- Nasri, W. and Charfeddine, L. (2012), "Factors affecting the adoption of internet banking in Tunisia: an integration theory of acceptance model and theory of planned behavior", *The Journal of High Technology Management Research*, Vol. 23 No. 1, pp. 1-14, doi: [10.1016/j.hitech.2012.03.001](https://doi.org/10.1016/j.hitech.2012.03.001).
- Olorunniwo, F., Hsu, M.K. and Udo, G.J. (2006), "Service quality, customer satisfaction, and behavioral intentions in the service factory", *Journal of Services Marketing*, Vol. 20 No. 1, pp. 59-72, doi: [10.1108/08876040610646581](https://doi.org/10.1108/08876040610646581).
- Park, H.-H. and Sullivan, P. (2009), "Market segmentation with respect to university students' clothing benefits sought: shopping orientation, clothing attribute evaluation, and brand repatronage", *International Journal of Retail and Distribution Management*, Vol. 37 No. 2, pp. 182-201.
- Rana, M.W., Lodhi, R.N., Butt, G.R. and Dar, W.U. (2017), "How determinants of customer satisfaction are affecting the brand image and behavioral intention in fast food industry of Pakistan?", *Journal of Tourism and Hospitality*, Vol. 6 No. 6, pp. 1-6, doi: [10.4172/2167-0269.1000316](https://doi.org/10.4172/2167-0269.1000316).
- Rio, C.del and Malani, P.N. (2020), "COVID-19 - new insights on a rapidly changing epidemic", *JAMA*, Vol. 323 No. 14, pp. 1339-1340, doi: [10.1001/jama.2020.3072](https://doi.org/10.1001/jama.2020.3072).
- Sekaran, U. and Bougie, R. (2010), *Research Methods for Business: A Skill Building Approach*, 5th ed., John Wiley & Sons, Chichester.

