International Journal of Electronic Commerce Studies
Vol.15, No.3, pp.1-28, 2024
doi: 10.7903/ijecs.2299

A Systematic Literature Review of Electronic Money Research

Dandy Kurnia
Gunadarma University
dandykurnia@staff.gunadarma.ac.id

Nurul Hidayah
Gunadarma University
Nurul_hidayah@staff.gunadarma.ac.id

Hotniar Siringoringo
Gunadarma University
hotniars@staff.gunadarma.ac.id

ABSTRACT

The aim of this paper was to review original papers on electronic money adoption. The review was performed by following a systematic literature review whereas Prisma framework and VOSviewer were deployed. The data reviewed was based on the Scopus database published in journals. The keywords provided to the Scopus database system to search for the articles were: "Electronic Money OR E-Money OR Electronic Wallet OR E-Wallet OR Digital Money OR Financial Technology OR Fintech OR Electronic Payment OR Mobile Payment." These 168 original articles included the topic of interest published between 2012 and 2021. The findings show SEM is the most frequently used model validation method. UTAUT, UTAUT 2, extended UTAUT, TAM, and extended TAM are the common model used in describing intention behavior in using e-money.

Keywords: electronic money; e-money; mobile money; m-money; digital money; electronic wallet; e-wallet

1. INTRODUCTION

Electronic money (e-money) is one of the financial technology products. Financial technology indicates the incorporation of technology into financial services. Electronic money is the product of the integration of information technology into payment services. The terminology used to represent electronic payment is quite varied, such as e-money, digital money, mobile money, electronic wallet (e-wallet). digital wallet, and mobile wallet. But whichever it is, what is meant is that payments are made not in cash not either using a credit or debit card.

Even though both are integrated technology in their services, electronic money is different from credit or debit cards. The difference between e-money and credit cards lies in the

basis of issuance. A credit card is a means of payment using a card issued by the issuing bank as a debt instrument and has a loan value that must be returned to the issuing bank within a certain period. Electronic money is issued based on money deposited in advance to the issuing institution. The difference with debit cards is that the value of e-money managed by the issuer is not a deposit as stipulated in the banking law. Debit cards are used to make cash withdrawals and transfer funds by directly reducing the cardholder's deposits at a bank or institution other than a bank authorized to collect funds in accordance with applicable regulations.

Electronic money is also different from virtual money such as crypto. First, in Indonesia crypto is not regulated by any institution to this date, while e-money is regulated by Bank Indonesia. Second, the cryptocurrency value system is determined by the level of trust, supply, and demand. The e-money value system acts like conventional money but in electronic (digital) form. Third, crypto is issued by a community called miners and has not yet received a permit from Bank Indonesia as a means of payment, while e-money is issued by issuers who have obtained permission from Bank Indonesia.

The e-money was introduced in Indonesia in 2009 by Bank Central Asia with the product “Flaz” in card type. The e-money server-based was introduced by PT. Anak Bangsa branded as “Gopay” in 2014. To date, there have been 60 issuers of e-money in Indonesia. There are two types of e-money used namely card-based and server-based. The growth of e-money users has increased rapidly, especially since the covid-19 pandemic. The question was "Will e-money replace cash transactions?"

To answer this question, first, it is needed to understand user acceptance/adoption. As it is a new product of financial technology, its acceptance/adoption must be an interest to scholars. The acceptance/adoption may vary among cultures, demography, etc. Hence, the first question was intended to answer in this review was:

Q1: What factors affect e-money adoption/acceptance?

To be able to replace the cash function in purchasing transactions, consumer behavior plays an important role. Electronic money is capable to replace cash in purchasing transactions if all consumers are loyal to use e-money. Despite the newbie of e-money, research on customer loyalty towards e-money has been performed extensively by scholars. Customer loyalty may be affected by many factors. So thus, the second questions to be answered in this literature review was:

Q2: What factors affect customer loyalty towards e-money?

2. METHODOLOGY

A systematic literature review was conducted to answer abovementioned questions. Previous research on e-money topics was explored. The research explored was limited to those published in Scopus-indexed journals, using keywords “Electronic Money OR E-Money OR Electronic Wallet OR E-Wallet OR Digital Money OR Financial Technology OR Fintech OR Electronic Payment OR Mobile Payment.”

In refining the search, the Prisma framework was deployed. Inclusion and exclusion methods were applied to filter the topics of interest. The screening was performed to filter the closest content to topics discussed by the studied article title and abstract. Articles related to the intention to adopt/accept e-money are included. For further study, it was required full access articles. Finally, the bibliometric method was deployed to learn the progress, novelty, and originality of the research conducted.

Aside from the Prisma framework, VOSviewer was also deployed to map topics of concern such as "co-authorship", "cooccurrence", "citation", "bibliographic coupling", or "co-citation links" [1]. An interactive map using VOSviewer can be useful to provide useful information such as research topics of interest at a certain time.

3. RESULT

Applied the Prisma framework result Figure 1. Using the keywords 10,674 documents (n_1) were resulted. The period included in the review is 2012 up to 2021. The fields included were documents in Computer Science; Engineering; Business, Management, and Accounting; Social Sciences; and Economics, Econometrics, and Finance. The document type is the article in the final stage of publication and published in a journal using English as language communication. As many as 2,006 documents have resulted from the screening stage. Only 1,725 documents are accessible and can be added to Mendeley library.

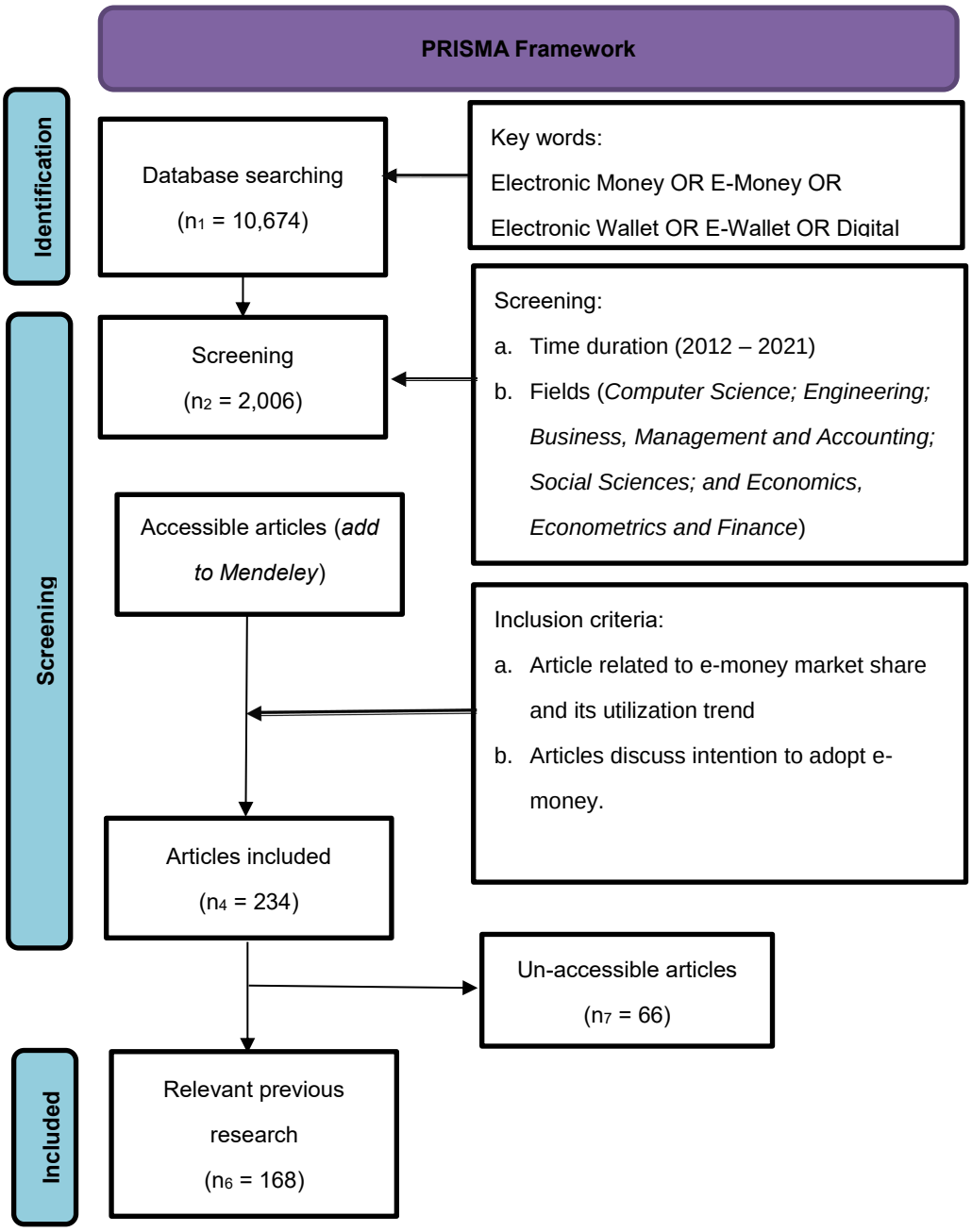

Figure 1. Prisma framework

All 1,725 articles were studied based on title and abstract. Among 1, 725 articles only 234 (n_4) contain "e-money market share and its utilization trend" or "intention to adopt/accept e-money." Due to the subscription form, only 168 articles (n_6) were further explored whilst 66 articles (n_7) were un-accessible. Table 1 shows the number of documents published in a certain journal a long with the total of citations. International Journal of Bank Marketing published the most articles (5.95%), whilst Journal of Retailing and Consumer Services gets the highest citation (1,121 citations).

