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The Future of Cashless Payments for Small Business during the Covid-19 Pandemic

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Abstract. This study aims to analyze the cashless payment of quick response (QR) system, which is an alternative for users to make payments. Cashless payments are an alternative to carry out electronic funds transfer at the point of sale. QR code payment emerged as the most popular as it does not require traditional infrastructure such as cards, payment networks, merchant accounts, and payment processing terminals.The research method used a quantitative method with linear regression analysis; three variables measured were: Perceived usefulness the subjective probability that technology can improve the way a consumer completes his goal and efficiency refers to an individual's perception that using a particular system will be effortless or, simply, easy to handle as independent variables and determined the intention to use the QR on the payment system as a dependent variable. The object of this research is the payment system for customers as the unit of analysis. The results show that perceived usefulness and efficiency are determinants of the future intention to use this technology. The conclusions and implications for management provide alternatives for small businesses to promote this new business by means of the new technical developments.

Keyword: Quick Response (QR), Innovation, Payment System, Intention to use

1. Introduction

In recent years, payment systems have evolved from simply cash or credit card transactions to different types of mobile payment systems. This transition has taken place due to changes in the economy, technological developments on the Internet, the proliferation of social networks, and increased use of mobile devices. Since smartphones are nowadays a pervasive commodity, consumers are benefiting from the ease and convenience of paying for goods and services when approaching this new payment channel. Mobile payment systems have adapted not only to a mostly digital and mobile free reality, but also to a new business climate, facilitating business transactions anywhere, anytime and for anyone [1].

Various ways have been voiced by the government, so that transmission can be cut off during pandemics cash has been seen as a carrier of germs and a possible way of transmitting disease. Cashless payments are an alternative to carry out electronic funds transfer.

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In previous studies, it was never discussed about the intention to use the QR on the payment, However on other research such as Francisco Liébana-Cabanillas, Iviane Ramos de Luna and Francisco Javier Montoro Ríos, which discussed about User behaviour in QR mobile payment system; Liguo Lou, Zilu Tian and Joon Koh, discussed about Tourist Satisfaction Enhancement Using Mobile QR Code Payment.

Different studies have demonstrated that perceived usefulness has a direct relationship with attitude, as well as the intention to use. In the context of our research, we consider that perceived usefulness of the payment system will influence the intention to use through the user's attitude towards the payment system. Efficiency refers to an individual's perception that using a particular system will be effortless or, simply, easy to handle. Therefore, this is considered one of the most influential aspects regarding the decision to adopt new technology. It has, on the one hand, an impact on attitude, because of self-efficacy and instrumentality. The effect of the perceived ease of use of a product on the perceived usefulness has been demonstrated in numerous studies in different contexts [4]. The relationship between the ease of use, attitude and intention to use has also often been examined.

Therefore, researchers are interested in doing research on intention to use the QR on the payment measurement variable perceived usefulness and efficiency for small business.

2. Method

To evaluate the proposed behavioral model, three self-administered questionnaires were created to be filled out by the consumer. Prior to distribution, the questionnaires were subjected to several preliminary tests to ensure its reliability, and to verify the suitability of the measurement scales, their reliability and validity were analyzed by both exploratory and confirmatory Reliability and validity.

2.1 Reliability and validity

Cronbach's α indicator was first used to measure the reliability of the scales, with 0.7 as the reference value. All the variables obtained very good values in the three groups or subsamples ($\alpha > 0.8$). To test the convergent and divergent validity of the scales, a confirmatory factor analysis was performed. In this analysis the different items that contributed least to the explanatory power of the model were eliminated ($R2 > 0.5$). Convergent validity was evaluated by means of the factor loadings of the indicators. The coefficients were significantly different from zero, and the loadings between latent and observed variables were high in all cases ($\beta > 0.7$). Consequently, we can deduce that the latent variables adequately explain the observed variables [4].

