

The Decision to Use QRIS in UMKM is Seen from the Perceived Benefits and Perceived Ease of use with Intention as an Intervening Variable



Nuzul Hidayat¹, Agus Supratman², Adinda Septi Utami³, Tri Yuliasuti⁴

^{1,2,3,4} Magister of Management, Faculty of Economics, Universitas Mataram

ABSTRACT: This research aims to determine the influence of perceived benefits and perceived ease of use on the decision to use QRIS in UMKM with intention to use as a mediating variable. This research is quantitative research. The number of samples used was 150 samples. Sampling was carried out using purposive sampling technique. Sample collection was carried out using a questionnaire via Google Form. The data analysis method used to prove the truth of the hypothesis was carried out using Structural Equation Modeling (SEM) via Smart PLS software. From the results of hypothesis testing, it was found that perceived benefits, perceived ease of use, and intention to use it had a positive and significant effect on the decision to use QRIS in UMKM.

KEYWORDS: Decision to use, Intention to use, Perceived ease of use, perceived benefits

I. INTRODUCTION

Payment systems used in business transactions are influenced by increasingly rapid technological advances today. Apart from cash transactions, many non-cash payment systems have emerged today. Bank Indonesia launched a non-cash payment system as a replacement for the previously existing cash payment system (Meliyanti, 2021). The rapid development of non-cash transactions in Indonesia can be seen from the increase in the value of shopping transactions over the last few months.

Table 1. Value of Shopping Transactions Using Electronic Money in Indonesia (January – August 2023)

No	Month	Transaction Value	Growth	Percent
1	January	Rp. 34.016.611.380.000	-	-
2	February	Rp. 31.977.966.870.000	(Rp. 2.038.644.510.000)	-5,99%
3	March	Rp. 36.941.910.000.000	Rp. 4.963.943.130.000	15,52%
4	April	Rp. 37.461.560.000.000	Rp. 519.650.000.000	1,41%
5	Mey	Rp. 37.752.848.210.000	Rp. 291.288.210.000	0,78%
6	June	Rp. 36.221.649.922.115	(Rp.1.531.198.287.885)	-4,06%
7	July	Rp. 39.232.859.790.000	Rp. 3.011.209.867.885	8,31%
8	Augustust	Rp. 38.538.069.232.027	(Rp. 694.790.557.973)	-1,77%

Source: databox.id

Based on data from Bank Indonesia (BI), throughout August 2023 the value of shopping transactions using electronic money or e-money in Indonesia reached Rp. 38.538.069.232.027. Bank Indonesia noted that in August 2023 there will be around 777.3 million units of cards or e-money instruments spread throughout Indonesia. The value of shopping transactions every month continues to fluctuate but tends to increase. This increase is of course accompanied by the convenience and innovation of electronic money payment systems.

Payment using QRIS is one of the new innovations in non-cash transactions. To make QR code payments easier in Indonesia, Bank Indonesia and the Indonesian Payment System Association (ASPI) launched the Quick Response Code Indonesian Standard on 17 August 2019 and began implementing it on 1 January 2020 (Saputri, 2020). One of the steps taken by Bank

The Decision to Use QRIS in UMKM is Seen from the Perceived Benefits and Perceived Ease of use with Intention as an Intervening Variable

Indonesia was to launch QRIS. This is one of the initiatives intended to support cashless efforts, encourage digital economic growth, and increase financial inclusion in Indonesia (Paramitha & Kusumaningtyas, 2020).

For traders and micro, small and medium enterprises (UMKM), QRIS, a digital payment method developed by various banking services in Indonesia, offers convenience in carrying out their financial activities. Merchants use QRIS to receive payments and record transactions that go directly into their accounts via cellphone without requiring additional devices or tools (Febrinastri & Fadilah, 2022).

To compete and maintain industrial quality, banking companies in Indonesia are competing to develop information technology (Helen, 2015). This is proven by the emergence of various features that can be accessed by every player in the banking industry. According to Bank Indonesia (BI), there are 30 million sellers who use the Quick Response Code Indonesia Standard (QRIS). Around 80 percent of this number, or 24 million, are micro, small and medium enterprises (UMKM).

The level of implementation of QRIS is related to individual acceptance of the new technology which is influenced by certain factors. Based on Technology Acceptance Model 3 (TAM 3) by Venkatesh et al., (2008) states that interest in using a technology is controlled by perceived benefits and perceived ease of use.