- Sohrabi, C., Alsafi, Z., O'Neil, N., Khan, M., Kerwan, A., Al-Jabir, A., Iosifidis, C. and Agha, R. (2020), "World Health Organization declares global emergency: a review of the 2019 novel coronavirus (COVID-19)", *International Journal of Surgery*, Vol. 76, pp. 71-76, doi: [10.1016/j.ijssu.2020.02.034](https://doi.org/10.1016/j.ijssu.2020.02.034).
- Sumaedi, S., Bakti, I.G.M.Y., Astrini, N.J., Rakhmawati, T., Widiyanti, T. and Yarmen, M. (2014), *Public Transport Passengers' Behavioural Intentions: Paratransit in Jabodetabek-Indonesia*, Springer Briefs in Business, Singapore.
- Sumaedi, S., Yarmen, M., Bakti, I.G.M.Y., Rakhmawati, T., Astrini, N.J. and Widiyanti, T. (2016), "The integrated model of theory planned behavior, value, and image for explaining public transport passengers' intention to reuse", *Management of Environmental Quality*, Vol. 27 No. 2, pp. 124-135, doi: [10.1108/MEQ-03-2015-0027](https://doi.org/10.1108/MEQ-03-2015-0027).
- Valaei, N. and Baroto, M.B. (2017), "Modelling continuance intention of citizens in government Facebook page: a complementary PLS approach", *Computer in Human Behavior*, Vol. 73, pp. 224-237, doi: [10.1016/j.chb.2017.03.047](https://doi.org/10.1016/j.chb.2017.03.047).
- Venkatesh, V. and Davis, F.D. (2000), "A theoretical extension of the technology acceptance model: four longitudinal field studies", *Management Science*, Vol. 46 No. 2, pp. 186-204, doi: [10.1287/mnsc.46.2.186.11926](https://doi.org/10.1287/mnsc.46.2.186.11926).
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003), "User acceptance of information technology: toward a unified view", *MIS Quarterly*, Vol. 27 No. 3, pp. 425-478, doi: [10.2307/30036540](https://doi.org/10.2307/30036540).
- Wall, A.F. (2007), "Evaluating a health education website: the case of AlcoholEdu", *NASPA Journal*, Vol. 44 No. 4, pp. 692-714, available at: <https://www.tandfonline.com/doi/abs/10.2202/1949-6605.1864>.
- Whitten, P., Buis, L., Love, B. and Mackert, M. (2008), "Health education online for individuals with low health Literacy : evaluation of the diabetes and you website", *Journal of Technology in Human Services*, Vol. 26 No. 1, pp. 77-88, doi: [10.1300/J017v26n01](https://doi.org/10.1300/J017v26n01).
- Widiyanti, T., Sumaedi, S., Bakti, I.G.M.Y., Rakhmawati, T., Astrini, N.J. and Yarmen, M. (2015), "Factors influencing the behavioral intention of public transport passengers", *International Journal of Quality and Reliability Management*, Vol. 32 No. 7, pp. 666-692, doi: [10.1108/IJQRM-01-2013-0002](https://doi.org/10.1108/IJQRM-01-2013-0002).
- Wilcox, K., Roggeveen, A.L. and Grewal, D. (2011), "Shall I tell you now or later? Assimilation and contrast in the evaluation of experiential products", *Journal of Consumer Research*, Vol. 38 No. 4, pp. 763-773, doi: [10.1086/660702](https://doi.org/10.1086/660702).
- World Health Organization (2020b), "Coronavirus disease 2019 (COVID-19), Advice for the public", available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public> (accessed 05 May 2020).
- Worldometers (2020a), "Countries where COVID-19 has spread", available at: <https://www.worldometers.info/coronavirus/countries-where-coronavirus-has-spread> (accessed 27 August 2020).
- Wu, I.-L. and Chen, J.-L. (2005), "An extension of Trust and TAM model with TPB in the initial adoption of on-line tax: an empirical study", *International Journal of Human-Computer Studies*, Vol. 62 No. 6, pp. 784-808, doi: [10.1016/j.ijhcs.2005.03.003](https://doi.org/10.1016/j.ijhcs.2005.03.003).
- Wu, P.C.S. and Wang, Y.-C. (2011), "The influence of electronic word-of-mouth message appeal and message source credibility on brand attitude", *Asia Pacific Journal of Marketing and Logistics*, Vol. 23 No. 4, pp. 448-472, doi: [10.1108/13555851111165020](https://doi.org/10.1108/13555851111165020).
- Xie, Q., Song, W., Peng, X. and Shabbir, M. (2017), "Predictors for e-government adoption: integrating TAM, TPB, trust and perceived risk", *The Electronic Library*, Vol. 35 No. 1, pp. 2-20, doi: [10.1108/EL-08-2015-0141](https://doi.org/10.1108/EL-08-2015-0141).
- Yarmen, M., Rakhmawati, T., Bakti, I.G.M.Y., Astrini, N.J., Sumaedi, S. and Widiyanti, T. (2016), "Investigating patient loyalty: an integrated framework for trust, subjective norm, image, and

perceived risk (a case study in Depok, Indonesia)", *International Journal of Quality and Service Sciences*, Vol. 8 No. 2, pp. 179-196.

Yoo, B. and Donthu, N. (2001), "Developing and validating a multidimensional consumer-based brand equity scale", *Journal of Business Research*, Vol. 52 No. 1, pp. 1-14, doi: [10.1016/S0148-2963\(99\)00098-3](https://doi.org/10.1016/S0148-2963(99)00098-3).

Zeithaml, V.A. (1988), "Consumer perceptions of price, quality and value: a means and model and synthesis of evidence", *Journal of Marketing*, Vol. 52 No. 3, pp. 2-22, doi: [10.1177/002224298805200302](https://doi.org/10.1177/002224298805200302).

Further reading

World Health Organization (2020a), "Coronavirus disease (COVID-19), Situation report - 105", available at: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200504-COVID-19-sitrep-105.pdf?sfvrsn=4cdda8af_2 (accessed 05 May 2020).

World Health Organization (2020c), "Q&A on Coronaviruses (COVID-19)", available at: <https://www.who.int/news-room/q-a-detail/q-a-coronaviruses> (accessed 27 August 2020).

Corresponding author

Sik Sumaedi can be contacted at: sik_s_01@yahoo.com

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgrouppublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com

Reproduced with permission of copyright owner. Further reproduction prohibited without permission.