Table 1. Number of documents and citations by journal

No	Journal	No. of documents	No. of citations
1	*Journal of Retailing and Consumer Services*	9	1121
2	*International Journal of Bank Marketing*	10	788
3	*Industrial Management & Data Systems*	5	573
4	*Journal of Theoretical and Applied Electronic Commerce Research*	6	480
5	*Electronic Commerce Research and Applications*	2	307
6	*International Journal of Information Management*	1	262
7	*Internet Research*	2	252
8	*Technology in Society*	3	252
9	*Telecommunications Policy*	3	249
10	*International Journal of Retail & Distribution Management*	1	241
11	*Global Business Review*	1	192
12	*Service Business*	1	192
13	*Journal of African Business*	2	187
14	*Finance Research Letters*	2	186
15	*The Electronic Journal of Information Systems in Developing Countries*	3	183
16	*International Journal of Human–Computer Interaction*	3	181
17	*Transportation Research Part C: Emerging Technologies*	1	155
18	*Hum. Factors Man*	1	126
19	*Journal of Computer Information Systems*	1	111
20	*Journal of Advances in Management Research*	1	109
21	*The Journal of Applied Business Research*	1	105
22	*International Journal of Contemporary Hospitality Management*	1	100
23	*Technovation*	1	93
24	*International Journal of Electronic Business*	1	87
25	*Journal of Management Development*	1	86
26	*Economic Research–Ekonomska istRaživanja*	1	82
27	*Information Systems Management*	2	81

No	Journal	No. of documents	No. of citations
28	*Management Science Letters*	4	79
29	*South Asian Journal of Business Studies*	1	77
30	*Women's Studies International Forum*	1	73
31	*Market-Tržište*	1	68
32	*Journal of Hospitality and Tourism Management*	1	67
33	*Electronic Commerce Research*	1	65
34	*Journal of Asian Finance, Economics and Business*	4	63
35	*Wireless Personal Communications*	1	63
36	*Journal of Theoretical and Applied Electronic Commerce Research*	3	61
37	*Journal of Open Innovation: Technology, Market and Complexity*	1	58
38	*International Journal of E-Business Research*	3	56
39	*International Journal of Electronic Commerce Studies*	1	55
40	*Journal of Electronic Commerce in organizations*	1	55
41	*Review of International Business and Strategy*	1	54
42	*Australasian Journal of Educational Technology*	1	53
43	*International Journal of Mobile Human Computer Interaction*	2	52
44	*Information Technology for Development*	1	51
45	*Journal of Islamic Marketing*	1	49
46	*Journal of Organizational and End User Computing*	1	49
47	*International Journal of Entrepreneurship*	1	48
48	*International Journal of E-Adoption*	1	45
49	*Financial Markets and Portfolio Management*	1	44
50	*Journal of Distribution Science*	2	43
51	*European Business Review*	1	42
52	*Strategic Direction*	1	42
53	*Telematics and Informatics*	1	40

No	Journal	No. of documents	No. of citations
54	*International Journal of Advanced Trends in Computer Science and Engineering*	6	39
55	*Total Quality Management & Business Excellence*	1	39
56	*Information Technology and Management*	2	38
57	*Information Systems and e-Business Management*	1	37
58	*Mobile Information Systems*	1	32
59	*Journal of Behavioral and Experimental Finance*	1	31
60	*Online Information Review*	1	30
61	*Journal of Systems and Information Technology*	1	27
62	*The Bottom Line*	2	27
63	*Social Responsibility Journal*	1	25
64	*Information*	1	23
65	*International Journal of Emerging Markets*	1	23
66	*International Journal of Finance & Economics*	1	22
67	*Quality Innovation Prosperity*	1	22
68	*International Journal of Mobile Communications*	2	21
69	*Innovative Marketing*	2	20
70	*Journal of Database Management*	1	20
71	*International Journal of Quality and Service Sciences*	1	19
72	*International Journal of Data and Network Science*	4	18
73	*Business Process Management Journal*	1	17
74	*Journal of Asia Business Studies*	2	17
75	*Journal of Engineering and Applied Sciences*	1	16
76	*International Journal of Web Information Systems*	2	15
77	*Asian Economic and Financial Review*	1	14
78	*Indian Journal of Public Health Research & Development*	1	14

No	Journal	No. of documents	No. of citations
79	*International Journal of Business and Society*	1	14
80	*Journal of Decision Systems*	1	14
81	*International Journal of Recent Technology and Engineering (IJRTE)*	3	12
82	*Journal of Marketing and Logistics*	1	12
83	*International Journal of Electronic Finance*	1	11
84	*TELKOMNIKA*	1	9
85	*Global Business and Economics Review*	1	8
86	*Information Resources Management Journal*	1	8
87	*Spanish Journal of Marketing -ESIC*	1	8
88	*International Journal of Business Excellence*	1	7
89	*Journal of Enterprising Communities: People and Places in the Global Economy*	1	7
90	*Administrative Sciences*	1	6
91	*iJIM*	1	5
92	*International Journal of Computing and Digital Systems*	1	5
93	*Business: Theory and Practice*	1	3
94	*International Journal of Innovative Technology and Exploring Engineering (IJITEE)*	1	2
95	*Journal of Islamic Accounting and Business Research*	1	2
96	*Journal of Siberian Federal University. Humanities & Social Sciences*	1	2
97	*Aslib Journal of Information Management*	1	1
98	*Journal of Content, Community& Communication*	1	1
99	*International Journal of Services Technology and Management*	1	0
100	*Nankai Business Review International*	1	0
101	*Review of International Geographical Education (RIGEO)*	1	0
		168	

Document-based, [2] is the most cited (376 citations) with the title "Adoption of in-store mobile payment: Are perceived risk and convenience the only drivers?", published in the Journal of Retailing and Consumer Services as shown in Table 2. As shown in Table 3 e-money topics were raised in 36 countries. China is the country that publishes the most articles on the topic of e-money. Articles from China also received the most citations. Coming in second place is India based on citations (1528) and Indonesia based on documents total (27). India is the third based on documents total (22) whilst Indonesia is number 9 based on citations (341). It shows the interest of Indonesian scholars in e-money is quite good. The least based on citation (0 citations) and document (1 document) is Kazakhstan.

Table 2. Citation by documents

No	Authors	No of Citation	No	Authors	No of Citation
1	[2]	376	65	[66]	45
2	[3]	288	66	[67]	44
3	[4]	262	67	[68]	44
4	[5]	241	68	[69]	42
5	[6]	241	69	[70]	42
6	[7]	238	70	[71]	42
7	[8]	225	71	[72]	40
8	[9]	192	72	[73]	40
9	[10]	192	73	[74]	39
10	[11]	180	74	[75]	39
11	[12]	165	75	[76]	38
12	[13]	161	76	[77]	37
13	[14]	158	77	[78]	36
14	[15]	155	78	[79]	36
15	[16]	154	79	[80]	35
16	[17]	141	80	[81]	32
17	[18]	139	81	[82]	32
18	[19]	134	82	[83]	31
19	[20]	129	83	[84]	30
20	[21]	128	84	[85]	29
21	[22]	126	85	[86]	27
22	[23]	125	86	[87]	27
23	[24]	112	87	[88]	26
24	[25]	111	88	[89]	26
25	[26]	109	89	[90]	25

