The Journal of Accounting and Management

The Role of Perceived Quality and Brand Attitude on The Relationship Between Perceived Ease of Use and Customer Preference: Research on Mobile Taxi Booking Sector

Sabina Musavi[1], Galandar Mammadli[2]

Abstract: This study examines the effect of perceived ease of use on brand attitude and perceived quality in mobile taxi booking application selection. A total of 206 survey data were collected from individuals living in Baku and analyzed using structural equation modeling. Applications like Uber, Bolt, Ekonom Taxi, and 189 Taxi—which are often used for taxi transportation in Baku—were listed as examples of mobile taxi booking apps within the inquiries. According to the findings, the effect of perceived ease of use by customers ordering from mobile taxi booking applications is significant and positively related to perceived quality. Moreover, the effect of ease of use on attitude towards the brand is also significant and positive. Respectively, the effect of perceived quality, ease of use and brand attitude on consumer preference has a significant and positive relationship. All hypotheses established in the research were accepted based on the results of the analysis tests. Although research has been done in the literature regarding the factors affecting the customers' choice of taxi company, it has not been found much to examine the ease of use of the application and, accordingly, the brand quality and attitude. In this direction, this study includes findings on how mobile taxi booking companies can change and shape customers' quality perceptions and attitudes.

Keywords: perceived ease of use; perceived quality; brand attitude; customer preference; mobile taxi booking

JEL Classification: M30, M31, M37

1. Introduction

Mobile-app-based taxi booking services have transformed the transportation business, reaching billions of consumers worldwide. In addition to providing personalized transportation services to clients, such apps make it easier and less expensive for taxi drivers to discover passengers in a variety of ways. (Weng et al., 2017). Converting these opportunities to profits transportation companies can reach their goals.

[1] Ph.D. Candidate, Lecturer, Azerbaijan State Economic University, Baku, Azerbaijan, Corresponding author: sabina-musavi@unec.edu.az.
[2] Ph.D., Lecturer, Baku Higher Oil School, Senior Researcher, Innovation and Digital Development Agency, Baku, Azerbaijan, E-mail: galandar.mammadli@idda.az.

Anderson (2009) argues that an important feature of human intelligence is how information is defined and used in making a decision. It defines the types of various information structures that contain detailed information or associations in the brain (Anderson, 2009). This guiding force behind human behavior is expressed as attitude (Inceoğlu, 2010). Attitude is the tendency to react positively or negatively to an object, person, institution, or event (Ajzen, 2005). It occurs in different ways according to the factors that make up the attitude, and it is important to know these factors in order to distinguish the differences in behavior patterns. A consumer can become a loyal customer if they have a lasting, deeply positive attitude towards the product or service. It is very difficult to weaken the relationship of such customers with the brand. Besides, another consumer may be more indecisive even with a positive attitude and may be quite willing to leave the brand when a better offer comes in (Solomon, 2017).

Variables and features indicate consumer thought. Decision-making is influenced by cognitive aspects called consumer thinking variables. The following three categories of thinking factors are crucial for decision-making: Features of a brand are seen, as are attitudes toward the brand and the advantages of customer demand (Assael, 2003).

Brands occupy a place in the minds of consumers. Consumers' perceptions and feelings about a product and its performance, everything that the product or service means to consumers, represent the brand. (Kotler & Armstrong, 2018).

In general, a Mobile App is perceived as more useful by consumers when it is easy to use. Previous studies have revealed strong empirical support for a positive relationship between perceived usefulness and perceived ease of use (Yang, 2005; Pai & Huang, 2011; Son et al., 2012; Shiau & Chau, 2016).

Perceived ease of use can be understood as the judgment of consumers or the public regarding the amount of effort or time required to learn and use a new technology, and these judgments can be either a positive or a negative judgment (Gefen et al., 2003; Singh et al., 2020). If people think that it will be easy to learn and understand a new technology or system, positive judgment can occur. Pipitwanichakarn and Wongtada (2020) also expressed perceived ease of use as people's cognitive feelings, judgments, and ideas about their efforts to learn a new technology or system.

