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Adoption of e-payment platforms amidst Pandemic

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Abstract

Cash has been the major means of transaction among people but after the spread of COVID-19, cash has become a potential carrier of the disease. There is high risk associated with usage of cash as it passes on from one hand to the other. In such a case the usage of e payment platforms comes to the rescue. These platforms not only reduce the risk of spreading COVID-19 but also make the transactions convenient. A large number of e-payment platforms are available in the country. People had been using e-payment platforms even before the pandemic but a large number of populations was reluctant because of perceived risks associated with its usage. But, spread of COVID-19 has inspired people to consider the benefits of e payments in comparison to the risks. The paper deals with the relation that how perceived usefulness have impacted the adoption and usage of e payments platforms amidst the spread of COVID-19. The study was done with the help of a questionnaire on a sample size of 219 people.

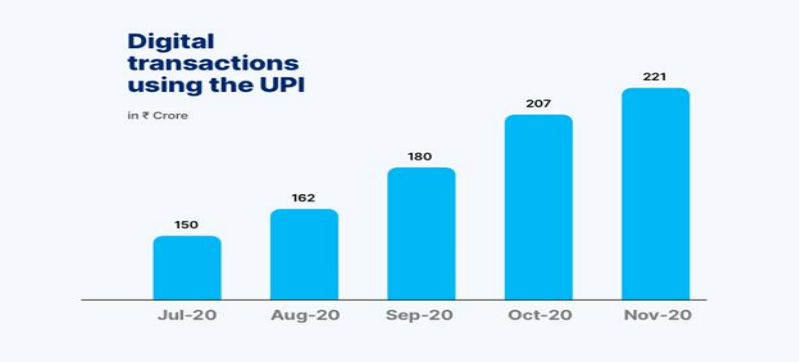
Keywords; E-payment platforms, Perceived usefulness, Attitude, Behavioral intention, Pandemic.

INTRODUCTION

The pandemic has changed a lot in our living styles. Social distancing, using a mask and sanitizing have now become an integral part of day to day living norms. In such a case, handling cash transactions increases the risk of getting infected which diverts the population to use other safe methods such as e-payments. The pandemic also changed the way people looked at these e payment platforms. They now seem to be good way to avoid cash transfers from one hand to the other. Also, a wide variety of financial services are also available on online platforms which includes investments and bill payments also. (Johri et al., 2022)

A wide range of applications are available on the mobile Appstore for performing e payments. Some of the most commonly used applications in India include Paytm, Phone-pay, G-pay, Amazon pay and BHIM app. The registration on these applications is simple and they are convenient to use. There has been an increase in the mobile banking users in the previous years. These platforms are not only cost effective for user but also for financial institutions. (Kumar, 2022)

Figure 1



(Source: Paytm)

The digital transactions done only via UPI reached a value of 221 crores by November 2020.The government has been trying to promote mobile banking platforms in order to promote digital financial inclusion in the country. Steps such as digital India movement and JAM (Jandhan -Aadhar-Mobile) trinity have played a great role in enhancing the usage. In some studies Demonetization was also found effective in increasing the users of e payment platforms. The study aims to analyses how the spread of COVID- 19 has affected the usage of e payment platforms in India.

LITERATURE REVIEW

The study utilizes the TAM (Technology acceptance model) proposed by Davis. According to Davis (1989), a technology is accepted by a user because he feels that it will be useful for him. This feeling of usefulness is called as "perceived usefulness". During the spread of COVID, people found out that E payments are useful in following the norms of social distancing (Dubey, et.al.,2020). Due to the spread of COVID, people have started to use and trust the e payment platforms. They have started to feel that e payment platforms are actually useful to them. COVID acted as an opportunity for smart phone and IT companies to develop their e payment platforms (Iyenger, et.al.,2020). Mobile banking is considered safer in the times of COVID which adds to its usefulness (Kumar, et.al. 2020). In a study of 305 people in Sri Lanka, Nayanajith (2021) found that perceived usefulness has a significant positive relation to usage of mobile banking (Kujur et al., 2024).

