An Analysis of Maybank Kuala Terengganu Low E-Payment Adoption among Online Banking Users

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Abstract: Customers still prefer paying by cash despite the rapid evolution of mobile technology, which contributes to digitalization initiatives in the Malaysian banking industry and its e-payment products. Although account holders have been advised on the widely promoted electronic payment (e-payment), the adoption of the system has yet to reach total capacity. The current study aims to investigate the low adoption of e-payments among online banking users, specifically at the Kuala Terengganu Maybank branch. The study also identified the factors influencing customers' decisions to use the Maybank e-payment system and examined the level of customer adoption of the system. The primary data collection method involved survey questionnaires distributed among 351 respondents. Descriptive analysis and multiple regression analysis were also employed for data analysis. Resultantly, perceived usefulness, social influence, and perceived risk significantly influenced the adoption of the Maybank e-payment system. Perceived usefulness is the most significant factor in system adoption. Users will consider adopting mobile e-payment systems when financial institutions prioritise their perceived usefulness, self-efficacy, social influence, and perceived risk. These findings could assist Maybank in integrating effective theoretical and practical approaches and providing solutions to enhance the usage of e-payment systems among online banking users.

Keywords: E-payment; adoption; perceived usefulness; self-efficacy; social influence; perceived risk

Introduction

The financial system in Malaysia has been gradually established over many years, even before the 1957 national independence granted by Britain (Chung & Mohd, 2018). Bank Negara Malaysia has been initiating efforts to boost mobile payment use given the significant potential and benefits of its adoption in the Malaysian economy (Bank Negara Malaysia, 2018). E-payment is a payment system for transferring money via the Internet, along with the establishment of the World Wide Web. This system was introduced to the public by Bank Negara Malaysia and the government in 2007, during which banks were actively introducing the Electronic Fund Transfer (EFT) mode of transfer as a banking service.

E-payment growth has aligned with the evolution of mobile phone technology to facilitate mobile users' banking transactions. Hence, the banking industry must adhere to fast-paced and dynamic mobile technology to promote feasible banking experiences to its customers at any time. Traditional banking that requires waiting in line and queuing for numbers during opening hours alongside manual over-the-counter transactions will gradually reduce with the rising need and convenience of mobile banking technology. According to Fung et al. (2014), e-money or e-payment is

monetary value stored electronically on devices, such as a chip card, a hard drive in personal computers, or a server represented by a claim on the issuer. This value is subsequently issued upon receipt of funds to make payment transactions that are accepted by persons other than the issuer.

In line with the development of buying and selling activities and market conditions, the usage of e-money or e-payment has grown exponentially in various developed countries, where the system is widely accepted in developing countries (Susanto et al., 2020). The revolution of smartphone devices has raised the need to evolve banking transactions and payment systems to maintain customer bank preferences and loyalty. Although payment system development via code reader involves high costs, the acceptance and adoption of this initiative amongst customers remain low.

The current study concerns Maybank Berhad, which was established on 31, 1960. This bank is the most valuable and largest in Malaysia in terms of market capitalization. Additionally, most pioneer banking projects are implemented at Maybank, thus leading the Malaysian banking industry to officiate its mobile technology and electronic payment product known as Maybank QRPay. Given that Maybank branches are located across the country, all staff have implemented an internal initiative to promote the mobile e-payment system to their customers. Moreover, reports are derived by monitoring active accounts with activated QRPay transactions.

A rising issue in the Maybank East Coast Region concerns Terengganu users still opting for cash payments. Despite widespread promotion of e-payment as a smarter choice for paying for goods and services in Kuala Terengganu, cash usage still dominates this urban area. Table 1 displays the performance of the adoption of the Maybank e-payment system in Kuala Terengganu. Observably, the utilisation results are under 100%.