2. Methodology

The data collected for this study from Azerbaijani consumers in Baku the capital city of the country. The most preferred taxi brands of Azerbaijani consumers are Bolt, Uber, Ekonom Taxi and 189 Taxi. The survey, one of the data collection techniques of quantitative methodologies, was conducted in the study, and the research hypotheses were evaluated using the data acquired. A study methodology based on quality perception and brand attitude was designed to assess the impact of mobile application interfaces on customer choice. Totally, 206 consumers participated in this survey. The study adds to the current literature by establishing a methodology for predicting customer quality perception and brand completeness as a result of ease of use in selecting MTB services (Figure 1).

The questionnaire consisted of 3 parts: 3 control questions, 5 demographic questions and scales consisting of statements about variables. The Perceived Ease of Use scale consists of 6 items and Adams et al. (1992) from the article. Brand attitude scale is a 3-item scale and was taken from Sengupta and Johar (2002). The concept of brand preference is a 4-item scale, according to Liu et al. (2014) article. Perceived quality is a 5-item scale, according to Dodds et al. (1991) article. Structural

equation modeling was applied in the study and the results were evaluated using the IBM SPSS AMOS 21.0 program package.

The research model is shown in Figure 2, and the hypotheses to be tested in the research are formed by considering these variables. The main reason for choosing the mobile taxi order sector in the research is the intense competition in this sector throughout the country. Entry and exit to the market is not difficult and competition between companies is high.

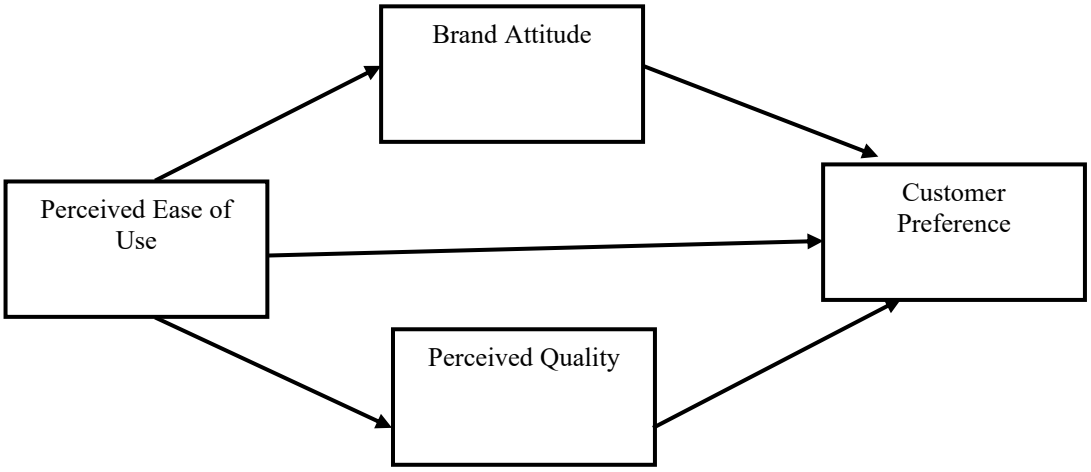

Figure 1. Research Model

H1: Perceived ease of use has an impact on brand attitude.

H2: Perceived ease of use has an impact on perceived quality.

H3: Perceived ease of use has an impact on customer preference.

H4: Brand attitude has an impact on customer preference.

H5: Perceived quality has an impact on customer preference.

H6: Brand attitude mediates the relationship between perceived ease of use and customer preference.

H7: Perceived quality mediates the relationship between perceived ease of use and customer preference.

There are 7 hypotheses in the research. Although 5 of them were designed to test the effect between variables, 2 were created to reveal whether the variables mediate this process.

3. Findings

Demographic data within the framework of research findings are shown in Table 1 below. The findings obtained as a result of descriptive analyzes are important in terms of general tendencies and descriptions of the participants.

Table 1. Demographic Frequency Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	105	51,0	51,0	51,0
	Female	101	49,0	49,0	100,0

	Total	206	100,0	100,0	
	16-25	124	60,2	60,2	60,2
Age	26-50	64	31,1	31,1	91,3
	51 and over	18	8,7	8,7	100,0
	Total	206	100,0	100,0	
	Single	161	78,2	78,2	78,2
Marital Status	Married	45	21,8	21,8	100,0
	Total	206	100,0	100,0	
	Secondary	9	4,4	4,4	4,4
Education	Bachelour	106	51,5	51,5	55,8
	Master & PhD	91	44,2	44,2	100,0
	Total	206	100,0	100,0	
	300 and less	75	36,4	36,4	36,4
	301-1000	66	32,0	32,0	68,4
Income	1001-2000	47	22,8	22,8	91,3
	2001 and over	18	8,7	8,7	100,0
	Total	206	100,0	100,0	