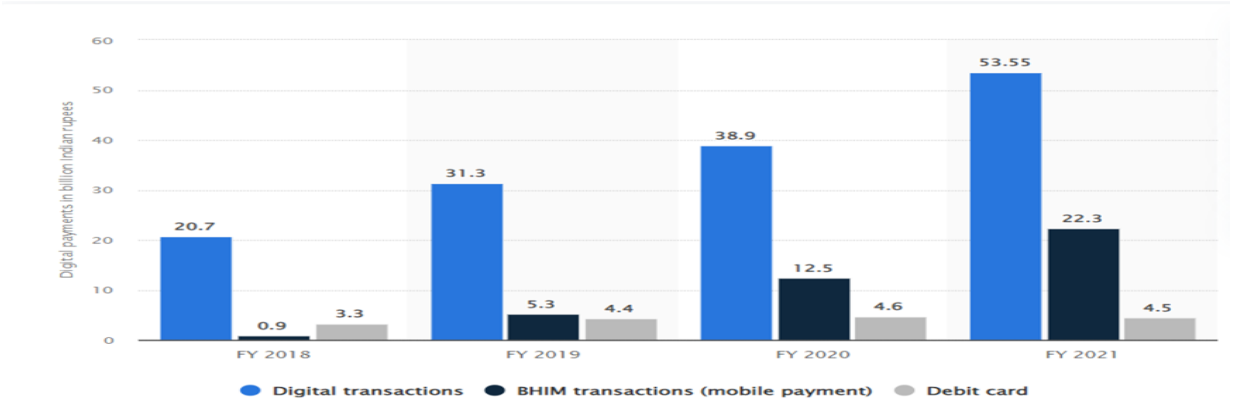
Perceived usefulness plays a vital role in formation of attitude. When the perceived usefulness is relatively positive, the attitude formed is also positive (Purnawirawan et.al. 2012). Attitude can be defined as a bias which defines one's degree of favorability. It plays an important role in decision making (Chaouali et al., 2017). Perceived usefulness significantly affects attitude (Davis,1989). Also, as per the theory of reasoned action, attitude led to behavioural intention which results in actual behaviour (Ajzen and Fishbein ,1980). Carranza et. al.,2021, found that perceived usefulness positively influences the attitude as well as intentions to use e banking. This study was done on a sample size of 105 people which also concluded that attitude is responsible for behavioural intention and usage. The customer attitude and behaviour will be impacted if they are aware of importance of e payment platforms (Akturan and Tezcan,2012).

Al-Maroof et.al. (2021) also studied how COVID impacted e learning platforms using a sample size of 630 people. It was found that the fear of vaccination and catching the disease has significantly impacted the perceived usefulness of online platforms among people which resulted in adoption of the same. The spread of COVID also resulted in development of e commerce and increased the volume of digital payments by 14% (Galhotra and Dewan,2020).

Also, India is a highly populated country which makes it, a huge base for internet users. The mobile internet users accounted to 536 million in 2021 which makes it easy to access financial payment applications. Agarwal et.al. (2020) identified online transactions as saviour in the times of pandemic by providing 24/7 banking to all. (Baran, 2024)

Secondary data also indicates a surge in usage of e payment platforms. The volume of transactions has significantly increased from FY 2020 to FY 2021. In the FY 2019, the payments done via digital platforms accounted to 36.6 billion INR which was increased to 51.4 billion INR which further had reached 75.85 billion INR by Nov 2021. COVID can be a factor for this significant increase in transactions.

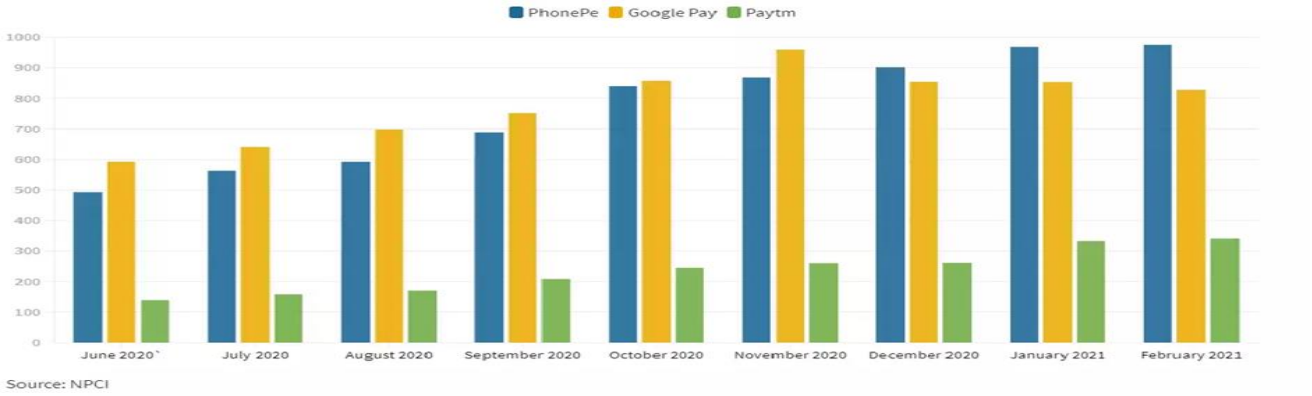
Figure 2



Source: (Statista)

Further, if we have a look on the user base increase in the major e payment platforms available in India, it can be concluded that there is a significant rise in the customers of these platforms.

