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QRIS Efficiency in Improving Digital Payment Transaction Services for Culinary Micro-Small and Medium Enterprises in Depok City

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Abstract

Currently, one of the most popular electronic payment methods is using QR (Quick Response) code. As the first step transformation in Indonesian Payment System to help accelerate the development of the digital economy and finance, Bank Indonesia has issued QRIS (Quick Response Code Indonesian Standard) as unification of various QR type from various e-wallet that use QR codes. The unification of QR codes is certainly a good breakthrough, but there is fee MDR (Merchant Discount Rate) that is charged to the MSMEs (Micro-Small and Medium Enterprises) if they are using QRIS, that makes problem for them. The main purpose of this research is to analyze the efficiency of QRIS in helping to add payment service to customers in digital payment transaction for MSME. The research method used is a quantitative method by distributing questionnaires to 114 culinary MSMEs in Depok city. The result show that using QRIS makes digital payment for culinary MSMEs in Depok more efficient.

Keywords: efficiency, digital payment, QRIS, Micro-Small and Medium Enterprises (MSMEs)

1. Introduction

One of the backgrounds of this research is the role of fintech in increasing MSMEs financial inclusion. The role of fintech is reflected in several basic characteristics of fintech described by the United Nations Environment Program (UNEP) (Pratiwi, 2018), that are: (1) increasing access and decentralization of the financial system; (2) increase transparency, accountability and collaboration across sectors; and (3) lower costs through increased efficiency, speed and automation. By looking at one of the characteristics of fintech, it can increase the efficiency of digital financial transactions in the form of payments, transfers, investments or fund management.

The initial step for digital transformation in the payment system in Indonesia has been taken by Bank Indonesia as the central bank by issuing the QR Code Indonesia Standard (QRIS) which was launched to coincide with the 74th Anniversary of Indonesian Independence, on August 17, 2019 in Jakarta (Indonesia, n.d.). With the existence of QRIS, it also supports the National Non-Cash Movement are commonly called in GNNT terms program so that the Indonesian people become Less Cash Society (LCS) which was launched by Bank Indonesia. Currently, with the emergence of QRIS, all payment applications from digital transaction service providers, both bank and non-bank that are used by the community, can be used in all MSMEs, culinary, parking, tourist tickets, donations bearing the QRIS logo and others. People are also quite familiar with payments via QR Code, but they don't know much about QRIS as a standard QR Code for payment (Karniawati, Darma, Mahuni, & Sanica, 2021).

Several fintech companies that provide transactions including DANA, OVO, Gopay and LinkAja stated that during this pandemic there was an increasing trend of using QRIS. Bank Indonesia recorded, that 3.82 million merchants which have fintech payment had adopted QRIS as of July 3, 2021. The QRIS system has great potential to increase Cashless Society acceptance because Indonesia has a high penetration for cellular usage and internet subscriptions. There is a relationship between customer behavior with performance expectations, business expectations, social influences and condition of facilities from QRIS (Lonardi, et al., 2020).

Since the launch of QRIS, many merchants, especially culinary MSMEs merchants, have started using it immediately. By looking at the phenomenon of the rapid growth of QRIS, it cannot be denied that until now, not many MSMEs have used QRIS. One of the obstacles in using QRIS is the existence of an MDR fee of 7% which is set by the standard by Bank Indonesia for all banks or QRIS service providers (Telkom Indonesia, 2021).

This research is about the efficiency of QRIS in increasing digital payment transactions for Culinary MSMEs in the city of Depok. The selection in Depok City was based on the number of existing MSMEs and the most active internet

and smartphone users in Indonesia. In addition, demographic factors such as the population, to the high productive age were also considerations for choosing the City of Depok and the culinary business was chosen because it is our basic need. During this pandemic, the implementations of restriction community activities which commonly called PPKM in Indonesia terms was implemented so that this culinary business was considered the most promising in the era of the Covid19 pandemic, which is still ongoing as it is today, all buying and selling activities and payments are mostly done through online or financial applications. Many business actors have begun to switch to using digital transaction models, this has become a convenience for both business actors (merchants) and customers also aims to suppress the spread of the virus through cash payment. In addition, (Rofiat, 2017) recommends that MSMEs should increase the use of digital payment transactions to improve their financial performance.