According to Table 2, 51% of the 206 people participating in the research, 105 people are men and 49% are women, a total of 101 people. The age distribution of the participants is 60.2%, that is, 124 people between the ages of 16-25, 31.1% between the ages of 26-50, 64 people, 51 and above are only 8.7%, that is 18 people. According to marital status, 78.2% (161 people) were single, 21.8% (45 people) were married. The educational status of the participants was asked in the questionnaire form. According to the results, 4.4% (9 people) of the participants had secondary school, 51.5% (106 people) had undergraduate and 44.2% (91 people) had master's and doctoral education. According to financial income, 36.4%, that is, 75 people with an income of less than 300azn, 32% with an income of 301-1000azn, that is, 66 people with an income of 1001-2000azn, 22.8%, 47 people and 8,7% with 2001azn and above income, 18 persons taking.

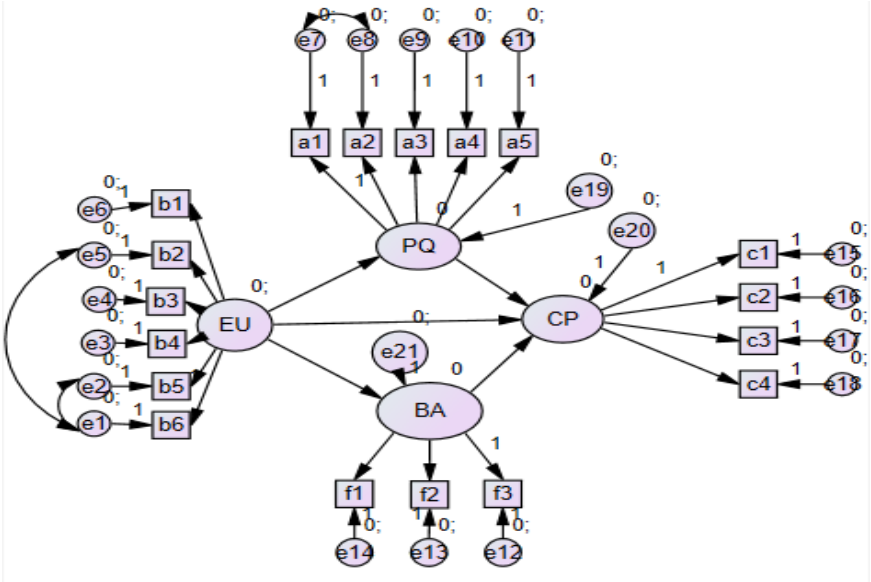

Figure 2. SEM Analysis

In Figure 2, the relationships between the variables used in the research are shown as path analysis. Some items were matched to improve the fit indices.

It is clear from Table 2, the condition meets that all factor loadings should be above 0.5 (Hair et al., 2013). The composite reliability values of the Perceived Quality (0,889), Ease of Use (0,961), Brand attitude (0,888), and consumer preference (0,870) are also shown in the Table 2. Thus, it is possible to say that the scale has a good reliability which are above 0.7.

Table 2. Items loadings, average variance extracted, composite reliability, and Cronbach's alpha

Construct	Items	Factor Loadings	Cronbach	CR	AVE
Perceived Quality	Perceivedquality1	0,759	0.893	0,889	0,615
	Perceivedquality2	0,828			
	Perceivedquality3	0,727			
	Perceivedquality4	0,795			
	Perceivedquality5	0,808			
Ease of Use	Easeofuse1	0,844	0.96	0,961	0,805
	Easeofuse2	0,826			
	Easeofuse3	0,934			
	Easeofuse4	0,961			
	Easeofuse5	0,934			
	Easeofuse6	0,875			
Brand Attitude	Attitude1	0,929	0.878	0,888	0,726
	Attitude2	0,776			
	Attitude3	0,845			
Customer preference	Customerpreference1	0,847	0.874	0,870	0,627
	Customerpreference2	0,828			
	Customerpreference3	0,685			
	Customerpreference4	0,797			

Reliability analysis of each variable and the resulting dimensions were examined. The reliability of the scale is the measure of its consistency, and its alpha coefficient ranges from 0 to 1. The value of the alpha coefficient should be above 0.7 (Chan & Idris, 2017; Pallant, 2000). As can be seen in Table 2, the reliability coefficients of the variables are above 0.7.