Table 1. QRPAY Performance vs Target for the Year 2021

Title	Actual	Target	Percentage (%)
Number of On-boarded Merchants	45	58	77.6
Active Merchants	28	47	59.6

Source: Maybank Region PKT report December 2021

A minimal target was set based on the geographical areas of urban and sub-urban categories. As the Kuala Terengganu branch is categorised as urban, the target settings for 'number of on-boarded merchants' and 'active merchants' are 58 and 47, respectively. Unfortunately, their performances were below par at 45 and 28, respectively. Hence, both performances were lower than 100%, with only 77.6% of merchants onboarding the e-payment system and 59.6% implementing an active e-payment system. Figures 1 and 2 demonstrate the discrepancy between the Kuala Terengganu branch's actual performance and the bank management's set target for e-payment usage, specifically the QRPay cashless payment system.
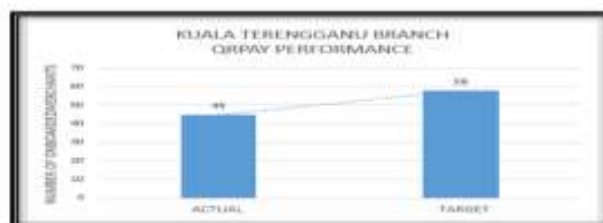

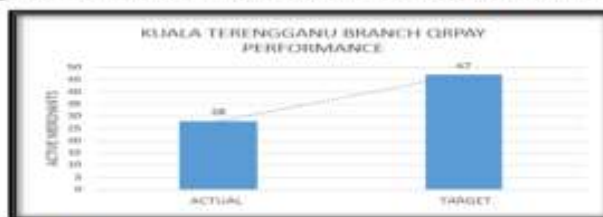Figure 1: Number of On-boarded Merchants (Actual vs Target)

Figure 2: Active Merchants (Actual vs Target)

The usage of this system remains low in Kuala Terengganu Branch based on the figures above. Thus, the current study aims to investigate the low e-payment adoption of the Maybank e-payment system among customers in the Kuala Terengganu branch.

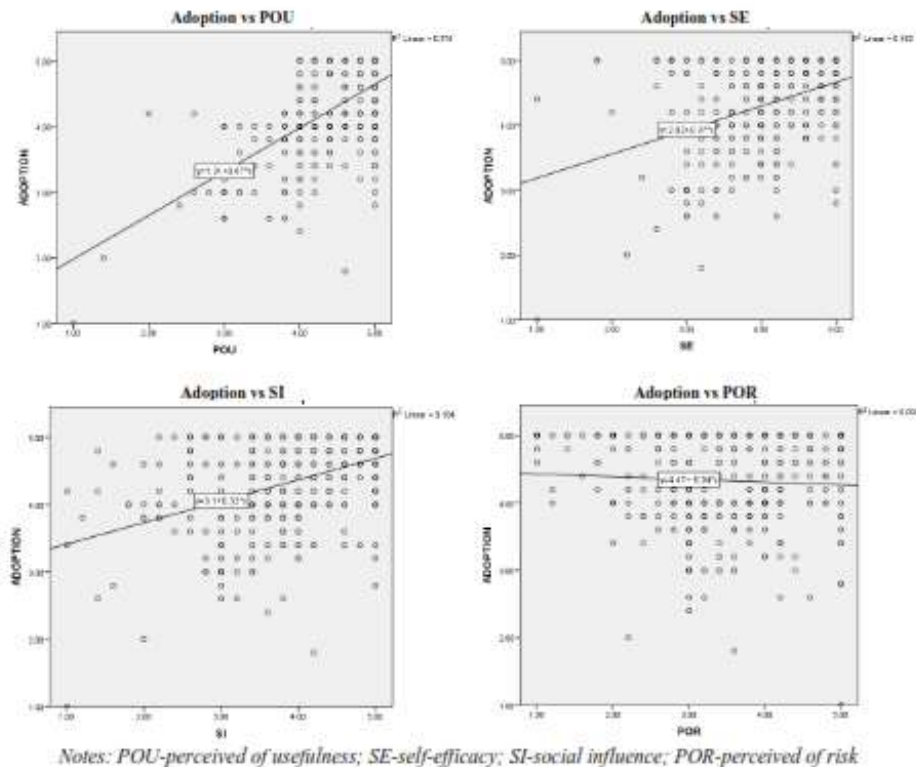Notes: POU-perceived of usefulness; SE-self-efficacy; SI-social influence; POR-perceived of risk

Figure 3 : Scatter Plot

Notes: POU = perceived usefulness; SE = self-efficacy; SI = social influence; POR = perceived risk.

Figure 3 indicates an upward trend (relationship) in all independent variables (POU, SE, and SI), excluding the independent variable POR. Therefore, the present study examines the factors and determinants of e-payment adoption in Malaysian banking services.