First is Validity Test is done to see how far the score obtained actually states the measurement / observation results. While the reliability test is done to show how far a measuring device can be trusted or reliable. Each measuring device should have the ability to provide measurement results that are relatively consistent over time. Tests are carried out on each question on the questionnaire distributed to respondents [5].

2.2 Classical Assumption Test

2.1.1 Multicollinearity Test is used to determine the existence of high correlation between variables in a multiple regression model. If there is a high correlation between the independent variables, then relation between them of the dependent variable will be disrupted [5]. Multicollinearity testing can be done by looking at the value of Variance Inflation Factors (VIF). If the value of VIF < 10 then not multicollinearity, and if the value of VIF > 10 then there is multicollinearity.

2.1.2 Autocorrelation Test is used to see that there is a linear relation between the errors on a series of observations, sorted by time (time series) [5]. Testing can use the Durbin Watson (DW) test method. If the value of DW < Durbin Lower (dL) then there is positive autocorrelation, and if the value of 4 – DW < Durbin Upper (dU) then there is negative autocorrelation.

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2.1.3 Heteroscedastic Test is used to test if there is a regression model residual variance inequality from one observation to another observation. Regression formula obtained by assuming confounding variables (error) has a constant residual variance (range of errors approximately equal). Heteroscedasticity occurs if residual variance is not constant [5]. If the value of probability < alpha (0.05) then there is a problem of heteroscedasticy, and If the value of probability > alpha (0.05) then there is no problem of heteroscedasticy. The regression model is good if there is no problem of heteroscedasticy.

2.1.4 Normality Test a form of testing about the distribution of data. The purpose is to find out whether the data taken is normally distributed data. The normality testing can be done by Shapiro Wilk test. If p-value < alpha (0.05) then data is not normally distributed, and if p-value > alpha (0.05) then data is normally distributed.

2.1.5 Linearity Test is used to determine whether two or more variables have a significant linear relationship or not. The results of these tests can then be used to help make decisions in determining the regression model that will be used appropriately [5].

2.3 Descriptive Test

Descriptive analysis is used to determine the characteristics of the variables studied from the primary data obtained in the research. Descriptive analysis helps in answering research hypotheses that have been determined, such as:

Ho : p = 0, : Perceived usefulness, efficiency and intention to use the QR on the payment system not in a feasible category for consumers.

Ho : p ≠ 0, Perceived usefulness, efficiency and intention to use the QR on the payment system a feasible category for consumers.

In this study, descriptive analysis was carried out by examining the feasibility of the variables studied. There are five categories of feasibility categories [8], can be seen in Table 1.

Table 1. Feasibility Category

Number	Percentage (%)	Feasibility Category
1.	< 21%	Very Unfeasible
2.	21% - 40%	Not Feasible
3.	41% - 60 %	Decent enough
4.	61% - 80%	Feasible
5.	81% - 100%	Very Feasible

3. Results and Discussion

In this research, Data is tested using the SPSS application that can be used for statistical analysis.

3.1 Result of Validity and Reliability Test

Table 2. Result of Validity Test

Questions	r(item, total)	r-table	Questions	r(item, total)	r-table
Question 1	0.3894	0.1654	Question 8	0.2397	0.1654
Question 2	0.3478	0.1654	Question 9	0.1962	0.1654
Question 3	0.4087	0.1654	Question 10	0.5164	0.1654
Question 4	0.6239	0.1654	Question 11	0.4136	0.1654

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Question 5	0.2532	0.1654	Question 12	0.6239	0.1654
Question 6	0.5181	0.1654	Question 13	0.3695	0.1654
Question 7	0.4974	0.1654	Question 14	0.5548	0.1654

The validity of each indicator can be measured through the numbers which are stated in the box of Item Total Statistic, referring to the column named Corrected Item – Total Correlation. The values of each indicator from the independent and dependent variables have to be bigger than the numbers in the r table [5]. So, it can be concluded that the research data is valid based on the output of results in Table 2, show that the value of r (item, total) for each question < r table.