Table 3. Correlation Table

Correlation	Ease of Use	Attitude	Perceived Quality	Customer preference
Ease of Use	**0,784**			
Brand Attitude	,335	**0,897**		
Perceived Quality	,371	,124	**0,852**	
Customer preference	,457	,662	,333	**0,792**
Mean	4,2937	3,6294	3,3883	3,7840
SD	,66047	,74660	,79502	,68969

This situation shows that the reliability and consistency of the scales are high. It is observed that Average Variance Explained (AVE) values are above 0.5 (Fornell & Larcker, 1981). In order to evaluate the validity of this study, correlation coefficients were compared with the square roots of the AVE values. As can be seen from the results in Table 3, the square roots of the AVE values are greater than the correlations.

Table 3 shows the descriptive data for the variables, especially the mean values and standard deviations. As can be seen, mean values of all variables are above the mean.

Table 4. Fit indices

Index	**CNIM/DF**	**P**	**CFI**	**RFI**	**NFI**	**RMSEA**	**TLI**
Value	2.231	0.000	0.950	0.90	0.914	0.077	0.940

The Table 4 deals with the fit indices of the measures for the Structure Equation Model. The values of NFI, TLI, and CFI are above the standard of minimum acceptable value, which is 0.90. Thus, it is predicted that the model provides a general fit. Besides this, in order to measure the errors in the conceptual framework, the RMSEA is substantially used by research studies, and the standard maximum acceptable value of the RMSEA is 0.08. Meanwhile, the above table portrays that the value of the RMSEA is 0.077, which is less than the standard maximum acceptable value.

Table 5. SEM Analysis

	Path Coef.	**R^2**	**S.E.**	**C.R.**	**P**	
Percqual <--- easeofuse	,419	0,137	,086	4,864	***	Accepted
Atttitude <--- easeofuse	,384	0,112	,083	4,630	***	Accepted
Custpre <--- Percqual	,189	0,531	,066	2,862	,004	Accepted
Custpre <--- easeofuse	,218		,075	2,919	,004	Accepted
Custpre <--- Attitude	,559		,068	8,261	***	Accepted

SEM results for the research model, standardized regression coefficients (P), critical ratio (C.R.), multiple specificity coefficient (R2) and significance (p) values for structural relationships are shown in Table 5. When the results are considered, it is observed that there is a same-way relationship between perceived quality and ease of use (.419) and the regression coefficient is 0.137. It is seen at $p<0.05$ significance level that the independent latent variable, ease of use, explains 13.7% of the dependent variable perceived quality. In other words, the rate (1- R2) that the independent latent variables cannot explain is 86.3%.

In the second structural equation, It is determined that brand attitude and ease of use (.384) are in the same direction and the regression coefficient is 0.112. It is confirmed at $p<0.05$ significance level that ease of use, which is the independent latent variable, explains 11.2% of the brand attitude, which is the dependent latent variable. The rate that independent latent variables could not explain is 88.8%.

In the third structural equation, it is seen that customer preference and perceived quality (.189), ease of use (.218) and brand attitude (0.559) are in the same direction and the regression coefficient is 0.531. It is confirmed at $p<0.05$ significance level that the independent latent variables perceived quality, brand attitude and brand preference explain 53.1% of the dependent latent variable brand preference. The rate that independent variables could not explain was 46.9%.

When Table 4 is examined, the effect of perceived ease of use by users ordering a taxi from the mobile application on perceived quality is significant and positive ($\beta = 0.419$; $p<0.05$). In addition, the effect of ease of use on attitude towards the brand is also significant and positive ($\beta = 0.384$; $p<0.05$). Respectively, the effects of perceived quality ($\beta = 0.189$; $p<0.05$), ease of use ($\beta = 0.218$; $p<0.05$), brand attitude ($\beta = 0.559$; $p<0.05$) on consumer preference are also significant and positive. is directional. In this context, as seen in Table 4, all hypotheses were accepted.