No	Authors	No of Citation	No	Authors	No of Citation
26	[27]	105	90	[91]	24
27	[28]	102	91	[92]	24
28	[29]	100	92	[93]	24
29	[30]	99	93	[94]	23
30	[31]	98	94	[95]	23
31	[32]	98	95	[96]	23
32	[33]	96	96	[97]	23
33	[34]	93	97	[98]	22
34	[35]	92	98	[99]	22
35	[36]	87	99	[100]	21
36	[37]	86	100	[101]	20
37	[38]	83	101	[102]	20
38	[39]	82	102	[103]	20
39	[40]	77	103	[104]	20
40	[41]	76	104	[105]	20
41	[42]	73	105	[106]	19
42	[43]	70	106	[107]	19
43	[44]	68	107	[108]	17
44	[45]	67	108	[109]	16
45	[46]	66	109	[110]	15
46	[47]	65	110	[111]	15
47	[48]	65	111	[112]	14
48	[49]	65	112	[113]	14
49	[50]	63	113	[114]	14
50	[51]	62	114	[115]	14
51	[52]	61	115	[116]	14
52	[53]	60	116	[117]	13
53	[54]	59	117	[118]	13
54	[55]	58	118	[119]	13
55	[56]	58	119	[120]	12
56	[57]	55	120	[121]	11
57	[58]	55	121	[122]	11
58	[59]	54	122	[123]	11
59	[60]	53	123	[124]	11
60	[61]	51	124	[125]	11

No	Authors	No of Citation	No	Authors	No of Citation
61	[62]	51	125	[126]	10
62	[63]	49	126	[127]	10
63	[64]	49	127	[128]	10
64	[65]	48	128	[129]	10

Table 3. Number of documents and citations by country

No	Country	No. of document	No. of citations	No	Country	No. of document	No. of citations
1	China	28	1533	19	Saudi Arabia	3	98
2	India	22	1528	20	Tanzania	1	98
3	South Korea	9	722	21	Hungary	2	89
4	Spain	8	722	22	Vietnam	3	88
5	United States	4	540	23	Turkey	1	82
6	South Africa	5	418	24	Pakistan	1	63
7	Japan	2	384	25	Thailand	5	50
8	France	1	376	26	Nigeria	1	45
9	Indonesia	27	341	27	Uganda	2	32
10	Oman	2	221	28	Cambodia	2	31
11	Malaysia	9	198	29	Sweden	1	19
12	Ghana	4	176	30	Bangladesh	1	14
13	Italy	1	155	31	Dutch	1	10
14	United Arab Emirates	2	141	32	Greece	1	8
15	Kenya	2	135	33	Bahrain	2	7
16	Taiwan	5	129	34	Brazil	1	7
17	German	1	128	35	Sri Lanka	1	2
18	United Kingdom	2	104	36	Kazakhstan	1	0

Figure 2 depicts the relationships of research topics that have been conducted related to mobile money. It shows that the most frequently appointed by scholars is “mobile payment”, followed by perceived risk, trust, continuance usage, intention to use, perceived usefulness, technology acceptance model, TAM, e-wallet, mobile payments, and fintech. “Mobile payment” appears in 51 articles, whilst others’ appearance can be seen in Table 4. For more detail, we discuss each cluster composed in this map. There are

6 clusters of keywords identified and connected to each other. Red, green, blue, gold, purple, and light blue colors represent the first, second, third, fourth, fifth, and sixth clusters respectively.

The first cluster consists of 8 keywords, i.e. “adoption”, “fintech”, “mobile money”, ”perceived security”, ”security”, “SEM”, “trust”, and “UTAUT2”. It shows UTAUT2 along with perceived security, security, and trust are deployed in analysing the adoption of “fintech” and “mobile money” using SEM methods. Trust variable was the most frequently raised by scholars in their research. Again, mobile payment is the term deployed in cluster 2. Variables linked to mobile payment in this cluster are “perceived risks”, "continuance intention", "satisfaction", "perceived trust", and "attitude".

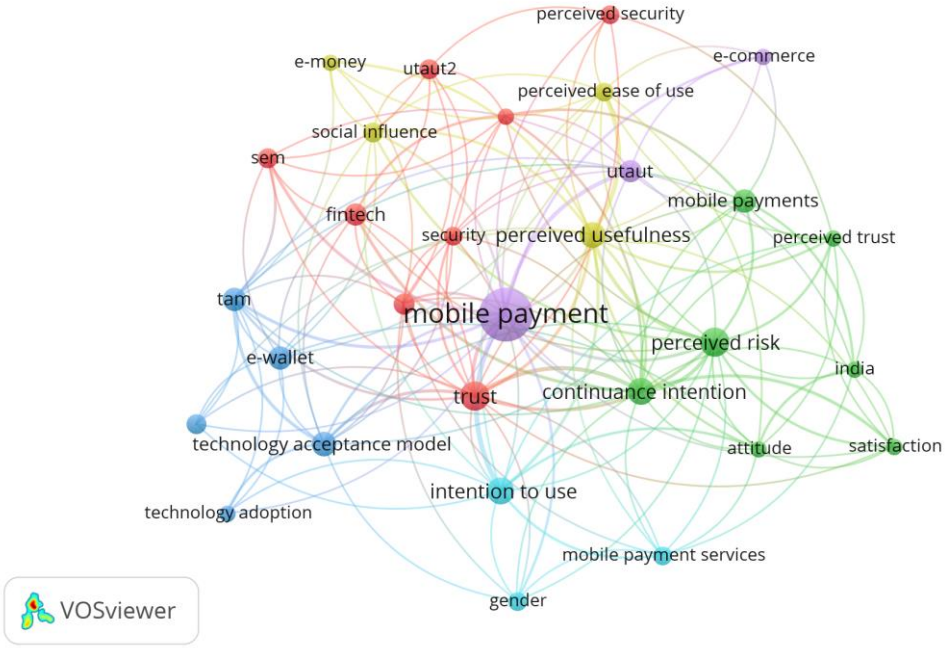

Figure 2. Network Visualization by VOSViewer

Table 4. Cluster formed based on keywords.

Key Words	Links	Total link strength	Occurrences
Cluster 1 (8 items)			
Adoption	12	13	8
Fintech	9	12	9
Mobile money	9	12	5
Perceived security	6	6	6
Security	7	8	6
SEM	8	11	7

Key Words	Links	Total link strength	Occurrences
Cluster 1 (8 items)			
Trust	18	33	15
UTAUT 2	7	7	7
Cluster 2 (7 items)			
Attitude	10	13	5
Continuance intention	17	31	13
India	8	10	5
Mobile payments	11	14	10
Perceived risk	18	32	15
Perceived trust	10	12	5
Satisfaction	8	11	5
Cluster 3 (5 Items)			
e-wallet	10	10	10
perceived value	6	6	7
TAM	12	18	10
technology acceptance Model	12	18	11
technologi adoption	5	6	5
Cluster 4 (4 items)			
e-money	5	6	5
perceived ease of use	11	16	6
perceived usefulness	17	35	12
social influence	9	12	7
Cluster 5 (3items)			
e-commerce	5	6	5
mobile payment	19	45	51
UTAUT	11	15	9
Cluster 6 (3 items)			
Gender	8	9	6
Intention to use	13	23	13
Mobile payment service	9	10	6

The e-wallet term is used in cluster three. In analysing the e-wallet adoption, TAM along with perceived value were deployed. The e-money term is used in cluster four along with perceived ease of use, perceived usefulness, and social influence variables. Again, mobile payment term is used in cluster 5 and UTAUT was the model deployed in identify the

adoption in e-commerce. The last cluster again used mobile money term. The focus in this last cluster are gender and intention to use.

The appearance of term in research is shown in Figure 3. The term of "mobile payment" and all other terms in green colour has been introduced around year of 2018. The closest the colour to blue the nearest the term introduced around year of 2012. Among the terms used in e-money research, mostly they are used since 2016. It can be seen the term "e-wallet", "fintech", etc. were introduced around year of 2020. Around year of 2020 scholars discussed intention to use, attitude, security, social influence, and perceived ease of use of e-money users. The term of "e-wallet' and "fintech" were also introduced by scholars around year of 2020.

