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# A Study on the Digital Payment Adoption in Millennials Amid Covid-19

Anu Kurian<sup>1</sup>, Sidharth Krishnan H<sup>2</sup>

<sup>1</sup>Assistant Professor, Saintgits Institute of Management, Kottayam, Kerala, India

<sup>2</sup>Saintgits Institute of Management, Kottayam, Kerala, India

**Abstract:** *The COVID-19 pandemic has impacted the world since the end of 2019 and has negatively impacted almost all sectors of the economy except the digital payment sector. The various digital payment systems have been very helpful in tackling and preventing the spread of the COVID 19 by minimizing cash payments and ensuring contactless payments.*

*The topic is “A Study on the Digital Payment Adoption in Millennials Amid Covid-19”. The topic for the study is based upon the current economic condition. The main aim of the study is to examine whether factors such as perceived risk, perceived usefulness, trust, perceived ease of use and perceived vulnerability has contributed towards the adoption of digital payment among millennials during this COVID pandemic. The purpose to study the relationship between perceived risk, perceived usefulness, trust, perceived ease of use, perceived vulnerability and adoption of digital payment among millennials amid COVID 19. The descriptive research design is adopted. The survey method is used for data collection. The millennials of India are the respondents of this study. Data is tested using correlation and multiple regression. There is significant association between perceived risk, perceived usefulness, perceived ease of use, perceived vulnerability and adoption of digital payment among millennials amid COVID 19. There is no significant association between trust and adoption of digital payment among millennials amid COVID 19.*

**Keywords:** *Digital payment adoption, technology adoption model, E-commerce, E-payment, Perceived risk.*

## I. INTRODUCTION

Millennials is the generation born between 1981 and 1996. Millennials use technology in all areas of life, such as sending messages, accessing various websites, making online transactions, ordering online transportation services and many more. In addition, digital transactions are also one of the characteristics of millennial generation. Millennial generation is the generation with the largest percentage of cashless payment services users due to the fast, practical, and safe transactions made possible. Digital payments are the transactions that are carried out via digital or online modes. The Government of India has been taking several measures to promote and encourage adoption of digital payments platforms in the country. The government aims to create a digitally empowered economy that is ‘Faceless, Paperless, Cashless’. As a result of COVID-19 the use of digital transactions and electronic cash transfers were encouraged in every nook and corner of the country. The usage of digital payment platforms rapidly increased during COVID-19 lockdown period to reduce the physical visit to the banks in the country.

## II. LITERATURE REVIEW

A study on the determinants of behavioral intention on E wallet usage revealed the influence of performance expectancy, effort expectancy, social influence and perceived security on behavioral intention to use e-wallets in amid of COVID-19 lockdown period (Dr.C Revathi,2020).M-payment providers, despite perceived usefulness having no significant effect, it continues to be one of the drawing factors for people to use M-payment, hence it's best for the M-payment to move forward with providing benefits to its users to increase cashless payment and stop the spread of COVID-19 (Dewi Mustikasari,2020).Consumers prefer to use digital transactions when handling cash presents a higher risk of spread of the virus. The habits they develop during periods of restrictions and lockdowns appear to further diminish their preference for transacting in cash ((Tomasz Piotr Wisniewski2020) .Applicability of TAM with the inclusion of additional variables in the model and the adoption of the digital payment system offers valuable information in understanding the critical variables influencing large scale implementation of the digital payment system( Mukhamad Najiba,2020).The variables perceived usefulness, perceived ease of use and trust were arrived at by adopting the Technology Adoption Model (TAM), perceived vulnerability and perceived risk were also included as variables under study. Perceived vulnerability is the subjective perception of the impending possibility of a negative event happening to a person. Perceived risk means the various factors that concerns the user in adopting digital payments. It includes loss of money, cyber fraud etc.

### III. METHOD

The present study focused on the association between perceived risk, perceived usefulness, perceived ease of use, perceived vulnerability, trust and adoption of digital payment among millennials amid COVID 19.

#### A. Context

The Primary data collection method is used for collecting the data and using the questionnaire the data were collected from the respondents. The questionnaire is designed in a simple and easy manner so that everyone can understand it. Most of the questions were multiple choice questions using the Likert scale. For analyzing the collected data SPSS package is used. SPSS is the statistical software used as the tool for the data entry and analysis purpose, the software helps get a refined output of the input. Factor analysis and regression analysis are done using SPSS. The tools for the analysis of the data collected for the present study are descriptive analysis, Cronbach’s Alpha, correlation and multiple regression which are the statistical tools used.

#### B. Participants

The survey was conducted on random basis. The questionnaire has been prepared and send to people who come under the age group ranging 25 to 40. The sample size taken for the study was from 210 respondents.