Variables of perception of ease of use, level of efficiency, and potential insecurity have an effect on the interest in conducting transactions using Fintech in a group way (Ginting, Purba, & Sucipto, 2021) which is also one of the backgrounds for conducting this research. This study aims to determine and analyze the efficiency of QRIS in improving digital payment transaction services for MSMEs, especially in the culinary field in Depok City. This research is expected to indicate that the benefits of QRIS are very efficient for culinary SMEs in Depok City. In general, it is also able to provide suggestions for improvement for policy makers in this case the government regarding the rules of the game in digital payment transactions in the future. Based on the results of the study and the background, the purpose of this study is to analyze the efficiency of digital payment transactions using QRIS.

2. Literature Review

2.1. Efficiency

Efficiency refers to getting the most output from the least amounts of inputs or resources. Efficiency is often referred to as "do things right" which means not wasting resources (Robbins & Coulter, 2016). Efficiency is the accuracy of the way (effort, work) in running something without wasting time, effort and cost (Mulyadi, 2007). According to (Winardi, 2003) efficiency should be considered as a measure of the quality of work in a technology.

2.2. Quick Response Indonesian Standard Code (QRIS)

QRIS is the unification of various QR types from various Payment System Service Providers (PJSP) using a QR Code. QRIS was developed by the payment system industry together with Bank Indonesia so that the transaction process with the QR Code can be easier, faster, and secure. All Payment System Service Providers who will use QR Code Payments must implement QRIS (Indonesia, n.d.).

Currently QRIS can be used by any merchant by simply opening an account or an account with one of the QRIS providers. However, there is a maximum limit for the nominal transaction value, which is IDR 2,000,000 (two million rupiah). With QRIS, it provides many benefits from the user's side, including being faster, up-to-date, no need to bother carrying cash, no need to worry about the QR e-wallet installed. On the other side, it also provides benefits for merchant such as up-to-date and improve branding, increase sales because it can accept any QR based payment, more practical, reduce cash management cost, facilitates reconciliation, avoid counterfeit money and do not need to provide change, automatically recorded for all transactions, develop credit profile information to facilitate future credit.

2.3. Micro-Small and Medium Enterprise (MSMEs)

Micro-small and medium enterprises are small businesses which are independent productive economic businesses, which are carried out by individuals, or business entities that are not subsidiaries or branches of companies owned, or become a direct or indirect part of a medium or large business that have the criteria as referred to in Law (RI, 2008), namely:

a. Micro Business has a maximum net worth of IDR 50,000,000 (fifty million rupiahs) excluding land and buildings for business premises.
b. Small Business has a net worth of more than IDR 50,000,000 (fifty million rupiahs) up to a maximum of IDR 500,000,000 (five hundred million rupiahs), excluding land and buildings for business premises and has annual sales of more than IDR 300,000,000.00 (three hundred million rupiahs) up to a maximum of ID 2,500,000,000.00 (two billion five hundred million rupiahs).
c. Medium Enterprises have a net worth of more than IDR 500,000,000.00 (five hundred million rupiahs) up to a maximum of IDR 10,000,000.00 (ten billion rupiahs), excluding land and buildings for business premises; and has annual sales of more than IDR 2,500,000,000.00 (two billion five hundred million rupiahs) up to a maximum of IDR 50,000,000,000.00 (fifty billion rupiahs).