Table 6. Mediation Analysis

Mediation Effects	Standartized indirect effects	Bootstrap LC/UC	Results
Easeofuse-->Percqual-->Customerpreference	0.262	0,156/0.378	Accepted
Easeofuse-->Attitude-->Customerpreference			Accepted

When Table 5, in which research hypotheses are tested, is evaluated, according to Bootstrap results, the indirect effect of ease of use on customer preference (β = .262, 95% LC/UC ([0.156/0.378]) through perceived quality and brand attitude) is significant.In this context, H6 and H7 hypotheses are supported.

4. Results

In this study, mobile applications developed for taxi travel were examined. In the research survey, the participants were asked why they chose the application-based taxi companies such as Uber, Bolt, Ekonom taxi and 189 taxi, which are the most used for MTB apps in Baku city. The research analyzes the effect of ease of use of mobile taxi booking applications on brand image, quality perception and customer preference. According to the results of the analysis, the effect of perceived ease of use by users ordering from mobile taxi reservation applications on perceived quality is significant and positive (β = 0.419; p<0.05). In addition, the effect of ease of use on attitude towards the brand is also significant and positive (β = 0.384; p<0.05). Respectively, the effects of perceived quality (β =0.189; p<0.05), ease of use (β =0.218; p<0.05), brand attitude (β =0.559; p<0.05) on consumer preference are also significant and positive. is directional. According to these results, all hypotheses of the research were accepted.

5. Discussion

In this research, taxi order applications, which are an important source of transportation and income in today's urbanization areas, were investigated. In the research, the ease of use, brand attitude and quality perception of the application, which has an effect on customer preference, were examined. In the results of the study, all the research hypotheses were accepted.

The results of studies conducted by Hossain and Quaddus (2013), Bhattacherjee (2001), Li and Liu (2014) in the literature reveal the significant effects of perceived ease of use on customer satisfaction. As a result, meeting the MTB App's users' expectations and ensuring that the MTB App is useful are critical considerations for MTB App service providers. As a result, the MTB App's service providers should cultivate a close relationship with the App's users in order to understand their expectations and expand the MTB App's usefulness in order to satisfy their users. Software developers should pay attention to practical functions and extend essential features that are often used when creating and developing MTB Apps. MTB companies should emphasize the full functionality of their Apps in their marketing to effectively respond to the various wants and expectations of their consumers.

Users' intention to continue using online travel services was explored by Li and Liu (2014), and perceived utility and confirmation were found to explain 23.7 percent of user satisfaction. This study looked into customers' intentions to use online travel services again and discovered that perceived utility and confirmation explained 55.9% of user satisfaction. Online travel services can be used to gather information for the goal of making travel decisions as well as for hedonic and socio-

psychological purposes, such as taking images for amusement, exchanging travel information, and gaining knowledge for social presence. The MTB App, on the other hand, has a single purpose and is used to book a taxi. Other dimensions, such as perceived ease of use and perceived enjoyment, may thus influence online travel service consumers' happiness and usage preferences. This may explain why, in the context of the MTB App, perceived utility and confirmation accounted a higher variance of the satisfaction construct.

As a result, users of the MTB App will get more familiar with its capabilities, and simplicity of use will become less important in their attitudes about utilizing the App. Furthermore, as MTB Apps get more user-friendly, the difficulty of utilizing them is becoming less of a worry. As a result, the minimal influence of perceived ease of use on MTB App users' attitudes is predicted. Furthermore, if MTB App users are happy with the app and their families and friends think it's a good idea to use it to book cabs, they'll see the MTB App as a safe way to do so, and perceived risk won't be an issue (Weng et al., 2017).

6. Conclusion

Perceived ease of use was investigated as a factor determining Baku's mobile taxi booking (MTB) marketplace customers' perceptions of quality, brand attitude, and customer preference. A survey conducted among 206 respondents and structural equation modeling provided evidence in support of perceived ease of use having strong and positive effects on perceived quality and brand attitude. Furthermore, these variables were found to mediate between ease of use and customer preference.

The empirical evidence revealed that ease of use not only directly enhances customer preference but also indirectly through perceived quality and brand attitude. Among these variables, brand attitude was the most influential on customer preference and highlighted how critical it was to create positive brand associations in addition to functional ease. The findings also suggest that MTB companies operating in highly competitive business platforms such as Uber, Bolt, Ekonom Taxi, and 189 Taxi in Baku have opportunities for differentiation through maximizing designing ease of use interface to users, increasing perceptions about their service quality, and creating good attitudes among customers toward their own brands.