Perceived benefits is a measure of people's beliefs that the use of information technology can improve the user's work abilities (Venkatesh et al., 2008). In other words, if information technology succeeds in improving user performance, their interest in using the technology will have an effect (Venkatesh et al., 2008). Putri (2023) found that perceived benefits have a positive and significant influence on intention to use QRIS-based payment media. In addition, Ningsih et al., (2021) found that perceived benefits have a positive and significant influence on the decision to use QRIS-based electronic money. However, research by Marchelina & Pratiwi (2018) produced different findings, showing that perceived benefits have no effect on e-money usage.

The perception that QRIS technology is easy to use also supports the adoption of this technology. Ease of use is the level of a person's belief that using a technology will eliminate effort (Venkatesh et al., 2008). This means that if a technology can be used easily, people will be more interested in using it. Ningsih et al., (2021) stated that the ease of using QRIS has a positive influence on interest in using it. Furthermore, Palupi et al., (2022) found that ease of using QRIS has a positive and significant influence on QRIS purchasing decisions. However, research by Sati & Ramaditya (2020) found that perceived convenience does not have a significant influence on consumers' interest in using QRIS. The inconsistencies in the results of previous research made researchers interested in conducting this research.

II. LITERATURE REVIEW

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is used to predict user acceptance of the use of new technology. The TAM model introduced by Davis (1989) is an adaptation of the theory developed by Fishbein & Ajzen (1975), namely the Theory of Reasoned Action (TRA). TRA theory explains that a person's reactions and perceptions of something determine their attitudes and actions. Information Technology Users' reactions and perceptions influence their acceptance of technology. In Amijaya (2010) research, the TAM model can be developed based on the perceived benefits and ease of use of information technology to predict user acceptance of the use of new technology in information systems. The TAM theory introduced by Davis (1989) is the basis for determining what efforts are needed to arouse interest in using technology.

Quick Response Code Indonesian (QRIS)

QRIS is an abbreviation for Quick Response Code Indonesian. QRIS is a QR Code standard for payment systems in Indonesia developed by Bank Indonesia with the Indonesian Payment System Association (ASPI) (Paramitha & Kusumaningtyas, 2020). QRIS is designed using 1 code that can serve various types of payments, this aims to create payment efficiency.

Decision to Use

Decisions are the final result of the thinking process; in other words, a person has the ability to make that decision because they have several options. After the decision process is complete, someone will make a decision to use (Silalahi et al., 2022). The final decision to use something of course goes through several stages first, to really ensure that the decision is right.

Perceived Benefits

According to Jogiyanto & Willy (2009) perceived usefulness is the extent to which someone believes that the use of a particular technology will improve their work performance. Someone will use technology if they feel it has benefits for them. Davis (1989) explains that benefit is a level of confidence within a person that the use of a technology can improve his or her performance.

The Decision to Use QRIS in UMKM is Seen from the Perceived Benefits and Perceived Ease of use with Intention as an Intervening Variable

Perceived Ease of Use

According to Jogiyanto & Willy (2009) perceived ease of use is the level to which a person believes that a technology can be used easily and is easy to understand. Monisa (2013) provides an explanation of how easy it is to use technology, defined as how much someone trusts to use it. Ease is defined as the degree to which a person believes that using technology will result in them not having to do anything. Where the convenience offered by the company to use it also helps customers make decisions about whether to use it or not.

Intention to Use

Davis (1989) states that behavioral interest is defined as the level of how strong a person's interest is in carrying out a certain behavior. Behavioral interest is the desire to carry out a behavior. According to Kotler (2016), interest arises after receiving stimulation from the product he sees, following interest in trying the product, and finally the desire to buy, own and use the product.

III. RESEARCH METHOD

This research develops and tests a model (Figure 1) that integrates perceived benefits, perceived ease of use, usage interest, and usage decisions using SEM PLS. This research uses a quantitative approach with the main instrument in the form of a questionnaire distributed online to obtain data from various regions in Indonesia. The scale used is Likert type 1-7 from strongly disagree-strongly agree. Data collection was carried out online with a sample size of 150 UMKM. This number is considered to be more than the minimum number (100) recommended in multivariate research (Hair et al., 2010). Despite the risks of spreading online, online surveys offer benefits such as cost, time and other efficiencies. Researchers are aware of the risks of online surveys targeting inappropriate groups. Therefore, researchers stated that this survey was intended to be completed by UMKM that meets the inclusion requirements.