2.4. Framework

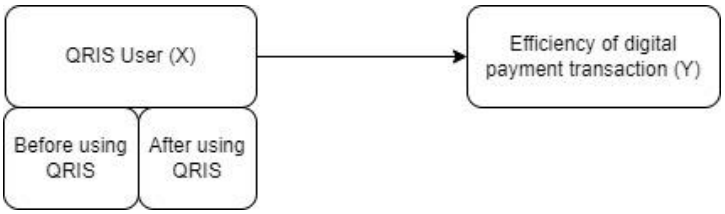

Figure 1: Concept Framework

The dependent variable used in this study is the efficiency of digital payment transactions, and the independent variable used is the use of QRIS.

From this framework, it can be seen that this research shows that the independent variable (X) of using QRIS is divided into two groups, namely before using QRIS and after using QRIS. From the two groups, it will be known how efficient QRIS is before using it and after using QRIS in helping MSMEs make digital payment transactions. Based on the study of existing theories and frameworks, the following hypotheses can be formulated:

H_0: there is no difference in the efficiency of digital payments between before and after using QRIS

H_1: there is a difference in the efficiency of digital payments between before and after using QRIS

The indicators of the efficiency variable in this study (Ginting M. , 2019) are time saving, energy saving, easy transactions, cheap payments and the use of technology.

3. Materials and Methods

This research is a quantitative descriptive research that describes social phenomena that occur in the business world. The object of research is efficiency before and after using QRIS, while the subjects in this study are culinary MSMEs in Depok City which are spread over 5 shopping centers in Depok City. The population in this study is culinary MSMEs that use QRIS as their digital payments in the city of Depok. The sampling technique used is purposive sampling. With the unknown population, the determination of the number of samples uses the Cochran formula (Sugiyono, 2014) where the number of samples required is around 68 samples. The sample size in this study was 126 respondents, because during the pandemic and PPKM was imposed by the government. Of the 126 respondents who have used QRIS, as many as 114 respondents are in the culinary field. The sample used in this study was a paired sample, namely 114 MSMEs before using QRIS and after using QRIS.

The data collection technique used in this research is library research to collect secondary data in the form of books, scientific articles, and information about QRIS from Bank Indonesia. Furthermore, to collect primary data, field research was carried out, namely by distributing questionnaires (list of questions) which were distributed directly to MSMEs.

Parametric or non-parametric statistics is used to test two paired (correlated) samples. Data analysis was carried out starting from the instrument test consisting of a validity test and a reliability test. After that we did the data normality test, if the results is normally distributed, we use parametric statistics, otherwise non-parametric statistics as data analysis technique. Finally, for paired (correlated) sample data in the form of ratio intervals, the comparative hypothesis testing used for parametric statistics is the t-test, and for nonparametric statistics using the Wilcoxon Match Pairs test (Sugiyono, 2014). For all calculations using the SPSS v.25 application.

4. Results and Discussion

From the results of distributing questionnaires to 114 culinary MSMEs in the city of Depok, it is known that there were 10.5% of respondents who have just used QRIS (less than 3 months), 53.5% of respondents have used QRIS for the last 3 -6 months, 20.2% have used QRIS for 7 – 12 months and the remaining 15.8% have used QRIS for more than a year.

Further information we obtain that mostly respondents (92 MSMEs) got their turnover under 25 million, 20 other MSMEs got around 25 to 50 million, only one MSME got turnover up to 50 - 100 million and only one got more than 100 million.

4.1. Validity Test

The first step is to test the questionnaire statement items in the form of a validity test which aims to find out whether the statement items have been made correctly or ambiguously for prospective respondents. The statement items were made in pairs for both groups, namely before using QRIS and after using QRIS. Methods include: the stages and formulas that are used in data analysis, arranged sequentially step by step.