The contribution to value here involves enriching existing knowledge by linking ease of use with perceived quality and brand attitude for mobile taxi booking services—a territory not yet explored. On practical terms, these findings highlight that highlighting intuitive design, functional usability, and consistent quality cues have important customer preference and loyalty implications. Assistance in highlighting these considerations would enable providers with MTB to achieve sustainable competitiveness leadership, build customer satisfaction among users, and achieve sustainable penetration in the burgeoning digital transportation marketplace that is expanding at breakneck speed.

References

Adams, D. A., Nelson, R. R., & Todd, P. A. (1992). Perceived usefulness, ease of use, and usage of information technology: A replication. *MIS Quarterly*, 227-247.

Ajzen, I. (2005). *Attitudes, Personality and Behavior* (2nd edition). Open University Press.

Anderson, J. R. (2009). *The Architecture of Cognition*. New York: Psychology Press.

Assael, H., (2003). *Consumer Behavior: A Strategic Approach* (1st edition). Cengage Learning.

Bhattacherjee, A. (2001). Understanding information systems continuance: an expectation- confirmation model. *MIS Quarterly, 25*(3), 351–370.

Chan, L. L., & Idris, N. (2017). Validity and reliability of the instrument using exploratory factor analysis and Cronbach's alpha. *International Journal of Academic Research in Business and Social Sciences, 7*(10), 400-410.

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research, 28*(3), 307-319.

Fornell, C., & Larcker, D. F. (1981). *Structural equation models with unobservable variables and measurement error: Algebra and statistics*.

Gefen, D., Karahanna, E., & Straub, D. W. (2003). *Trust and TAM in online shopping: an Integrated Model*.

Hossain, M. A., & Quaddus, M. (2013). Does mandatory pressure increases RFID adoption?: A case study of Western Australian livestock industry. In: Y. Dwivedi, H. Z. Henriksen, D. Wastell, R. De (Eds.), *Grand Successes and Failures in IT: Private and Public Sectors*, pp. 184–202. Boston: Springer.

Inceoğlu, M. (2010). *Tutum Algi İletişim* (5. Baskı)/ *Attitude Perception Communication* (5th Edition). Istanbul: Beykent University Press.

Kotler, P., & Armstrong, G. (2018). *Principles of Marketing* (17th global edition). Pearson Education Limited.

Li, H., & Liu, Y. (2014). Understanding post-adoption behaviors of e-service users in the context of online travel services. *Information & Management, 51*(8), 1043–1052.

Liu, M. T., Wong, I. A., Rongwei, C., & Tseng, T. H. (2014). Do perceived CSR initiatives enhance customer preference and loyalty in casinos? *International Journal of Contemporary Hospitality Management*.

Pai, F. Y., & Huang, K. I. (2011). Applying the Technology Acceptance Model to the introduction of healthcare information systems. *Technological Forecasting and Social Change, 78*(4), 650–660.

Pallant, J. F. (2000). Development and validation of a scale to measure perceived control of internal states. *Journal of Personality Assessment, 75*(2), 308-337.

Pipitwanichakarn, T., & Wongtada, N. (2020). The role online review on mobile commerce adoption: an inclusive growth context. *Journal of Asia Business Studies, 14*(5), 759-778.

Sengupta, J., & Johar, G. V. (2002). Effects of Inconsistent Attribute Information on the Predictive Value of Product Attitudes: Toward a Resolution of Opposing Perspectives. *Journal Citation Reports, 29*(June), 39-56.

Shiau, W. L., & Chau, P. Y. (2016). Understanding behavioral intention to use a cloud computing classroom: a multiple model comparison approach. *Information & Management, 53*(3), 355–365.

Solomon, M. (2017). *Consumer Behavior. Buying, Having and Being* (12th edition). Pearson.

Son, H., Park, Y., Kim, C., & Chou, J. S. (2012). Toward an understanding of construction professionals' acceptance of mobile computing devices in South Korea: an extension of the technology acceptance model. *Automation in Construction, 28*, 82–90.

Weng, G. S., Zailani, S., Iranmanesh, M., & Hyun, S. S. (2017). Mobile taxi booking application service's continuance usage intention by users. *Transportation Research Part D: Transport and Environment, 57*, 207–216.

Yang, K. C. (2005). Exploring factors affecting the adoption of mobile commerce in Singapore. *Telematics and Informatics, 22*(3), 257–277.