#### C. Descriptive analysis

Table 1  
Results of Descriptive Statistics of Research Sample

Measure	Item	N	Percentage
Gender	Male	74	35.1
	Female	137	64.9
Age	25-28	69	32.7
	29-32	125	59.2
	33-36	13	6.2
	37-40	4	1.9

The above table shows the descriptive statistics of the respondents in this study. From 211 valid respondents, 74 respondents (35.1%) are male and 137 (64.9%) are female. With regards to age, 69 respondents (32.7%) are aged between 25 -28, 125 respondents (59.2%) are aged between 29-32, 13 respondents (6.2%) are aged between 33-36, 4 respondents (1.9%) are aged between 37-40.

Table 2  
The Statistical analysis and description of each variable

Variables	Measurement of variables	Mean	Standard deviation
Perceived risk	Which concerns you the most:		
	Payment credentials and passwords getting stolen.	4.32	1.03
	Frauds		
	Security of card data	3.79	0.87
	Fear of losing money	4.04	1.07
	Average	3.87	1.02
		4.00	0.92

Trust	I don't have any such concern	4.22	0.80
	I prefer using digital payment system because of its safety and security.	4.52	0.62
	I am confident enough to transfer huge amounts via online	4.24	0.68
	Average	4.33	0.44
Perceived vulnerability	Covid has restricted cash withdrawal from ATM	4.54	0.58
	I prefer making online transfer to third person or organization like bank loans, mutual funds, transfer to relatives, etc. as a result of safety reasons during covid pandemic.	4.53	0.59
	As a result of covid pandemic I prefer using online methods to transfer big amounts rather than going to the bank in person.	4.61	0.54
	I prefer using digital payment system because there is health risk making cash transactions during the covid pandemic	4.65	0.51
	Average	4.58	0.39
Perceived ease of use	Purchases of tickets, hotel booking, etc. are done using digital payment methods	4.58	0.54
	All monthly bills like electricity, gas, etc. are paid online as a result of Covid.	4.59	0.56
	I prefer using digital payment system because its easy to use	4.59	0.56
	Average	4.58	0.40

Perceived usefulness	During covid, payment was done at retail shops using digital payment systems	4.58	0.54
	During covid, payment was done at petrol pumps using digital payment systems.	4.62	0.53
	I prefer using digital payment system because of its wide range of uses		
	I prefer using digital payment system because of discounts and offers	4.53	0.59
	I prefer using digital payment system because it makes scheduled payments	4.53	0.66
	I prefer using digital payment system because it makes payments quicker	4.56	0.63
	Average	4.55	0.69
Adoption of digital payment	During the covid-19 pandemic, I use digital payment system to do payments more often	3.43	1.27
	During the covid-19 pandemic, If I have the opportunity to pay using digital payment systems I will do it	3.09	1.26
	In the coming months, I will try out new digital payment methods/applications		
	In the next 5 years I will do transactions using digital payment systems more often than using cash	2.99	1.33
	Average	3.02	1.34
		1.13	
		3.13	

The above table shows the mean and standard deviation of each questionnaire item and the overall average mean of each variables.



Table 3  
Variables Measurement Items

Variables	Measurement of variables	Codes
Perceived Risk	Payment credentials and passwords getting stolen	PR 1
	Frauds	PR 2
	Security of card data	PR 3
	Fear of losing money	PR 4
Trust	I don't have any such concern	TR1
	I prefer using digital payment system because of its safety and security.	TR2
	I am confident enough to transfer huge amounts via online.	TR3
Perceived vulnerability	Covid has restricted cash withdrawal from ATM.	PV 1
	I prefer making online transfer to third person or organization like bank loans, mutual funds, transfer to relatives, etc. as a result of safety reasons during covid pandemic.	PV 2
	As a result of covid pandemic I prefer using online methods to transfer big amounts rather than going to the bank in person.	PV 3
	I prefer using digital payment system because there is health risk making cash transactions during the covid pandemic.	PV 4
Perceived ease of use	All monthly bills like electricity, gas, etc. are paid online as a result of Covid.	PEU 1
	Purchases of tickets, hotel booking, etc. are done using digital payment methods.	PEU 2
	I prefer using digital payment system because its easy to use	PEU 3
Perceived usefulness	During covid, payment was done at retail shops using digital payment system.	PU 1
	During covid, payment was done at petrol pumps using digital payment system.	PU 2
	I prefer using digital payment system because of its wide range of use.	PU 3
	I prefer using digital payment system because of discounts and offer.	PU 4
	I prefer using digital payment system because it makes scheduled payment.	PU 5
	I prefer using digital payment system because it makes payments quicker.	PU 6
Adoption of digital payments	During the covid-19 pandemic, I use digital payment system to do payments more often.	ADP 1
	During the covid-19 pandemic, If I have the opportunity to pay using digital payment systems, I will do it.	ADP 2
	In the coming months, I will try out new digital payment methods/applications	ADP 3
	In the next 5 years I will do transactions using digital payment systems more often than using cash.	ADP 4

The above table shows the variable, questions under each variable and their respective codes.