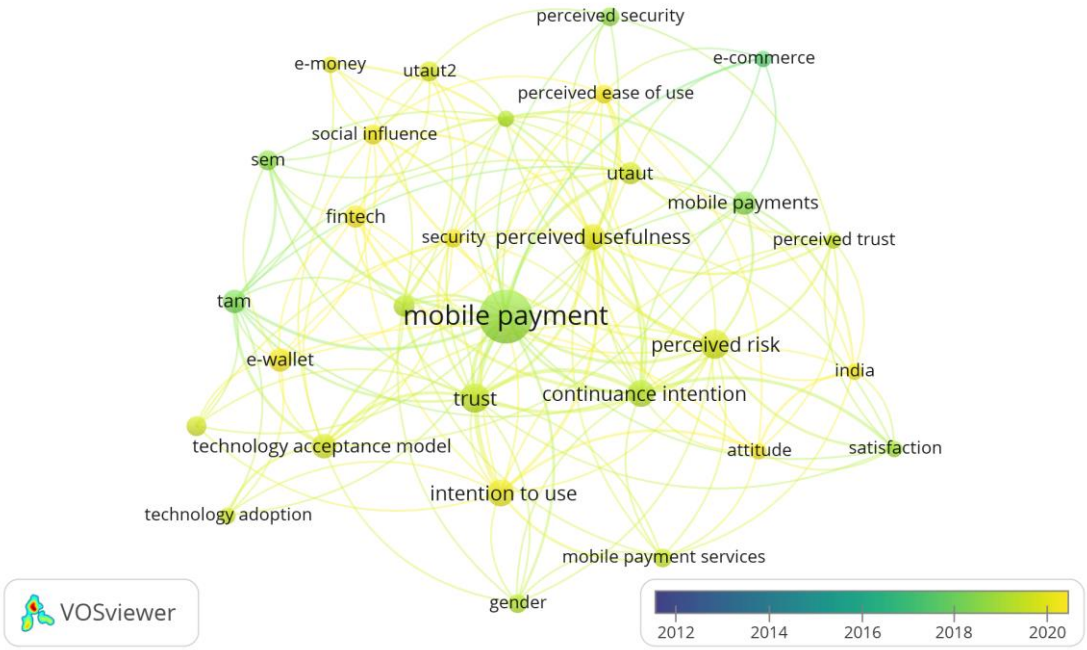

Figure 3. Overlay Visualization by VOSViewer.

4. DISCUSSION AND CONCLUSION

Among more than 42 thousand journal titles in Scopus, only 101 journals accepted and published article on the topic of concern. It shows research on e-money market share and its utilization trend, and intention to adopt e-money is still developing. Many topics and opportunities are still wide open for future research. Majority of the journal published only one article during the 10-year time period (2012-2022). The study mostly performed with Asian countries as e-money user. Consumer behavior among continents and among countries probably different due to culture, technology adoption capabilities, demography, etc. Thus, expanding the study to other countries will be enrich the theory of e-money adoption.

As shown above, mobile payment/s term is the most frequently raised by researchers. It makes sense that the term mobile payment is used more than other terms such as e-money, digital money, and so on because money in this form usually requires mobile cellular (smartphone particularly) in its use. Among quantitative methods, structural equation modelling (SEM) is the most frequently deployed to validate the model developed. The model validated the intention adoption is one among UTAUT, UTAUT 2, and TAM.

The UTAUT and UTAUT 2 models have been verified by many scholars in predicting the acceptance of e-money (such as [13], [24], [26], [41], [76], [58], [87], [122], [127], but the results are not the same between studies, as shown in Table 5. Hedonic motivation variable for instance shows a significant role in affecting intention to use e-money in developing country [58] and in Malaysia precisely [60; 99] but not in Ghana [34; 87] and India [40]. It indicates further study to evaluate hedonic motivation effect on behavioral intention to use e-money is still challenging.

The results of research on the role of facilitating conditions in influencing behavioral intentions to use e-money are not the same from one study to another, even studies in the same country. On merchant, e-money consumer in Ghana, facilitating condition affect intention to use e-money [87], but not with buyer [34]. Similarly, with different respondent in Malaysia, Moorthy et al. [99] show the significant effect of facilitating condition on behavioral intention to use e-money but not Moorthy et al. [60]. It implies also further study is still challenging to validate the role of facilitating condition on behavioral intention to use e-money.

As depicted on Table 5, the role of all UTAUT and UTAUT 2 variables on behavioral intention to use e-money is still contradict each other whether in the same country or different country. This result drives the need to further explore of UTAUT and UTAUT 2 models in the context of e-money adoption.

Similarly, TAM and extended TAM have been validated by many scholars. The result is summarized in Table 6. Majority of scholars proofed intention to use e-money is affected by “perceived usefulness”, following by “subjective norm”, “perceived ease of use”, and “perceived security”. It is interesting perceived security is not proven by all researchers to be the main consideration of consumer intention to use e-money. Among 20 studies, as shown on Table 6, only 4 studies proved the significant effect of perceived security on behavioral intention to use e-money. As we know, e-money application is vulnerable to hack, but consumer considers usability, ease of use, and subjective norm than security.

The customer loyalty using e-money has been also investigated. As shown in Table 7, many factors affect the customer loyalty in using e-money. Majority of scholars proofed the intention variable affect customer loyalty to use e-money. These results further strengthen previous studies showing the role of intention in forming consumer loyalty. A few researchers show the influence of performance expectancy, social influence, effort expectancy, facilitating condition, perceived ease of use, cashback and rewards, convenience, and cost on customer loyalty in using e-money.

Table 5. List of factors affect intention (UTAUT and UTAUT 2).

Factors	Affect	Do not affect
Hedonic motivation	[58], [60], [99]	[34], [40], [87]
Facilitating conditions	[26], [40], [58], [60], [87], [99], [102]	[34], [60], [76], [92]
Performance expectancy	[13], [26], [34], [40], [58], [87], [92], [99], [102]	[60], [76], [107]
Effort expectancy,	[13], [26], [34], [40], [92], [107]	[60], [76], [87], [99], [102]
Social influence	[13], [26], [60], [76], [92], [133]	[34], [40], [87], [99], [102], [107]
Price value	[24], [58], [60], [110], [134]	[34]
Habit	[40], [60], [65]	[34], [87]

Table 6. List of factors affect intention (TAM).

Factor	References
Perceived ease of use	[9], [15], [26], [59], [88], [112]
Perceived usefulness	[9], [15], [26], [30], [31], [59], [88], [112], [123], [133], [135], [136], [137]
Perceived security	[15], [30], [58], [94],
Subjective norm	[23], [44], [55], [64], [100], [136]

Table 7. List of factors affect loyalty.

Factor	References
Intention	[76], [102], [138], [139]
Performance expectancy, social influence	[76], [105], [138]
Effort expectancy, facilitating condition	[76], [105]
Perceived ease of use, Cashback and rewards, convenience, cost	[37]
Perceived usefulness, perceived ease of use, attitude,	[139]
Perceived service quality, socio demographic	[105]
Financial inclusion	[90]

Factor	**References**
Culture	[138]
Gender, education, income,	[140]
Relative advantage	[51]
Trust	[90]

Although many studies confirmed the same, the effect is probably different. Such perceived ease of use mostly shows a positive effect on the intention to adopt [15], [26], [59], [88]. However, [88] show a weak negative effect. A few of them found that perceived ease of use [64], [100], and subjective norm [9] do not affect intention to use. Generally, perceived usefulness was found to affect intention to use/adopt e-money significantly and positively.

The most important thing for e-money issuers is of course the use or acceptance of e-money, not just the intention to use it. A person may have an intention but not applied it in behavior. As happened in the intention to use model, the effect of each factor is not mutually supportive for different contexts or different cultures. Scholars that studied the effect of various factors on e-money loyalty is shown in Table 5.

Trust is the most frequently integrated with TAM and UTAUT models to predict intention and loyalty. The role of trust in predicting the intention and customer loyalty is not always agreed upon from one study to another. Many scholars show the positive and significant effect of trust on intention to use [78], [94], [100], [112], [127], [135] and loyalty/continuation usage [6], [59], [79], [94]. But on the other hand, a few researchers show the unsignificant effect of trust on loyalty/continuation usage [85]. Whilst a few scholars show trust mediates intention to use the model, not an effect [14], [19], [133].

Demographic factors have also been investigated in their role in e-money adoption/acceptance. The most frequently used are gender [11], [31], [41], [59], [76], [140], [141] and age [12], [26], [77]. Scholars show the inconsistent role of gender on e-money intention to use/actual usage. Some of them [31], [41], [59], [140], [141] found that gender moderates the relationship of intention with its antecedent [11], [76], [77]. [11] only show gender moderation in the association between convenience and adoption. [12] shows different results from others. They show gender and age influence "consumer satisfaction and e-money usage".

Regardless of the extensive research on e-money since 2012, the results have not confirmed each other. It implies the research on e-money adoption is still challenging. The UTAUT (and extended) and TAM (and extended) are still the most popular in predicting the intention to adopt e-money. Extended or modified the UTAUT and TAM are still open widely and adjusted to culture and technology penetration. Intention, trust, and satisfaction are the strongest factors that affect loyalty to use e-money. When quantitate method becomes the researcher’s choice, SEM is the common method deployed in validating the e-money research model. Mostly the analysis is based on data collected using a questionnaire. Quasi-experiment is mentioned only limited.