IV. RESULTS AND DISCUSSION

Respondent Description

From distributing questionnaires to 150 UMKM in Indonesia, the following characteristics of respondents were obtained.

Table 2. Respondent Description

Respondent Data	Respondent Description	Amount	Percent
Type of UMKM	Culinary	73	48,7%
	Beauty	11	7,3%
	Fashion	8	5,3%
	Craft	3	2%
	Health	2	1,3%
	Other	53	35,3%
Long time in business	< 1 Year	72	48%
	1 – 3 Years	50	33,3%
	3 – 5 Years	15	10%
	> 5 Years	13	8,7%
Length of use of QRIS	< 1 Year	93	62%
	1 – 3 Years	54	36%
	> 3 Years	3	2%
Region	West Nusa Tenggara	71	47,3%
	East Nusa Tenggara	4	2,7%
	Bali	19	12,7%
	Java	37	24,7%
	Sumatera	7	4,7%
	Sulawesi	12	8%

Source: Data processing (2024)

The Decision to Use QRIS in UMKM is Seen from the Perceived Benefits and Perceived Ease of use with Intention as an Intervening Variable

Based on Table 2 above, it is known that the characteristics of respondents based on MSME type are dominated by Culinary (48.7%). Then based on length of business, it is dominated by < 1 year (48%). Furthermore, based on the length of use of Qris, it is dominated by < 1 year (62%). Next, the region is dominated by West Nusa Tenggara (47.3%).

Data analysis with SEM-PLS

The following can be seen of the results of data analysis using Smart PLS version 4:

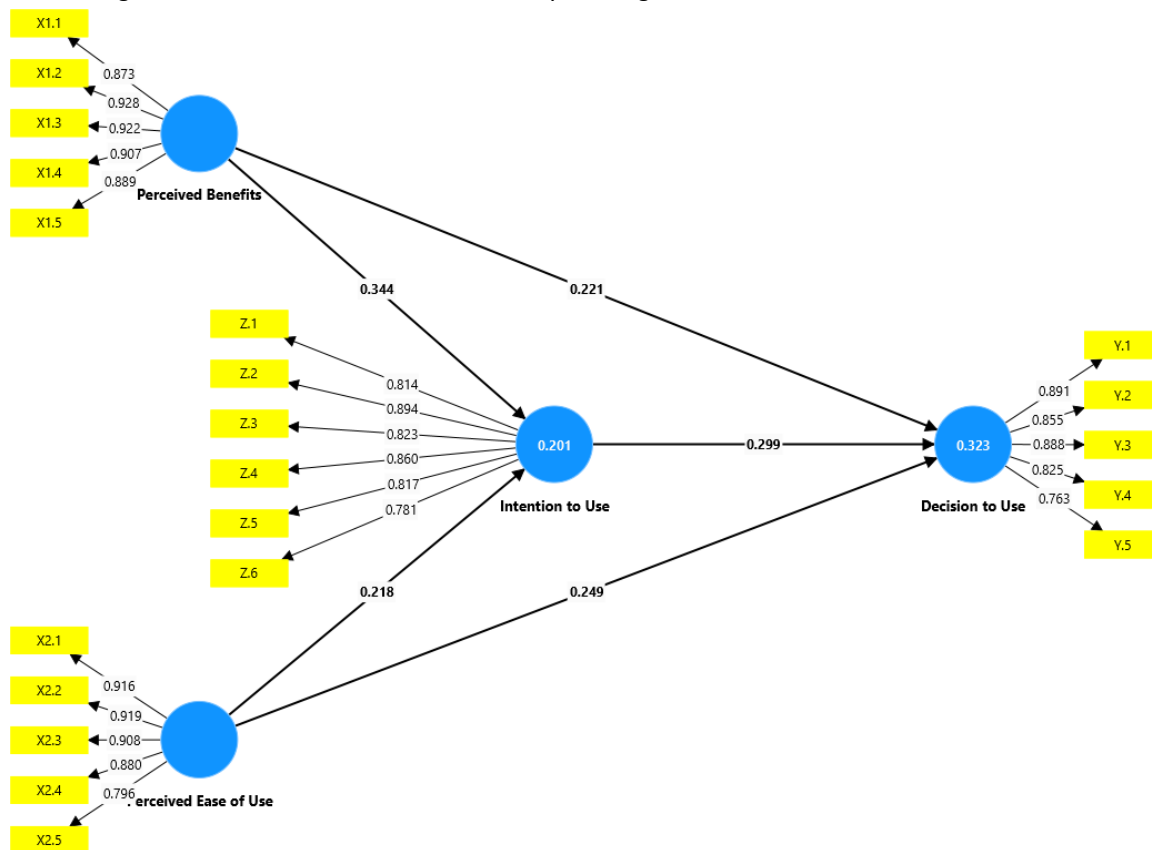


Figure 1. Structural Model

Based on Figure 1 above, it can be seen that all indicators for each variable have a value > 0.70, meaning that each indicator for each variable is valid or meets the convergent validity criteria.

Table 3. Average Variance Extracted (AVE) Value

	Average Variance Extracted (AVE)
Perceived Benefits (X1)	0,817
Perceived Ease of Use (X2)	0,783
Intention to Use (Z)	0,693
Decision to Use (Y)	0,715

Source: Data processing (2024)

Then based on Table 3, the Average Variance Extracted value for each variable is > 0.50, so that the measurements carried out meet the convergent validity criteria.

Table 4. Cronbach Alpha

	Cronbach's alpha	Composite reliability	Keterangan
Perceived Benefits	0.944	0.957	Reliabel
Perceived Ease of Use	0.931	0.947	Reliabel
Intention to Use	0.911	0.931	Reliabel
Decision to Use	0.900	0.926	Reliabel

Source: Data processing (2024)

The Decision to Use QRIS in UMKM is Seen from the Perceived Benefits and Perceived Ease of use with Intention as an Intervening Variable

Reliability is measured by composite reliability parameters and Cronbach's alpha. The composite reliability results will show a satisfactory value if it is above 0.7, while the recommended Cronbach's alpha value is around 0.7. Based on Table 4 above, it is known that the Cronbach alpha value for each variable is > 0.7 . It can be concluded that the data in this study is declared reliable.

Table 5. P-value test result

	Original sample (O)	T statistics (O/STDEV)	P values	Results
Intention to Use -> Decision to Use	0.299	4.379	0.000	Accepted
Perceived Ease of Use -> Decision to Use	0.249	3.463	0.001	Accepted
Perceived Ease of Use -> Intention to Use	0.218	2.953	0.004	Accepted
Perceived Benefits -> Decision to Use	0.221	2.864	0.005	Accepted
Perceived Benefits -> Intention to Use	0.344	4.952	0.000	Accepted

Source: Data processing (2024)

Based on Table 5 above, the hypothesis is accepted if the T-statistic value is > 1.975 and the p-value is < 0.05 . Hypothesis testing between variables can be explained as follows.

H1: The results of the hypothesis test for the Intention to Use variable on Decision to Use obtained a t-statistic value of $4.379 > 1.975$ with a p-value of $0.000 < 0.05$. It can be stated that Intention to Use has a positive and significant effect on Decision to Use. Intention is a direct determinant of a person's actions or behavior. Intention variables continue to be used as determinants of a person's behavior in accepting technology. According to Susanto (2015), technology acceptance in a behavioral approach is often measured by intention (interest) which is defined as the desire to behave.

H2: The results of the hypothesis test for the variable Perceived Ease of Use on Decision to Use obtained a t-statistic value of $3.463 > 1.975$ with a p-value of $0.000 < 0.05$. It can be stated that Perceived Ease of Use has a positive and significant effect on Decision to Use. Ease of use is the level of a person's belief that using a technology will eliminate effort (Venkatesh et al., 2008). This means that if a technology can be used easily, people will be more interested in using it. Palupi et al., (2022) found that ease of using QRIS has a positive and significant influence on QRIS purchasing decisions.

H3: The results of the hypothesis test for the variable Perceived Ease of Use on Intention to Use obtained a t-statistic value of $2.953 > 1.975$ with a p-value of $0.004 < 0.05$. It can be stated that Perceived Ease of Use has a positive and significant effect on Intention to Use. The results of this research are in accordance with the results of research by Ningsih et al., (2021) which shows that the ease of using QRIS has a positive influence on intention in using it.