Table 4  
Reliability Analysis Results

Variable Description	Reliability Statistics			
	Number of questions	Cronbach's Alpha	Reference Value	Description
Perceived Risk	4	.936	$\alpha > 0.70$	Reliable
Trust	3	.701	$\alpha > 0.70$	Reliable
Perceived vulnerability	4	.765	$\alpha > 0.70$	Reliable
Perceived ease of use	3	.865	$\alpha > 0.70$	Reliable
Perceived usefulness	6	.758	$\alpha > 0.70$	Reliable
Adoption of digital payments	4	.890	$\alpha > 0.70$	Reliable

Reliability test was conducted to examine whether the items of a particular construct shows inter item consistency. Cronbach's alpha test is used to check the reliability. The value of Cronbach's alpha should be at least 0.50. If the Cronbach's alpha is greater than .70, then the reliability is acceptable; above 0.80 shows good reliability and above .90 indicates the reliability is excellent. Since the values of the variables are above 0.50 the reliability of the items used in questionnaire is well established and reliability measures of all variables are acceptable.

#### IV. RESULTS

##### A. Model Summary

Table 6

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.980 <sup>a</sup>	.961	.960	.90771

The model summary table provides the R and R<sup>2</sup> values. The R value represents the simple correlation and is 0.980. The R square value is 0.961 and measures the proportion of the variation in the dependent variable. The adjusted R square value indicates how much of the total variation in the dependent variable. The adjusted R square value is 0.960.

Table 7 Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.505	.772		.654	.514
	Perceived risk.	-.243	.158	-.198	-1.541	.025
	Trust	.222	.162	.136	1.371	.172
	Perceived vulnerability	.114	.092	.082	1.234	.039
	Perceived ease of use	1.247	.036	.947	34.177	.000
	Perceived usefulness	-.014	.026	-.008	-.537	.039

Dependent Variable: Adoption of digital payment.

The coefficient table provide necessary information about dependent variable from independent variable. We can use the values in the “B” column under the “Unstandardized Coefficients”. A negative beta coefficient indicates the decrease in the dependent variable for a unit change in the independent variable. From the above table all factors except trust are significant since the value is less than 0.05.

## V. DISCUSSION

64.9 % of the respondents were females and 35.1% respondents were males.59.2 % respondents belong to the age category between 29-32, 32.7 % respondents belong to the age category between 25-28, 6.2% respondents belong to the age category between 33-36, 1.9 % respondents belong to the ag category between 37-40. 96.1 % adoption in digital payment is influenced by perceived risk, perceived vulnerability, perceived ease of use, perceived usefulness. There is a significant association between perceived risk and adoption of digital payment in millennials. ( $P = .025$ ). There is a significant association between perceived vulnerability and adoption of digital payment in millennials. ( $P = 0.039$ ). There is a significant association between perceived ease of use and adoption of digital payment in millennials. ( $P = .000$ ). There is a significant association between perceived usefulness and adoption of digital payment in millennials. ( $P = .039$ ) There is no significant association between trust and adoption of digital payment in millennials. ( $P = 0.172$ ).

## VI. CONCLUSION

The current COVID-19 situation has become a unique phenomenon that creates worries and **Conclusion**

## VII. LIMITATIONS

As a result of the COVID-19 pandemic data collection method was limited to online survey. A face to face approach could've yielded a more informative data. The study only captured adoption of digital payments during COVID-19 pandemic. The study could be better if it was done by comparing the data collected before and after the pandemic.

## VIII. CONCLUSION

The current COVID-19 situation has become a unique phenomenon that creates worries and increasing the people's awareness about health; hence people tend to take care of themselves and one of the ways is to avoid physical contact including using digital payment for transactions. To stop the COVID-19 infection, the government has appealed to apply social distancing and cashless payments by adopting digital payment platforms. This becomes a phenomenon that pushes people to follow government appeal under the reason of health concern and stopping the spread of COVID-19, specifically on using digital payment methods. This increases the urgency that digital payment becomes the first option, when previously it was a second option. The COVID-19 situation creates its own unique concerns for each individual in relation to COVID-19 infection.

This study has analysed five variables that affects digital payment adoption during the current COVID-19 pandemic. The result of the four variables, perceived risk, perceived vulnerability, perceived ease of use and perceived usefulness has significant effect on the adoption of digital payment among millennials while trust does not have any significant effect. During this covid pandemic people have to take utmost care by avoiding physical contact, following social distancing norms, avoiding mass gathering and avoiding cash transactions by using digital payment platforms for transactions.

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