E-money adoption and usage loyalty generally studying from the purchaser's perspective. The study from a merchant or seller or trader perspective is still very rare. Whereas in the use of e-money in sales transactions, the availability of facilities for the use of e-money is the first thing to be considered. It is impossible for the purchaser to insist to use e-money when the merchant/trader/seller does not accept the e-money payment. But when the merchant/trader/seller accepts only e-money payment, the purchaser should agree and accept it. Thus, studying e-money adoption (intention and loyalty) from a merchant/trader/seller perspective is challenging in the future.

5.ACKNOWLEDGMENT

This research was funded by the Indonesian Government through the Directorate of Research and Development Strengthening, with Basic Research ("Penelitian Dasar") scheme on the Decree number 0217/E5/PG.02.00/2023 and the Contract Number 73/E5/PG.02.00.PL/2023. We thank the government of Indonesia for this research funding.

6. REFERENCES

[1] W. Lamers, N. J. van Eck, L. Waltman, and H. Hoos, “Patterns in citation context: the case of the field of scientometrics,” *Proceedings of the science and technology indicators conference, Leiden,* 2018. pp. 1114-1122. Available: https://hdl.handle.net/1887/64521.

[2] G. de Kerviler, N. T. M. Demoulin, and P. Zidda, “Adoption of in-store mobile payment: Are perceived risk and convenience the only drivers?” *Journal of Retailing and Consumer Services*, vol. 31, pp. 334–344, 2016.

[3] D. L. Amoroso and R. Magnier-Watanabe, “Building a research model for mobile wallet consumer adoption: The case of mobile Suica in Japan,” *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 7, no. 1, pp. 94–110, 2012.

[4] F. Liébana-Cabanillas, J. Sánchez-Fernández, and F. Muñoz-Leiva, “The moderating effect of experience in the adoption of mobile payment tools in virtual social networks: The m-payment acceptance model in virtual social networks (MPAM-VSN),” *International Journal of Information Management*, vol. 34, no. 2, pp. 151–166, 2014.

[5] A. A. Bailey, I. Pentina, A. S. Mishra, and M. S. Ben Mimoun, “Mobile payments adoption by US consumers: an extended TAM,” *International Journal of Retail & Distribution Management*, vol. 45, no. 6, pp. 626–640, 2017.

[6] Z. Shao, L. Zhang, X. Li, and Y. Guo, “Antecedents of trust and continuance intention in mobile payment platforms: The moderating effect of gender,” *Electronic Commerce Research and Applications*, vol. 33, p. 100823, 2019.

[7] X. Cao, L. Yu, Z. Liu, M. Gong, and L. Adeel, "Understanding mobile payment users' continuance intention: a trust transfer perspective," *Internet Research*, vol. 28, no. 2, pp. 456–476, 2018.

[8] H. S. Ryu, "What makes users willing or hesitant to use fintech?: the moderating effect of user type," *Industrial Management and Data Systems*, vol. 118, no. 3, pp. 541–569, 2018.

[9] A. Shankar and B. Datta, "Factors affecting mobile payment adoption intention: an Indian perspective," *Global Business Review*, vol. 19, no. 3, pp. S72–S89, 2018.

[10] F. Liébana-Cabanillas, F. Muñoz-Leiva, and J. Sánchez-Fernández, "A global approach to the analysis of user behavior in mobile payment systems in the new electronic environment," *Service Business*, vol. 12, no. 1, pp. 25–64, 2018.

[11] M. Humbani and M. Wiese, "A cashless society for all: determining consumers' readiness to adopt mobile payment services," *Journal of African Business*, vol. 19, no. 3, pp. 409–429, 2018.

[12] N. Singh, S. Srivastava, and N. Sinha, "Consumer preference and satisfaction of M-wallets: a study on North Indian consumers," *International Journal of Bank Marketing*, vol. 35, no. 6, pp. 944–965, 2017.

[13] K. Al-Saedi, M. Al-Emran, T. Ramayah, and E. Abusham, "Developing a general extended UTAUT model for M-payment adoption," *Technology in Society*, vol. 62, p. 101293, 2020.

[14] N. Singh and N. Sinha, "How perceived trust mediates merchant's intention to use a mobile wallet technology," *Journal of Retailing and Consumer Services*, vol. 52, p. 101894, 2020.

[15] L. Di Pietro, R. Guglielmetti Mugion, G. Mattia, M. F. Renzi, and M. Toni, "The integrated model on mobile payment acceptance (IMMPA): an empirical application to public transport," *Transportation Research Part C: Emerging Technololy*, vol. 56, pp. 463–479, 2015.

[16] M. Humbani and M. Wiese, "An integrated framework for the adoption and continuance intention to use mobile payment apps," *International Journal of Bank Marketing*, vol. 37, no. 2, pp. 646–664, 2019.

[17] S. Talwar, A. Dhir, A. Khalil, G. Mohan, and A. K. M. N. Islam, "Point of adoption and beyond. Initial trust and mobile-payment continuation intention," *Journal of Retailing and Consumer Services*, vol. 55, p 102086, 2020.

[18] A. Kumar, A. Adlakaha, and K. Mukherjee, "The effect of perceived security and grievance redressal on continuance intention to use M-wallets in a developing country," *International Journal of Bank Marketing*, vol. 36, no. 7, pp. 1170–1189, 2018.

[19] J. Park, E. Amendah, Y. Lee, and H. Hyun, "M-payment service: Interplay of perceived risk, benefit, and trust in service adoption," *Human Factors and Ergonomics in Manufacturing & Service Industries*, vol. 29, no. 1, pp. 31–43, 2019.

[20] S. H. Lim, D. J. Kim, Y. Hur, and K. Park, "An empirical study of the impacts of perceived security and knowledge on continuous intention to use mobile fintech payment services," *International Journal of Human-Computer Interaction*, vol. 35, no. 10, pp. 886–898, 2019.

[21] M. Jünger and M. Mietzner, "Banking goes digital: the adoption of fintech services by German households," *Financial Research Letters*, vol. 34, 2020.

[22] J. Park, J. Ahn, T. Thavisay, and T. Ren, "Examining the role of anxiety and social influence in multi-benefits of mobile payment service," *Journal of Retailing and Consumer Services*, vol. 47, pp. 140–149, 2019.

[23] Z. Kalinic, V. Marinkovic, S. Molinillo, and F. J. Liébana-Cabanillas, "A multi-analytical approach to peer-to-peer mobile payment acceptance prediction," *Journal of Retailing and Consumer Services*, vol. 49, pp. 143–153, 2019.

[24] J. Wu, L. Liu, and L. Huang, "Consumer acceptance of mobile payment across time," *Industrial Management & Data Systems*, vol. 117, no. 8, pp. 1761–1776, 2017.

[25] X. Chen and S. Li, "Understanding continuance intention of mobile payment services: an empirical study," *Journal of Computer Information Systems*, vol. 57, no. 4, pp. 287–298, 2017.

[26] N. Sobti, "Impact of demonetization on diffusion of mobile payment service in India," *Journal of Advances in Management Research*, vol. 16, no. 4, pp. 472–497, 2019.

[27] S. Shin and W. Lee, "The effects of technology readiness and technology acceptance on NFC mobile payment services in Korea," *Journal of Applied Business Research*, vol. 30, no. 6, p. 1615, 2014.

[28] W. L. Shiau, Y. Yuan, X. Pu, S. Ray, and C. C. Chen, "Understanding fintech continuance: perspectives from self-efficacy and ECT-IS theories," *Industrial Management and Data Systems*, vol. 120, no. 9, pp. 1659–1689, 2020.

[29] A. B. Ozturk, A. Bilgihan, S. Salehi-Esfahani, and N. Hua, "Understanding the mobile payment technology acceptance based on valence theory," *International Journal of Contemporary Hospitality Management*, vol. 29, no. 8, pp. 2027–2049, 2017.

[30] R. Peng, L. Xiong, and Z. Yang, "Exploring tourist adoption of tourism mobile payment: An empirical analysis," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 7, no. 1, pp. 21–33, 2012.

[31] E. T. Lwoga and N. B. Lwoga, "User acceptance of mobile payment: the effects of user-centric security, system characteristics and gender," *The Electronic Journal of Information Systems in Developing Countries*, vol. 81, no. 1, pp. 1–24, 2017.

[32] C. Hampshire, "A mixed methods empirical exploration of UK consumer perceptions of trust, risk and usefulness of mobile payments," *International Journal of Bank Marketing*, vol. 35, no. 3, pp. 354–369, 2017.

[33] M. Miao and K. Jayakar, "Mobile payments in Japan, South Korea and China: Cross-border convergence or divergence of business models?" *Telecomm Policy*, vol. 40, no. 2–3, pp. 182–196, 2016.

[34] P. K. Senyo and E. L. C. Osabutey, "Unearthing antecedents to financial inclusion through FinTech innovations," *Technovation*, vol. 98, p. 102155, 2020.