Table 1: Instrument Validity Test Results for the Group Before Using QRIS

No	Question No	r-count	Validation
1	X1.1	0.731	Valid
2	X1.2	0.277	Invalid
3	X1.3	0.642	Valid
4	X1.4	0.825	Valid
5	X1.5	0.652	Valid
6	X1.6	0.602	Valid
7	X1.7	0.742	Valid
8	X1.8	0.360	Invalid
9	X1.9	0.780	Valid
10	X1.10	0.056	Invalid
11	X1.11	0.507	Valid
12	X1.12	0.207	Invalid
13	X1.13	0.156	Invalid

Table 2: Instrument Validity Test Results for the Group After Using QRIS

No	Question No	r-count	Valid
1	X1.1	0.590	Valid
2	X1.2	0.556	Valid
3	X1.3	0.572	Valid
4	X1.4	0.572	Valid
5	X1.5	0.679	Valid
6	X1.6	0.675	Valid
7	X1.7	0.680	Valid
8	X1.8	0.692	Valid
9	X1.9	0.771	Valid
10	X1.10	0.664	Valid
11	X1.11	0.545	Valid
12	X1.12	0.745	Valid
13	X1.13	0.711	Valid

Based on the data in table 1, it can be seen that there are several items that are invalid because the value of r-count is smaller than the value of r table, which is 0.446, so the question items are then replaced. Next, the data in table 2 shows that all instrument items are valid because the r-count value is greater than the r-table value. Then, the invalid statements were being replaced, the validity test was re-tested and declared valid for all statement items in both groups.

4.2. Reliability Test

The reliability test using approaching of the Cronbach Alpha formula. From the results, Cronbach's alpha value for the group before using QRIS was 0.775 and for the group after using QRIS was 0.820. The criteria for an item to be said to be reliable or reliable according to (Siregar, 2013) is > 0.6. It was concluded that all items of the statement were reliable because they were greater than 0.6 for both groups.

4.3. Normality Test

Normality test is used to determine whether the variable data owned is normally distributed or not. We can say that the data is normal if the significance value (p) > 0.05, otherwisw if the significance value (p) < 0.05 then the data is said to be abnormal.

Table 3: Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Before Using_QRIS	0.126	114	0.000	0.950	114	0.000
After Using_QRIS	0.143	114	0.000	0.956	114	0.001
[a] is Liliefors Significance Correction						

From table 3 using the Kolmogorov-Smirnov[a] test, the Sign value <0.05, both before using QRIS and after using QRIS, it can be concluded that the data in this study were not normally distributed. Therefore, a non-parametric statistical technique is used, namely the Wilcoxon Match Pairs test to test the hypothesis that the sample correlates with the ratio interval data.

4.4. Hypothesis Test - Wilcoxon Match Pairs Test

Wilcoxon Match Pairs Test is a non-parametric statistical test that is used to analyze paired data because of the two different treatments (Kerlinger, 2014). The Wilcoxon test aims to measure the significance of the difference between 2 groups of paired data on an ordinal or interval scale but the data are not normally distributed.

Table 4: Wicoxon Test Ranks

		N	Mean Rank	Sum of Ranks
After Using_QRIS - Before Using_QRIS	Negative Ranks	0[a]	0.00	0.00
	Positive Ranks	114[b]	57.50	6555.00
	Ties	0[c]		
	Total	114		

[a] is After Using_QRIS < Before Using_QRIS

[b] is After Using_QRIS > Before Using_QRIS

[c] is After Using_QRIS = Before Using_QRIS

From the table 4, it can be interpreted:

(1). Negative Ranks or the negative difference between the results of using QRIS before and after is 0, both in the N value, Mean Rank, and Sum Rank, this 0.00 value shows no decrease from the value before and after using QRIS.

(2). Positive Rank or the difference (positive) between the results after and before using QRIS. There is positive data (N) which means that the 114 respondents experienced an increase in value, and also an increase in the value for the Mean Rank and Sum Rank.

(3). Ties is the similarity of values before and after using QRIS. In the table the ties value is 0, so it can be said that there is no equal value between before and after using QRIS.