Literature Review

The advancement of technological merging and the combination of digital systems have simplified and created an efficient workflow that has led to an excellent business development process (Thomas, 2020). Most mobile banking applications incorporate a unique Quick Response (QR) code into their payment systems, enabling swift and effortless transactions. The QR code can be installed into users' personal smartphone applications and used as a tool for changing and improving the customer experience. This system is also broadly used in various sectors, such as tourism, transportation, and banking (Vuksanovic et al., 2021). The Internet facilities and technology infrastructure in Malaysia remain under development, and certain rural locations lack Internet coverage (Ng et al., 2021). Davis's (1989) Theory of Acceptance Model (TAM) further describes the consumer adoption of new technology. Perceived usefulness is defined as "…the degree to which a person believes that using a particular system would enhance his or her job performance…" (Davis, 1989).

Lisana (2021) discovered that perceived usefulness directly impacts user adoption, following the rising trend of mobile payment transactions during COVID-19. Specifically, people realised the usefulness of e-payment transactions in daily transactions as they promoted contactless methods. Ahmad Hajazi et al. (2021) agreed that perceived usefulness has a significant impact when smartphone usage is high, which enables users to make cashless payments faster and simpler than using cash. Self-efficacy also significantly affects effort expectancy (Upadhyay et al., 2022). Teoh

and Lin (2013) stated that self-efficacy significantly influences Malaysian consumers' perceptions of e-payment as peers, relatives, and friends share positive comments when using e-payment services, thus influencing their perception. Farah et al. (2018) found that social influence significantly influences the intention to adopt mobile commerce. Lu (2014) added that consumers' intention to continue using has changed due to social influence. Furthermore, Arenas-Gaitan et al. (2019) identified social influence as a key contributor to intention to use. Ahmed and Sur (2021) defined perceived risk as the "possibilities of financial loss." The possibility of data losses during e-payment transactions could lead to consumer financial losses, such as personal data exposure, PIN code theft, and mobile theft. Ahmad Hajazi et al. (2021) and Rahman et al. (2020) found that security significantly impacts user adoption when users are concerned with personal and financial information security. These users will only adopt the system if they are confident that the service provider can ensure a safe and secure system (Ahmad Hajazi et al., 2021). Therefore, the current study proposes that perceived usefulness, self-efficacy, social influence, and perceived risk could influence the intention to adopt an e-payment system.

Methodology

Data Collection Method

The present study identified significant variables that influence the adoption of the Maybank e-payment system, specifically in the Kuala Terengganu branch. The dependent variable is adoption, while the independent variables are perceived usefulness, self-efficacy, social influence, and perceived risk. The target group involved new account holders of Maybank Kuala Terengganu. Furthermore, the primary goal is to understand their preferred payment method when performing any banking transaction, whether online or offline. This method allows for determining the variants of perceptions, attitudes, or behaviours of respondents towards Maybank e-payment system adoption. Google Forms was used for the survey questionnaires, which enabled easy access among the respondents to answer. Meanwhile, the data analysis used Statistical Packages for Social Science (SPSS) Version 22. The internal consistency was assessed using the reliability test conducted using SPSS.

Empirical Function

The current study referred to TAM regarding the hypothesis that a person's acceptance of technology is determined by their intention to use the technology (Davis, 1989). The current study applied the function of a dependent variable and independent variables that are formed as per Equation (1):

$$Ad = f(POU, SE, SI, POR)$$

$$(1)$$

Where Ad is the adoption, f is the function, POU is the perceived usefulness, SE is the self-efficacy, SI is the social influence, and POR is the perceived risk.

Empirical Model

The estimated function in Equation (1) generated the estimating model, which explained the estimated relationship between the dependent variable and independent variables. The estimated model is written as per Equation (2):

$$Ad = \gamma_0 + \gamma_1 POU + \gamma_2 SE + \gamma_3 SI + \gamma_4 POR + \varepsilon$$

$$(2)$$

Where γ_0 denotes the intercept and γ_1, γ_2, γ_3, γ_4, and ε denotes the coefficient of independent variables and error term. The present study also employed the ordinary least square (OLS) regression, where the null hypothesis of Maybank e-payment system performance is tested on the adoption as follows:

$$H_o: \gamma_1 = \gamma_2 = \gamma_3 = \gamma_4 = 0, against \ H_a: \gamma_1 \neq \gamma_2 \neq \gamma_3 \neq \gamma_4 \neq 0$$

Findings and Discussion

Descriptive Statistics

Table 9 lists the results of the descriptive analysis.