H4: The results of the hypothesis test for the variable Perceived Benefits on Decision to Use obtained a t-statistic value of $2.864 > 1.975$ with a p-value of $0.005 < 0.05$. It can be stated that Perceived Benefits has a positive and significant effect on Decision to Use. The results of this research are in accordance with research by Ningsih et al., (2021) which found that perceived benefits have a positive and significant influence on the decision to use QRIS-based electronic money.

H5: The results of the hypothesis test for the variable Perceived Benefits on Intention to Use obtained a t-statistic value of $4,952$ with a p-value of $0.000 < 0.05$. It can be stated that Perceived Benefits has a positive and significant effect on Intention to Use. The results of this research are also in accordance with research by Putri (2023) who found that perceived benefits have a positive and significant influence on intention to using QRIS-based payment media.

Table 6. Specific Indirect Effect test results

	Original sample (O)	T statistics (O/STDEV)	P values	Results
Perceived Ease of Use -> Intention to Use -> Decision to Use	0.065	2.547	0.012	Accepted
Perceived Benefits -> Intention to Use -> Decision to Use	0.103	3.562	0.000	Accepted

Source: Data processing (2024)

Table 6 shows the results of the variable mediation test, these results show.

H6: The results of the hypothesis test of the variable Perceived Ease of Use on Decisions to Use with Intention to Use as a mediating variable obtained a t-statistic value of $2,547 > 1.975$ with a p-value of $0.012 < 0.05$. It can be stated that the variable Perceived

The Decision to Use QRIS in UMKM is Seen from the Perceived Benefits and Perceived Ease of use with Intention as an Intervening Variable

Ease of Use has a positive and significant effect on Decisions to Use which are mediated by Intention to Use. In this way, Intention to Use indirectly influences the relationship between Perceived Ease of Use and Decision to Use.

H7: The results of hypothesis testing for the variable Perceived Benefits on Decisions to Use with Intention to Use as a mediating variable obtained a t-statistic value of $3,562 > 1.975$ with a p-value of $0.000 < 0.05$. It can be stated that the variable Perceived Benefits has a positive and significant effect on Decisions to Use which are mediated by Intention to Use. In this way, Intention to Use indirectly influences the relationship between Perceived Benefits and Decision to Use.

V. CONCLUSIONS

Based on the analysis of the results and discussion in the research, the following conclusions were obtained:

1. Intention to Use has a positive and significant influence on the Decision to Use QRIS in UMKM.
2. Perceived Ease of Use has a positive and significant influence on the Decision to Use QRIS in UMKM.
3. Perceived Ease of Use has a positive and significant influence on Intention to Use QRIS in UMKM.
4. Perceived Benefits has a positive and significant influence on the Decision to Use QRIS in UMKM.
5. Perceived of Benefits has a positive and significant influence on Intention to Use QRIS in UMKM.
6. Intention to Use mediates the influence of Perceived Benefits on the Decision to Use QRIS in UMKM.
7. Intention to Use mediates the influence of Perceived Ease of Use on Decisions to Use QRIS in UMKM.