[35] J. Fan, M. Shao, Y. Li, and X. Huang, "Understanding users' attitude toward mobile payment use: A comparative study between China and the USA," *Industrial Management and Data Systems*, vol. 118, no. 3, pp. 524–540, 2018.

[36] S. A. Salloum and M. Al-Emran, "Factors affecting the adoption of e-payment systems by university students: Extending the TAM with trust," *International Journal of Electronic Business*, vol. 14, no. 4, pp. 371–389, 2018.

[37] R. K. Bagla and V. Sancheti, "Gaps in customer satisfaction with digital wallets: challenge for sustainability," *Journal of Management Development*, vol. 37, no. 6, pp. 442–451, 2018.

[38] J. Guo and H. Bouwman, "An analytical framework for an m-payment ecosystem: A merchants′ perspective," *Telecomm Policy*, vol. 40, no. 2–3, pp. 147–167, 2016.

[39] E. Oney, G. O. Guven, and W. H. Rizvi, "The determinants of electronic payment systems usage from consumers' perspective," *Economic Research-Ekonomska Istraživanja*, vol. 30, no. 1, pp. 394–415, 2017.

[40] K. Gupta and N. Arora, "Investigating consumer intention to accept mobile payment systems through unified theory of acceptance model: An Indian perspective," *South Asian Journal of Business Studies*, vol. 9, no. 1, pp. 88–114, 2020.

[41] J. Lee, M. H. Ryu, and D. Lee, "A study on the reciprocal relationship between user perception and retailer perception on platform-based mobile payment service," *Journal of Retailing and Consumer Services*, vol. 48, pp. 7–15, 2019.

[42] C. N. Gichuki and M. Mulu-Mutuku, "Determinants of awareness and adoption of mobile money technologies: Evidence from women micro entrepreneurs in Kenya," *Women's Studies International Forum*, vol. 67, pp. 18–22, 2018.

[43] F. Liébana-Cabanillas, A. Japutra, S. Molinillo, N. Singh, and N. Sinha, "Assessment of mobile technology use in the emerging market: Analyzing intention to use M-payment services in India," *Telecomm Policy*, vol. 44, no. 9, 2020.

[44] W. Aslam, M. Ham, and I. Arif, "Consumer behavioral intentions towards mobile payment services: An empirical analysis in Pakistan," *Market-Trziste*, vol. 29, no. 2, pp. 161–176, 2017.

[45] S. Khanra, A. Dhir, P. Kaur, and R. P. Joseph, "Factors influencing the adoption postponement of mobile payment services in the hospitality sector during a pandemic," *Journal of Hospitality and Tourism Management*, vol. 46, pp. 26–39, 2021.

[46] S. F. Verkijika, "An affective response model for understanding the acceptance of mobile payment systems," *Electronic Commerce Research and Applications*, vol. 39, 2020.

[47] Z. Liu, S. Ben, and R. Zhang, "Factors affecting consumers' mobile payment behavior: A meta-analysis," *Electronic Commerce Research*, vol. 19, no. 3, pp. 575–601, 2019.

[48] P. Kaur, A. Dhir, R. Bodhi, T. Singh, and M. Almotairi, "Why do people use and recommend M-wallets?" *Journal of Retailing and Consumer Services*, vol. 56, 2020.

[49] M. Al-Okaily, A. Lutfi, A. Alsaad, A. Taamneh, and A. Alsyouf, "The determinants of digital payment systems' acceptance under cultural orientation differences: The case of uncertainty avoidance," *Technology in Society*, vol. 63, p. 101367, 2020.

[50] A. N. Khan and A. Ali, "Factors affecting retailer's adoption of mobile payment systems: A SEM-Neural network modeling approach," *Wireless Personal Communication,* vol. 103, no. 3, pp. 2529–2551, 2018.

[51] P. K. Wamuyu, "The role of contextual factors in the uptake and continuance of mobile money usage in Kenya," *The Electronic Journal of Information Systems in Developing Countries,* vol. 64, no. 1, pp. 1–19, 2014.

[52] R. Ramadan and J. Aita, "A model of mobile payment usage among Arab consumers," *International Journal of Bank Marketing,* vol. 36, no. 7, pp. 1213–1234, 2018.

[53] S. K. Sharma, H. Sharma, and Y. K. Dwivedi, "A hybrid SEM-Neural network model for predicting determinants of mobile payment services," *Information Systems Management,* vol. 36, no. 3, pp. 243–261, 2019.

[54] Z. Kalinić, F. J. Liébana-Cabanillas, F. Muñoz-Leiva, and V. Marinković, "The moderating impact of gender on the acceptance of peer-to-peer mobile payment systems," *International Journal of Bank Marketing*, vol. 38, no. 1, pp. 138–158, 2020.

[55] A. Daragmeh, J. Sági, and Z. Zéman, "Continuous intention to use E-wallet in the context of the COVID-19 pandemic: Integrating the health belief model (HBM) and technology continuous theory (TCT)," *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 7, no. 2, 2021.

[56] T. Sheng, "The effect of fintech on banks' credit provision to SMEs: Evidence from China," *Financial Research Letter,* vol. 39, 2021.

[57] J. M. Lee, B. Lee, and J. Y. Rha, "Determinants of mobile payment usage and the moderating effect of gender: Extending the UTAUT model with privacy risk," *International Journal of Electronic Commerce Studies,* vol. 10, no. 1, pp. 43–64, 2019.

[58] V. Soodan and A. Rana, "Modeling Customers' Intention to Use E-Wallet in a Developing Nation," *Journal of Electronic Commerce in Organizations*, vol. 18, no. 1, pp. 89–114, 2020.

[59] M. T. Alshurideh, B. Al Kurdi, R. Masa'deh, and S. A. Salloum, "The moderation effect of gender on accepting electronic payment technology: a study on United Arab Emirates consumers," *Review of International Business and Strategy,* vol. 31, no. 3, pp. 375–396, 2021.

[60] K. Moorthy, T. T. Yee, L. C. T'ing, and V. V. Kumaran, "Habit and hedonic motivation are the strongest influences in mobile learning behaviours among higher education students in Malaysia," *Australasian Journal of Educational Technology,* vol. 35, no. 4, pp. 174–191, 2019.

[61] M. Sinha, H. Majra, J. Hutchins, and R. Saxena, "Mobile payments in India: The privacy factor," *International Journal of Bank Marketing,* vol. 37, no. 1, pp. 192–209, 2019.

[62] A. Pal, T. Herath, R. De', and H. R. Rao, "Contextual facilitators and barriers influencing the continued use of mobile payment services in a developing country: Insights from adopters in India," *Information Technology for Development,* vol. 26, no. 2, pp. 394–420, 2020.

[63] A. N. Khan, X. Cao, and A. H. Pitafi, "Personality traits as predictor of M-payment systems," *Journal of Organizational and End User Computing*, vol. 31, no. 4, pp. 89–110, 2019.

[64] H. M. Aji, I. Berakon, and A. F. Riza, "The effects of subjective norm and knowledge about riba on intention to use e-money in Indonesia," *Journal of Islamic Marketing*, vol. 12, no. 6, pp. 1180–1196, 2021.

[65] H. Khatimah, P. Susanto, and N. L. Abdullah, "Hedonic motivation and social influence on behavioral intention of E-money: The role of payment habit as a mediator," *International Journal of Entrepreneurship*, vol. 23, no. 1, pp. 1–9, 2019.

[66] A. Tella, "Determinants of E-payment systems success: A user's satisfaction perspective," *International Journal of E-Adoption*, vol. 4, no. 3, pp. 15–38, 2012.

[67] T. Trütsch, "The impact of mobile payment on payment choice," *Financial Markets and Portfolio Management*, vol. 30, no. 3, pp. 299–336, 2016.

[68] M. N. Ardiansah, A. Chariri, S. Rahardja, and U. Udin, "The effect of electronic payments security on E-commerce consumer perception: An extended model of technology acceptance," *Management Science Letters*, vol. 10, no. 7, pp. 1473–1480, 2020.

[69] V. S. Dinh, H. V. Nguyen, and T. N. Nguyen, "Cash or cashless? Promoting consumers' adoption of mobile payments in an emerging economy," *Strategic Direction*, vol. 34, no. 1, pp. 1–4, 2018.

[70] Z. Wang, Z.(G.) GUAN, F. Hou, B. Li, and W. Zhou, "What determines customers' continuance intention of FinTech? Evidence from YuEbao," *Industrial Management and Data Systems*, vol. 119, no. 8, pp. 1625–1637, 2019.

[71] C.-M. Leong, K.-L. Tan, C.-H. Puah, and S.-M. Chong, "Predicting mobile network operators users M-payment intention," *European Business Review*, vol. 33, no. 1, 2021.