Table 9. Descriptive Analysis

	Adoption	*POU*	*SE*	*SI*	*POR*
Mean	4.3290	4.5275	4.0925	3.8790	3.5350
Maximum	5.00	5.00	5.00	5.00	5.00
Minimum	1.00	1.00	1.00	1.00	1.00
Std. Deviation	0.670	0.617	0.733	0.853	0.972
Skewness	-1.083	-1.776	-0.746	-0.822	-0.509
Kurtosis	1.521	4.695	0.890	0.711	-0.149
Observation	400	400	400	400	400

Notes: POU = perceived usefulness; SE = self-efficacy; SI = social influence; POR = perceived risk.

The descriptive analysis indicated that the mean value of the dependent variable (adoption) was 4.3290. The adoption standard deviation was lower than the mean value, indicating low variability. The maximum and minimum values of adoption were 5.00 and 1.00, respectively. The mean value for the independent variable (perceived usefulness) was 4.5275, and the standard deviation was 0.617. The data for perceived usefulness indicated low variability, as the standard deviation was lower than the mean value. The maximum and minimum values for perceived usefulness were 5.00 and 1.00, respectively.

The data for the second independent variable (self-efficacy) reflected a mean value of 4.0925 with a standard deviation of 0.733, which displayed low variability as the value was lower than the mean value. Meanwhile, the maximum and minimum values of self-efficacy were 5.00 and 1.00, respectively. The third independent variable (social influence) had a mean value of 3.8790, while the standard deviation was 0.853. The value of social influence was lower than the mean value, which indicated low variability. Additionally, the maximum and minimum values of social influence were 5.00 and 1.00, respectively.

The fourth independent variable (perceived risk) displayed a mean value of 3.5350 and a standard deviation of 0.972. The maximum and minimum values were 5.00 and 1.00, respectively. The value of the standard deviation of perceived risk was lower than the mean value, which reflected low variability. The skewness of the result displayed negative values presented by all variables. Thus, the data distribution was skewed to the left. The findings revealed that adoption (-1.083), perceived usefulness (-1.776), self-efficacy (-0.746), social influence (-0.822), and perceived risk (-0.509) were skewed to the left due to the negative value obtained.

Kurtosis measures the data distribution and determines whether it is normal. This measurement is also employed as an indicator to display the peakedness or flattening of the data distribution when the value exceeds 3, while the flattening of the data distribution occurs when the value is below 3. A kurtosis value of approximately 3 indicates a normal data distribution. Table 9 lists the data distribution for all variables as flattened with values below 3, except for perceived usefulness, which was at its highest peak with a data value exceeding three (4.695).

Pearson's Correlation

Table 10. Correlation

	Ad	*POU*	*SE*	*SI*	*POR*
Ad	1				
POU	0.613**	1			
SE	0.404**	0.529**	1		
SI	0.405**	0.402**	0.450**	1	
POR	-0.509	0.005	0.244**	0.132**	1

Notes: Ad = adoption; POU = perceived usefulness; SE = self-efficacy; SI = social influence; POR = perceived risk.

Table 10 shows that the dependent variable (adoption) is positively related to all of the independent variables except for perceived risk (-0.509), which is negatively related to adoption. The other independent variables are perceived usefulness (0.613), self-efficacy (0.404), and social influence (0.405). The results also indicated that there were no multicollinearity issues among variables when the correlation among independent variables was below 80%.

Multiple Regression Analysis

Table 11. Multiple Regression

Variables	**Coefficients**	**Standard Error**	**T-statistics**
Intercept	1.279	0.215	5.953
POU	0.538	0.051	10.550***
SE	0.080	0.045	1.772
SI	0.142	0.035	0.4091***
POR	-0.073	0.028	-2.658**
R-squared	0.418		
F-statistics	70.982***		

Notes: *** and ** denotes statistically significant at 1% and 5%, respectively; POU = perceived usefulness; SE – self-efficacy; SI = social influence; POR = perceived risk.