REFERENCES

- 1) Amijaya, G. R. (2010). *Pengaruh Persepsi Teknologi Informasi, Kemudahan, Resiko Dan Fitur Layanan Terhadap Minat Ulang Nasabah Bank Dalam Menggunakan Internet Banking (Studi Pada Nasabah Bank Bca)*.
- 2) Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>
- 3) Febrinastri, F., & Fadilah, R. (2022). *Digital Apps BRImo Mudahkan Belanja Selama Libur Lebaran dengan QRIS*. Suara.Com. <https://www.suara.com/bisnis/2022/05/06/123000/digital-apps-brimo-mudahkan-belanja-selama-libur-lebaran-dengan-qris>
- 4) Fishbein, M., & Ajzen, A. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*, Reading, MA: Addison.Wesley.
- 5) Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th Editio). Prentice Hall, Upper Saddle River, 761.
- 6) Helen, D. (2015). *Bank Berlomba-lomba Kembangkan Teknologi Informasi*. Bisnis.Com. <https://finansial.bisnis.com/read/20150625/90/447239/bank-berlomba-lomba-kembangkan-teknologi-informasi>
- 7) Jogiyanto, H., & Willy, A. (2009). *Konsep dan aplikasi PLS (partial least square) : Untuk penelitian empiris*. BPFE.
- 8) Kotler, Philip. (2016). *Dasar-Dasar Pemasaran*. Bumi Aksara.
- 9) Marchelina, D., & Pratiwi, R. (2018). Pengaruh Persepsi Manfaat, Persepsi Kemudahan, Persepsi Risiko dan Fitur Layanan terhadap Minat Penggunaan E- Money (Studi Kasus Pada Pengguna E-Money Kota Palembang). *Jurnal Akuntansi Dan Keuangan*, 1(1), 1–17. <https://core.ac.uk/download/pdf/162164902.pdf>
- 10) Meliyanti, M. (2021). *Strategi Bank Indonesia Kpw Kalteng Dalam Perkembangan Pembayaran Nontunai Melalui Quick Response Code Indonesia Standard (QRIS) Pada UMKM Di Kota Palangka Raya*. <http://digilib.iain-palangkaraya.ac.id/3526/>
- 11) Monisa, M. (2013). *Persepsi Kemudahan dan Kegunaan OPAC Perpustakaan Unair (Study Deskriptif Menilai Persepsi Kemudahan dan Persepsi Kegunaan OPAC Oleh Pengguna di Perpustakaan Universitas Airlangga)*.
- 12) Ningsih, H. A., Sasmita, E. M., & Sari, B. (2021). Persepsi Risiko Terhadap Keputusan Menggunakan Uang Elektronik (QRIS) Pada Mahasiswa. *Jurnal IKRA-ITH Ekonomika*, 4(1), 1–9.
- 13) Palupi, A. A., Hartati, T., & Sofa, N. (2022). Pengaruh Literasi Keuangan Dan Kemudahan Penggunaan Sistem Qris Terhadap Keputusan Bertransaksi Menggunakan Qris Pada UMKM. *Seminar Nasional Riset Terapan, Vol 10,1*, 1–9. <https://prosiding-old.pnj.ac.id/index.php/snrtb/article/view/5607>
- 14) Paramitha, D. A., & Kusumaningtyas, D. (2020). *QRIS* (Issue 76).
- 15) Putri, P. (2023). *Pengaruh Manfaat, Kemudahan, Dan Risiko Terhadap Penggunaan QRIS (Sensus pada UMKM Binaan dan Mitra Kantor Perwakilan Bank Indonesia di Wilayah Priangan Timur)*. Universitas Siliwangi.
- 16) Saputri, O. B. (2020). Preferensi Konsumen Dalam Menggunakan Quick Response Code Indonesia Standard (QRIS) Sebagai Alat Pembayaran Digital. *Journals of Economics and Business Mulawarman*, 17(2), 1–11.

The Decision to Use QRIS in UMKM is Seen from the Perceived Benefits and Perceived Ease of use with Intention as an Intervening Variable

- 17) Sati, R. A. S., & Ramaditya, M. (2020). Pengaruh Persepsi Manfaat, Persepsi Kemudahan Penggunaan dan Persepsi Risiko Terhadap Minat Menggunakan Shopee Paylater. *Jurnal Syntax Transformation*, 4(4), 1–20. <https://doi.org/10.46799/jst.v4i4.710>
- 18) Silalahi, P. R., Tambunan, K., & Batubara, T. R. (2022). Dampak Penggunaan QRIS Terhadap Kepuasan Konsumen Sebagai Alat Transaksi. *ULIL ALBAB : Jurnal Ilmiah Multidisiplin*, 1(2), 122–128.
- 19) Susanto, A. (2015). *Faktor-Faktor Yang Mempengaruhi Perilaku Penggunaan Internet Masyarakat Desa Pasar VI Kualanamu, Deli Serdang Sumatera Utara*. 5(May), 65–86. <https://doi.org/10.17933/jppi.2015.050100>
- 20) Venkatesh, V., Brown, S. A., Maruping, L. M., & Bala, H. (2008). Predicting different conceptualizations of system USE: The competing roles of behavioral intention, facilitating conditions, and behavioral expectation. *MIS Quarterly: Management Information Systems*, 32(3), 483–502. <https://doi.org/10.2307/25148853>



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.