Table 3. Result of Reliability Test

Questions	Alpha	Questions	Alpha
Question 1	0.8489	Question 8	0.8489
Question 2	0.8556	Question 9	0.8522
Question 3	0.8511	Question 10	0.8544
Question 4	0.8638	Question 11	0.8511
Question 5	0.8540	Question 12	0.8638
Question 6	0.8560	Question 13	0.8638
Question 7	0.8609	Question 14	0.8541

Variable is considered reliable if it scored > 0.60. When the score of its Cronbach Alpha test gets closer to 1, it is more reliable [5] [6]. Based on the output of results in Table 3, show that the value of alpha for each question > 0.6, so it can be concluded that the research data is reliable

3.2 Results of Classical Assumption Test
3.2.1Multicollinearity Test

The results of the VIF value are 1.298834. VIF < 10, so it can be concluded that there is no problem with multicollinearity. If the VIF value is greater than 10 value, the data is considered Multicollinearity and which indicates that this independent variable should be removed from the analysis [5].

3.2.2 Autocorrelation Test
The results of the Durbin Watson can be seen in Table 4.

Table 4. Result of Durbin Watson

Durbin-Watson (D)	1.8670
p-value	0.2767
DL	1.63367
DU	1.71527

Based on the output of results in Table 4, D > dL and 4 – D > dU so it can be concluded that there is no positive autocorrelation and there is no negative autocorrelation. There is no positive and negative autocorrelation because the data is not time series data. Autocorrelation test is only performed on the time series data, so in this study is not necessary to autocorrelation testing [5].

3.3.3 Heteroscedasticy Test
Heteroscedasticy Test using Breusch-Pagan and the results can be seen in Table 5:

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Table 5. Result of Heteroscedasticy

Breusch-Pagan	0.31309
p-value	0.8567

Based on the output of results in Table 5, show that the value of p-value > alpha (0.05), so it can be conclude that there is no problem with heteroscedasticy

3.3.4 Normality Test

Table 6. Result of Normality Test

Variable	Sub Variable	p-Value
Perceived usefulness (Y)	Y1	3.084e-12
	Y2	7.349e-10
	Y3	2.379e-11
	Y4	0.0000006577

Based on the output of results Sub variable 0.0000006577 in p-value < alpha (0.05) so it can be concluded that the research data is not normally distributed. If the data is not normally distributed, then one kind of the way to overcome that is to use a device (method or model) that does not require assumption of normality [5]. Because the data in the questionnaire is ordinal. Nonparametric test is a mathematical model that does not require the assumption of normality, so in this study used a Nonparametric test for studying.

3.3.5 Linearity Test
The results of the linear model can be seen in Table 7.

Table 7. Result of Linier Model

	Estimate	Std. Error
(Intercept)	1.16543	0.44651
X1	0.45761	0.10390
X2	0. 23642	0.09365

These results show the linear regression model of the relationship between X1 that is gap and X2 application to Y on sample data.

Y = 1.16543 + 0.45761 X1 + 0.23642 X2 + 0.44651
The linear regression model explains that there is a positive influence between XI and X2 on Y. The value of β_1 of 0.45761 can be interpreted as an average increase of X1 and the value of β_2 of 0.23642 can be interpreted as an average increase of X2.

3.3 Results of Descriptive Test

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Based on the results of the descriptive test, the average value percentage of the for the perceived usefulness variable is 72.26 % which is in the feasible category. While for the efficiency variable, the average value percentage of the questionnaire is 69.2 % where the entry is also in the feasible category. Then for the intention to use variable obtained the average value percentage of the questionnaire is 70.2 % which is [7] in the feasible category

4. Conclusion

Based on this research, it can be ignored that the first is the average of respondents assessing the use of the payment system through quick response (QR) In terms of Perceived usefulness and efficiency worthy. Second, the variable perceived usefulness and efficiency has a linear effect on its intention to use. So, if the value Perceived usefulness and efficiency increase the intention to use it during a pandemic.

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