The R-squared value of 0.418 indicates 41.8% of the changes in adoption, which is the dependent variable. The independent variables, namely perceived usefulness, self-efficacy, social influence, and perceived risk can explain this finding, but they cannot explain 58.2% of the dependent variables. The F-value is 70.982, which exceeds 4, and the significance F probability is 0.000, which is at a 1% significance level. Thus, this model is statistically significant. The intercept is the expected mean value of Y when all X = 0; hence, the adoption will increase by 1.279% if all independent variables remain constant. Nonetheless, the result indicates no statistical significance. Table 11 reveals that all independent variables, except for self-efficacy, are statistically significant. The independent variables reflected positive signs, excluding perceived risk. This finding suggests that for every 1% increase in perceived usefulness, the social influence level will increase by 0.54% and adoption by 0.14%. Meanwhile, a 1% increase in perceived risk will decrease adoption by 0.07%.

The test results revealed a significant positive relationship with the adoption of the Maybank e-payment system. This finding aligned with the prediction of the current study and findings by Abbas et al. (2019), Aboelmaged and Gebba (2013), and Kazemi et al. (2013), who also discovered a positive relationship. The study revealed a significant negative relationship with adoption, which coincides with Abbas et al. (2019), Kabir (2017), and Priya et al. (2018). The banks and service providers need to ensure the highest level of security when providing mobile banking services to generate better user acceptance. Additionally, the continuous innovation in mobile banking could offer better security and dependable applications to improve user confidence in mobile banking services, which the banks and service providers must continuously improve. The present study

discovered that perceived usefulness had the most significant relationship with the adoption of mobile banking compared to other independent variables. The main objective was to examine the level of customer adoption of the Maybank e-payment system. The mean rating analysis result revealed that the adoption variable had a mean score of 4.329, indicating that the Maybank e-payment system has a high adoption level.

Conclusion

This study aimed to evaluate the factors that influence the adoption of the Maybank e-payment system, namely perceived usefulness, self-efficacy, social influence, and perceived risk. These factors significantly influenced the adoption of this system. Survey questionnaires were distributed to customers of the Maybank Kuala Terengganu branch, where 400 respondents participated. Descriptive and inferential analyses, such as Pearson's correlation and multiple regression analyses, were used to analyse the data obtained from the returned and completed survey questionnaires. The present study indicated four factors that influenced the adoption of the Maybank e-payment system at Maybank Kuala Terengganu, Malaysia. Moreover, this study extended a new variable based on the TAM model, namely self-efficacy, social influence, and perceived risk. Primary data was evaluated using these four factors to create questionnaires for the respondents. As a result, perceived usefulness, social influence, and perceived risk significantly influenced the adoption of the adoption of the Maybank e-payment system. Firstly, the level of adoption significantly affected the adoption decision. Thus, increasing the number of users who adopt the Maybank e-payment system will increase user adoption decisions. A high level of adoption would increase the decision to use the Maybank e-payment system and would be too extreme. Secondly, perceived usefulness significantly influenced the adoption of the Maybank e-payment system, which indicates a positive impact. Therefore, the better usefulness of the e-payment system will increase the adoption of the Maybank e-payment system. Thirdly, social influence significantly impacted the adoption of the Maybank e-payment system, which indicated a positive impact. This finding revealed that a better social influence on the e-payment system would increase the adoption of the Maybank e-payment system. Fourthly, perceived risk significantly affected the adoption of the Maybank e-payment system, which reflects a positive impact. This result indicates that better risk prevention in the e-payment system will increase the adoption of the Maybank e-payment system.

The results could not be generalized to customers from other cultures and countries. Future studies should examine the topic further to confirm and validate the results in order to be consistent with other countries. The present study provided theoretical contributions to the current body of knowledge by advancing the understanding of the relationship between perceived usefulness, self-efficacy, social influence, perceived risk, and adoption of mobile banking. Conclusively, users will consider adopting the mobile e-payment system when banks and service providers prioritise their perceived usefulness, self-efficacy, social influence, and perceived risk.