[72] R.-Z. Wu and J.-H. Lee, "The comparative study on third party mobile payment between UTAUT2 and TTF," *Journal of Distribution Science*, vol. 15, no. 11, pp. 5–19, 2017.

[73] H. Choi, J. Park, J. Kim, and Y. Jung, "Consumer preferences of attributes of mobile payment services in South Korea," *Telematics and Informatics*, vol. 51, 2020.

[74] J. Jun, I. Cho, and H. Park, "Factors influencing continued use of mobile easy payment service: An empirical investigation," *Total Quality Management & Business Excellence*, vol. 29, no. 9–10, pp. 1043–1057, 2018.

[75] D. Chatterjee and K. Bolar, "Determinants of mobile wallet intentions to use: The mental cost perspective," *International Journal of Human Computer Interaction*, vol. 35, no. 10, pp. 859–869, 2019.

[76] M.-F. Wei, Y.-H. Luh, Y.-H. Huang, and Y.-C. Chang, "Young generation's mobile payment adoption behavior: Analysis based on an extended UTAUT model," *Journal of theoretical and applied electronic commerce research*, vol. 16, no. 4, pp. 618-637, 2021.

[77] Y. Liu, M. Wang, D. Huang, Q. Huang, H. Yang, and Z. Li, "The impact of mobility, risk, and cost on the users' intention to adopt mobile payments," *Information Systems and e-Business Management*, vol. 17, no. 2–4, pp. 319–342, 2019.

[78] I. K. Abdul-Hamid, A. A. Shaikh, H. Boateng, and R. E. Hinson, "Customers' perceived risk and trust in using mobile money services-an empirical study of Ghana," *International Journal of e-Business Research*, vol. 15, no. 1, pp. 1–19, 2019.

[79] N. N. D. Phuong, L. T. Luan, V. V. Dong, and N. L. N. Khanh, "Examining customers' continuance intentions towards e-wallet usage: the emergence of mobile payment acceptance in Vietnam," *The Journal of Asian Finance, Economics and Business*, vol. 7, no. 9, pp. 505–516, 2020.

[80] S. Moghavvemi, T. X. Mei, S. W. Phoong, and S. Y. Phoong, "Drivers and barriers of mobile payment adoption: Malaysian merchants' perspective," *Journal of Retailing and Consumer Services*, vol. 59, 2021.

[81] F. Gao, P.-L. P. Rau, and Y. Zhang, "Perceived mobile information security and adoption of mobile payment services in China," *International Journal of Mobile Human Computer Interaction*, vol. 9, no. 1, pp. 45–62, 2017.

[82] Z. Zhang, J.-E. Choi, and M.-S. Kim, "Chinese female consumers' intention to use mobile payment services," *Journal of Distribution Science*, vol. 16, no. 10, pp. 23–30, 2018.

[83] A. Daragmeh, C. Lentner, and J. Sági, "FinTech payments in the era of COVID-19: Factors influencing behavioral intentions of 'Generation X' in Hungary to use mobile payment," *Journal of Behavioral and Experimental Finance*, vol. 32, p. 100574, 2021.

[84] K.-Y. Lin, Y.-T. Wang, and T. K. Huang, "Exploring the antecedents of mobile payment service usage: Perspectives based on cost–benefit theory, perceived value, and social influences," *Online Information Review*, vol. 44, no. 1, pp. 299–318, 2020.

[85] P. Raman and K. Aashish, "To continue or not to continue: a structural analysis of antecedents of mobile payment systems in India," *International Journal of Bank Marketing*, vol. 39, no. 2, pp. 242–271, 2021.

[86] H. Yeh, "Factors in the ecosystem of mobile payment affecting its use: From the customers' perspective in Taiwan," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 15, no. 1, pp. 13–29, 2020.

[87] R. Odoom and J. P. Kosiba, "Mobile money usage and continuance intention among micro enterprises in an emerging market – the mediating role of agent credibility," *Journal of Systems and Information Technology*, vol. 22, no. 1, pp. 97–117, 2020.

[88] Y. Qu, W. Rong, H. Chen, Y. Ouyang, and Z. Xiong, "Influencing factors analysis for a social network web-based payment service in China*," Journal of Theoretical and Applied Electronic Commerce Research*, vol. 13, no. 3, pp. 99–113, 2018.

[89] R.-Z. Kuo, "Why do people switch mobile payment service platforms? An empirical study in Taiwan," *Technology in Society*, vol. 62, p. 101312, 2020.

[90] G. Okello Candiya Bongomin and J. Ntayi, "Trust: mediator between mobile money adoption and usage and financial inclusion," *Social Responsibility Journal*, vol. 16, no. 8, pp. 1215–1237, 2019.

[91] A. Khayer and Y. Bao, "The continuance usage intention of Alipay: Integrating context-awareness and technology continuance theory (TCT)," *The Bottom Line*, vol. 32, no. 3, pp. 211–229, 2019.

[92] N. H. Do, J. Tham, A. A. Khatibi, and S. M. F. Azam, "An empirical analysis of Cambodian behavior intention towards mobile payment," *Management Science Letters*, vol. 9, no. 12, pp. 1941–1954, 2019.

[93] W. Rafdinal and W. Senalasari, "Predicting the adoption of mobile payment applications during the COVID-19 pandemic," *International Journal of Bank Marketing*, vol. 39, no. 6, pp. 984–1002, 2021.

[94] M. A. Alqahtani, A. H. Al-Badi, and P. J. Mayhew, "Exploratory study of m-transaction: user's perspectives," *The Electronic Journal of Information Systems in Developing Countries*, vol. 60, no. 1, pp. 1–22, 2014.

[95] W.-C. Chen, C.-W. Chen, and W.-K. Chen, "Drivers of mobile payment acceptance in China: An empirical investigation," *Information (Switzerland)*, vol. 10, no. 12, 2019.

[96] F. Liébana-Cabanillas, N. Singh, Z. Kalinic, and E. Carvajal-Trujillo, "Examining the determinants of continuance intention to use and the moderating effect of the gender and age of users of NFC mobile payments: A multi-analytical approach," *Information Technology and Management*, vol. 22, no. 2, pp. 133–161, 2021.

[97] P. Susanto, M. E. Hoque, N. M. H. N. Hashim, N. U. Shah, and M. N. A. Alam, "Moderating effects of perceived risk on the determinants–outcome nexus of E-money behaviour," *International Journal of Emerging Markets*, vol. 17, no. 2, pp. 530–549, 2022.

[98] M. Park, J. Jun, and H. Park, "Understanding mobile payment service continuous use intention: An expectation - confirmation model and inertia," *Quality Innovation Prosperity*, vol. 21, no. 3, pp. 78–94, 2017.

[99] K. Moorthy et al., "What drives the adoption of mobile payment? A Malaysian perspective," *International Journal of Finance and Economics*, vol. 25, no. 3, pp. 349–364, 2020.

[100] F. Liébana-Cabanillas, S. Molinillo, and A. Japutra, "Exploring the determinants of intention to use p2p mobile payment in Spain," *Information Systems Management*, vol. 38, no. 2, pp. 165–180, 2021.

[101] E. D. Matemba, G. Li, and B. J. Maiseli, "Consumers' stickiness to mobile payment applications: An empirical study of WeChat wallet," *Journal of Database Management*, vol. 29, no. 3, pp. 43–66, 2018.

[102] S. Chaveesuk, B. Khalid, and W. Chaiyasoonthorn, "Digital payment system innovations: A marketing perspective on intention and actual use in the retail sector," *Innovative Marketing*, vol. 17, no. 3, pp. 109–123, 2021.

[103] C. Medina-Molina, M. Rey-Moreno, V. Cazurro-Barahona, and S. Parrondo, "The adoption of mobile banking applications from a dual perspective," *Sociologia y Tecnociencia*, vol. 9, no. 2, pp. 1–22, 2019.

[104] F. J. Molina-Castillo, C. Lopez-Nicolas, and M. De Reuver, "Mobile payment: The hiding impact of learning costs on user intentions," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 15, no. 1, pp. 1–12, 2020.

[105] I. K. Mensah, L. Chuanyong, and G. Zeng, "Factors determining the continued intention to use mobile money transfer services (MMTS) among university students in Ghana," *International Journal of Mobile Human Computer Interaction*, vol. 12, no. 1, pp. 1–21, 2020.

[106] C. Rehncrona, "Young consumers' valuations of new payment services," *International Journal of Quality and Service Sciences*, vol. 10, no. 4, pp. 384–399, 2018.

[107] H. T. Sukmana, T. Hariguna, N. Lutfiani, and U. Rahardja, "Exploring the moderating effect of technology readiness of user intention in the context of mobile payment service," *International Journal of Advanced Trends in Computer Science and Engineering*, vol. 8, no. 1.5, pp. 249–257, 2019.