Next are the results of the analysis of the Wilcoxon test, the basis for making decisions in the Wilcoxon test itself is to assess the Asymp Sig. (2-tailed) value with the test criteria:

- If P-Value < (0.05) then H_0 is rejected
- If P-Value > (0.05) then H_0 is accepted

To see the results of Z count with the following test criteria:

- If |Z-count | > Z-table then H_0 is rejected.
- If | Z-count | < Z-table then H_0 is accepted

Table 5: Result of Wilcoxon Test

Test Statistics

	After Using_QRIS - Before Using_QRIS
Z	-9.269
Asymp.Sig. (2-tailed)	0.000

Notes: Z value based on negative ranks

From table 5 by looking at the results of data processing, the Asymp.sig value (p-value) is 0.000, the value is smaller than 0.05, then H_0 is rejected, so it can be interpreted that there is a significant difference in the efficiency value before using QRIS and after using QRIS (hypothesis accepted). Furthermore, the calculated Z value data | Z_{count} | is compared with the Z table value, where the Z table value with an alpha level of 5% is 1.645. The value of | Z_{count} | is 9.269 which value is greater than the value of Z table, which means H_0 is rejected and H_1 is accepted. It can be concluded that there is a difference in the efficiency of digital payments before and after using QRIS.

Table 6: Respondent Descriptive Statistics Result

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Before Using_QRIS	114	12	34	22.18	5.886
After Using_QRIS	114	38	60	51.89	4.895
Valid N (listwise)	114				

Based on table 6 is the result of descriptive respondents where there is an increase in the minimum, maximum, and average values in the group after using QRIS, so in general it can be concluded that this study proves the level of efficiency before using QRIS is 22% and after using QRIS rose to about 51%.

From the results of tests conducted on 114 respondents before and after using QRIS, the results showed that there were differences in efficiency before and after using QRIS as a digital payment transaction tool for MSMEs in Depok with the most dominant indicators of time saving, energy saving and easy transactions. The following is an explanation for each variable:

1. Time saving, no need to prepare change, no need to separate personal funds and company funds and no need to check balances in several accounts/e-wallet.
2. Energy saving, no need to register with various e-wallets to provide digital transaction services, reduce cash receipts, reduce the risk of receiving counterfeit money, and better recorded reconciliation activities thereby reducing the potential for fraud.
3. Easy transactions, currently there are many QRIS service providers, making it easier for users to choose QRIS providers according to the account they have, digital payments are becoming more flexible and easier for merchants or customers and respond quickly from various e-wallets directly into the account.
4. Low fees, free registration for QRIS, although there is an additional fee which is MDR (merchant discount rate) that has been set by Bank Indonesia, but the service fee is still affordable by merchants.
5. The use of technology, which means by using QRIS creates a digital payment transaction process more flexible, practically more efficient and effective because it uses one transaction service for all e-wallets.

The interview results shows that most of the interviewed participants stated that they had a strong enough intention to use QRIS because they felt it was very efficient in improving digital payment transaction services, even though there were a few additional fees or MDR.

5. Conclusion

Based on the results of data analysis, hypothesis testing and the discussion that has been explained, it can be concluded that there are differences in efficiency values before using QRIS and after using QRIS. In addition, it can also be found that there is an increase in the value of efficiency after using QRIS with indicators of time saving, energy saving, and easy transactions which are the most chosen by respondents even though the low fees indicator has a service fee, namely the Merchant Discount Rate that has been set by Bank Indonesia the fee is still affordable by the merchant. So, we can say that that using QRIS makes digital payment for culinary MSMEs in Depok more efficient.

Suggestions for MSME actors who have not become QRIS users, it would be nice for them to become QRIS users because the benefits provided by this technology are numerous. QRIS is very safe, both for entrepreneurs and consumers as well as to support the acceleration of the digitalization of MSMEs in Indonesia, also in the Covid-19 pandemic will reduces cash receipt to prevent the spread of virus.

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