References

Abbas, M., Zaman, U., Ahmad, J., Nawaz, M. S., & Ahraf, M. (2019). Diffusion of mobile banking in Pakistan. *SMART Journal of Business Management Studies*, *15*(1), 10. https://doi.org/10.5958/2321-2012.2019.00002.2

Aboelmaged, M., & Gebba, T. R. (2013). Mobile Banking Adoption: An Examination of Technology Acceptance Model and Theory of Planned Behavior. *International Journal of Business Research and Development*, *2*(1), 35–50. https://doi.org/10.24102/ijbrd.v2i1.263

Ahmad Hajazi, M. U., Sou Chan, S., Ya'kob, S. A., Siali, F., & Abdul Latip, H. (2021). Usage Intention of Qr Mobile Payment System Among Millennials in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, *11*(1). https://doi.org/10.6007/ijarbss/v11-i1/8494

Ahmed, S., & Sur, S. (2021). Change in the uses pattern of digital banking services by Indian rural MSMEs during demonetization and Covid-19 pandemic-related restrictions. *Vilakshan-XIMB Journal of Management*, *ahead-of-p*(ahead-of-print). https://doi.org/10.1108/xjm-09-2020-0138

Arenas-Gaitán, J., Ramos, A. F. V., & Peral-peral, B. (2019). *A posteriori segmentation of elderly internet users: applying PLS-POS*. https://doi.org/10.1108/MIP-01-2019-0057

Bank Negara Malaysia. (2018). Financial Stability and Payment Systems Report in 2018. *Bank Negara Malaysia*, 1–160.

Chung, T., & Mohd, A. (2018). Whither competition in Malaysia's banking industry ex post a restructuring. *Journal of Economic Studies*, *45*(2), 263–282. https://doi.org/10.1108/JES-01-2017-0009

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

Farah, M. F., Hasni, M. J. S., & Abbas, A. K. (2018). Mobile-banking adoption: empirical evidence from the banking sector in Pakistan. *International Journal of Bank Marketing*, *36*(7), 1386–1413. https://doi.org/10.1108/IJBM-10-2017-0215

Fung, B., Molico, M., & Stuber, G. (2014). *Discussion Paper / Document analyse Electronic Money and Payments: Recent Developments and Issues Electronic Money and Payments: Recent Developments and Issues*.

Kabir, M. R. (2017). Factors Influencing the Usage of Mobile Banking: Incident from a Developing World Review of Business Research Factors Influencing the Usage of Mobile Banking: Incident from a Developing Country Mohammad Rokibul Kabir. *World Review of Business Research*, *3*(April), 96–114.

Lisana, L. (2021). *Factors in fl uencing the adoption of mobile payment systems in Indonesia*. *2025*. https://doi.org/10.1108/IJWIS-01-2021-0004

Lu, J. (2014). *Are personal innovativeness and social influence critical to continue with mobile commerce?* https://doi.org/10.1108/IntR-05-2012-0100

Priya, R., Gandhi, A. V., & Shaikh, A. (2018). Mobile banking adoption in an emerging economy: An empirical analysis of young Indian consumers. *Benchmarking*, *25*(2), 743–762. https://doi.org/10.1108/BIJ-01-2016-0009

Rahman, M., Ismail, I., & Bahri, S. (2020). Analysing consumer adoption of cashless payment in Malaysia. *Digital Business*, *1*(1), 100004. https://doi.org/10.1016/j.digbus.2021.100004

Susanto, P., Hoque, M. E., Hashim, N. M. H. N., Shah, N. U., & Alam, M. N. A. (2020). Moderating effects of perceived risk on the determinants–outcome nexus of e-money behaviour. *International Journal of Emerging Markets*. https://doi.org/10.1108/IJOEM-05-2019-0382

Teoh, W. M., & Lin, B. (2013). *Factors affecting consumers' perception of electronic payment: an empirical analysis*. *23*(4), 465–485. https://doi.org/10.1108/IntR-09-2012-0199

Thomas, A. (2020). *Convergence and digital fusion lead to competitive differentiation*. *26*(3), 707–720. https://doi.org/10.1108/BPMJ-01-2019-0001

Upadhyay, N., Upadhyay, S., Abed, S. S., & Dwivedi, Y. K. (2022). Consumer adoption of mobile payment services during COVID-19: extending meta-UTAUT with perceived severity and self-efficacy. *International Journal of Bank Marketing*, *ahead-of-p*(ahead- of-print). https://doi.org/10.1108/ijbm-06-2021-0262

Vuksanović, N., Demirović Bajrami, D., Petrović, M. D., & Grigorieva, E. M. (2021). QR codes as a tool for receiving feedback about guests' satisfaction at destinations. *Journal of Place Management and Development*, *14*(1), 19–31. https://doi.org/10.1108/JPMD-03-2020-0025