[108] Md. M. Alam, A. E. Awawdeh, and A. I. Bin Muhamad, "Using E-wallet for business process development: Challenges and prospects in Malaysia," *Business Process Management Journal*, vol. 27, no. 4, pp. 1142–1162, 2021.

[109] M. A. Kabir, S. Z. Saidin, and A. Ahmi, "Analysis of factors that influence electronic payment adoption," *Journal of Engineering and Applied Sciences*, vol. 12, Special issue 3, pp. 6560–6568, 2017.

[110] M. Najib, W. J. Ermawati, F. Fahma, E. Endri, and D. Suhartanto, "FinTech in the small food business and its relation with open innovation," *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 7, no. 1, 2021.

[111] W. A. Sunarjo, S. Nurhayati, and A. Muhardono, "Consumer behavior toward adoption of mobile payment: A case study in Indonesia during the COVID-19 pandemic," *Journal of Asian Finance, Economics and Business*, vol. 8, no. 4, pp. 581–590, 2021.

[112] K. Vinitha and S. Vasantha, "Influence of demographic variables on usage of e-payment system," *International Journal of Mechanical Engineering and Technology*, vol. 8, no. 11, pp. 265–276, 2017.

[113] Md. A. Hossain, Md. S. Hossain, and N. Jahan, "Predicting continuance usage intention of mobile payment: An experimental study of Bangladeshi customers," *Asian Economic and Financial Review*, vol. 8, no. 4, pp. 487–498, 2018.

[114] K. Z. K. Zhang, X. Gong, C. Chen, S. J. Zhao, and M. K. O. Lee, "Spillover effects from web to mobile payment services: The role of relevant schema and schematic fit," *Internet Research*, vol. 29, no. 6, pp. 1213–1232, 2019.

[115] S. F. Persada et al., "Revealing the behavior intention of Tech-Savvy generation Z to use electronic wallet usage: A theory of planned behavior based measurement," *International Journal of Business and Society*, vol. 22, no. 1, pp. 213–226, 2021.

[116] K. Garrouch, "Does the reputation of the provider matter? A model explaining the continuance intention of mobile wallet applications," *Journal of Decision Systems*, vol. 30, no. 2–3, pp. 150–171, 2021.

[117] I. K. Sumerta, "Analysis of technology acceptance model (TAM) to use e-money in Bali province," *International Journal of Advanced Trends in Computer Science and Engineering*, vol. 8, no. 1. 5, pp. 206–211, 2019.

[118] Y. M. Tang, K. Y. Chau, L. Hong, Y. K. Ip, and W. Yan, "Financial innovation in digital payment with WeChat towards electronic business success," *Journal of*

Theoretical and Applied Electronic Commerce Research, vol. 16, no. 5, pp. 1844–1861, 2021.

[119] X. Chen, L. Su, and D. Carpenter, "Impacts of situational factors on consumers' adoption of mobile payment services: A decision-biases perspective," *International Journal of Human Computer Interaction*, vol. 36, no. 11, pp. 1085–1093, 2020.

[120] Y. D. Handarkho, "Understanding mobile payment continuance usage in physical store through social impact theory and trust transfer," *Asia Pacific Journal of Marketing and Logistics*, vol. 33, no. 4, pp. 1071–1087, 2020.

[121] W.-R. Lin, Y.-H. Wang, and K.-H. Shih, "Understanding consumer adoption of mobile commerce and payment behaviour: An empirical analysis," *International Journal of Mobile Communications*, vol. 15, no. 6, p. 628, 2017.

[122] W. Chaiyasoonthorn and W. Suksangiam, "The diffusion and adoption of electronic payment systems in Bangkok," *International Journal of e-Business Research*, vol. 15, no. 2, pp. 102–115, 2019.

[123] A. S. Kumar and Y. A. Palanisamy, "Examining the consumers' preference towards adopting the mobile payment system," *International Journal of Electronic Finance*, vol. 9, no. 4, p. 268, 2019.

[124] S. F. Verkijika and B. N. Neneh, "Standing up for or against: A text-mining study on the recommendation of mobile payment apps," *Journal of Retailing and Consumer Services*, vol. 63, p. 102743, 2021.

[125] T. Mahakittikun, S. Suntrayuth, and V. Bhatiasevi, "The impact of technological-organizational-environmental (TOE) factors on firm performance: Merchant's perspective of mobile payment from Thailand's retail and service firms," *Journal of Asia Business Studies*, vol. 15, no. 2, pp. 359–383, 2021.

[126] F.-J. Mollina-Castillo, A. Rodriguez-Guirao, C. Lopez-Nicolas, and H. Bouwman, "Analysis of mobile pre-payment (pay in advance) and post-payment (pay later) services," *International Journal of Mobile Communications*, vol. 14, no. 5, p. 499, 2016.

[127] R. Z. Wu, J. H. Lee, and X. F. Tian, "Determinants of the intention to use cross-border mobile payments in korea among chinese tourists: An integrated perspective of UTAUT2 with TTF and ITM," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 16, no. 5, pp. 1537–1556, 2021.

[128] T. Hariguna, A. M. Adiandari, and A. Ruangkanjanases, "Assessing customer intention use of mobile money application and the antecedent of perceived value, economic trust and service trust," *International Journal of Web Information Systems*, vol. 16, no. 3, pp. 331–345, 2020.

[129] H. N. Phan, M. D. Tran, V. H. Hoang, and T. D. Dang, "Determinants influencing customers' decision to use mobile payment services: The case of Vietnam," *Management Science Letters*, vol. 10, no. 11, pp. 2635–2646, 2020.

[130] S. K. Ariffin, M. F. R. Abd Rahman, A. M. Muhammad, and Q. Zhang, "Understanding the consumer's intention to use the e-wallet services," *Spanish Journal of Marketing - ESIC*, vol. 25, no. 3, pp. 446–461, 2021.

[131] R. F. Oktaviani, D. P. Faeni, R. P. Faeni, and R. Meidiyustiani, "Implementation of Mobile Payment in Indonesia," *International Journal of Recent Technology and Engineering*, vol. 8, no. 2, pp. 863–866, 2019.

[132] A. Y. Yaakop, Y. P. Shi, B. Foster, and J. Saputra, "Investigating e-wallet adoption of COVID19 intra-period among Malaysian youths': Integrated task-technology fit and technology acceptance model framework," *International Journal of Data and Network Science*, vol. 5, no. 3, pp. 295–302, 2021.

[133] L. Lisana, "Factors influencing the adoption of mobile payment systems in Indonesia," *International Journal of Web Information Systems*, vol. 17, no. 3, pp. 0–10, 2021.

[134] Z. Rohimah, A. D. P. Elga, and G. Wang, "Factors that determine customer decisions in the use of E-payment in the culinary business," *International Journal of Advanced Trends in Computer Science and Engineering*, vol. 8, no. 6, pp. 3049–3052, 2019.

[135] L. Rybina, "Factors affecting usage of mobile payments by youth in Kazakhstan," *Innovative Marketing*, vol. 17, no. 4, pp. 103–110, 2021.

[136] S. Sinna Lebbe, A. Mohamad, and I. M. Sifat, "Back to the future: Returning to silver-backed money in Sri Lanka," *Journal of Islamic Accounting and Business Research*, vol. 10, no. 1, pp. 73–97, 2019.

[137] M. Aljawder and A. Abdulrazzaq, "The effect of awareness, trust, and privacy and security on students' adoption of contactless payments: An empirical study," *International Journal of Computing and Digital Systems*, vol. 8, no. 6, pp. 669–676, 2019.

[138] R. A. Rahadi, N. R. R. Putri, S. Soekarno, S. M. Damayanti, I. Murtaqi, and J. Saputra, "Analyzing cashless behavior among generation Z in Indonesia," *International Journal of Data and Network Science*, vol. 5, no. 4, pp. 601–612, 2021.

[139] M. M. AlKubaisi and N. Naser, "A quantative approach to identifying factors that affect the use of E-wallets in Bahrain," *Journal of Siberian Federal University - Humanities and Social Sciences*, vol. 13, no. 11, pp. 1819–1839, 2020.

[140] A. Monilakshmane and B. Rajeswari, "factors influence the choice of mobile apps for transactions among youngsters," *International Journal of Recent Technology and Engineering*, vol. 8, no. 2S6, pp. 612–617, 2019.

[141] F. Nurlaily, E. K. Aini, and P. S. Asmoro, "Understanding the fintech continuance intention of Indonesian users: The moderating effect of gender," *Business: Theory and Practice*, vol. 22, no. 2, pp. 290–298, 2021.