Figure 3



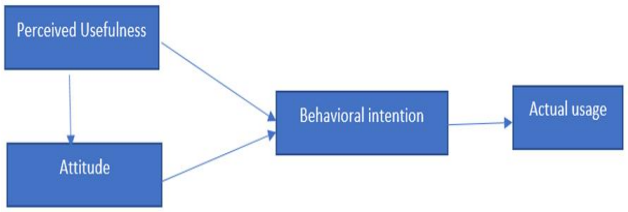
Source: Business Today

Research methodology and data analysis

The study was done using a structured questionnaire on a sample size of 219 people. The major factors considered in the research are perceived usefulness of an e payment platform, Attitude towards usage of an e payment platform and behavioral intention to use e payment platforms impacted by COVID -19. The questionnaire used five-point Likert scale. The participants were asked to complete the survey keeping in mind, the COVID scenario. The data collected was analyzed using SPSS for analyzing the relationships among them. The impact of gender on variables of the study was tested using independent sample t test and the impact of age, education, profession and income was tested using one way ANOVA at 5% significance.

Gender was found impact attitude in a significant way(p=0.028) while gender did not impact Perceived usefulness, Behavioral intention and Usage. It was found that age and profession was not having any significant impact on any variables. Income significantly impacted perceived usefulness (p=.009). Level of education significantly impacted Perceived usefulness (p=.003) and Behavioral intention (p=0.017).

Figure 4 Proposed model of the research



Source: Author Made

The initial data size was 219 but in order to normalize the data, outliers were removed and the final useable data size was 213.The outliers were removed with the help of Z values. The final data was tested for skewness and kurtosis which were found in the acceptable range so the data can be considered as normally distributed (Hair et al. ,2010) and Bryne (2010) argued that data is considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7.).

Table 1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PU	213	2.40	5.00	4.5296	.54886	-1.496	.167	2.530	.332
A	213	2.80	5.00	4.3972	.58422	-.828	.167	-.017	.332
B	213	2.33	5.00	4.3380	.64385	-1.007	.167	.655	.332
usage	213	2.00	5.00	4.2066	.76759	-.561	.167	-.504	.332
Valid N (listwise)	213								

(PU= Perceived Usefulness, A=Attitude B= Behavioral intention Usage= Actual; usage)

In order to find whether the variables are correlated or not, bivariate correlation between the variables was tested. Perceived usefulness and attitude's Pearson's correlation coefficient value was .518 which is significant at 1% level of significance which concludes that both are significantly corelated. Also Perceived usefulness and Behavioral intention were also found to be corelated (0.489) at 1% level of significance. The level of correlation between attitude and behavioral intention were found to be corelated (0.767) at 1% level of significance. The values indicate a positive correlation between the variables. Behavioral intention was found to be highly correlated (.902) to actual usage at 1% significance level.

Figure 5

Correlations

		PU	A
PU	Pearson Correlation	1	.518**
	Sig. (2-tailed)		.000
	N	213	213
A	Pearson Correlation	.518**	1
	Sig. (2-tailed)	.000	
	N	213	213

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		A	B
A	Pearson Correlation	1	.767**
	Sig. (2-tailed)		.000
	N	213	213
B	Pearson Correlation	.767**	1
	Sig. (2-tailed)	.000	
	N	213	213

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		usage	B
usage	Pearson Correlation	1	.902**
	Sig. (2-tailed)		.000
	N	213	213
B	Pearson Correlation	.902**	1
	Sig. (2-tailed)	.000	
	N	213	213

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		PU	B
PU	Pearson Correlation	1	.489**
	Sig. (2-tailed)		.000
	N	213	213
B	Pearson Correlation	.489**	1
	Sig. (2-tailed)	.000	
	N	213	213

**. Correlation is significant at the 0.01 level (2-tailed).

Four hypotheses were framed in accordance with the proposed model. In order to test the hypothesis framed, the variables were tested for linear regression.

H_1: Perceived usefulness significantly impacts the attitude towards usage of e payment platforms

The independent variable PU was regressed with dependent variable A in order to test H_1. It was found that PU significantly predicts A i.e., it plays a significant role in shaping A. The R^2 value was found to be .269 which implies that the model explains 26.9% variance.

H_2: Attitude towards usage of e payment platforms significantly impacts the behavioral intention towards usage of e payment platforms.

The independent variable A was regressed with dependent variable B in order to test H_2. The value of R^2 was .757 which explains 75.7% variance in the model.

H_3: Perceived usefulness significantly impacts the behavioral intention to use e payment platforms.

The independent variable PU was regressed with dependent variable B in order to test H3. The R^2 value was found to be .240 which explains 24% variance in the model.

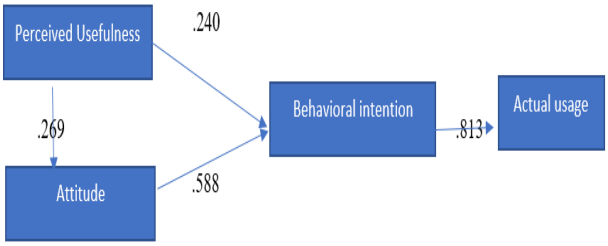
H_4: Behavioral intention significantly impacts the actual usage of e payments platforms.

The independent variable B was regressed with dependent variable Usage in order to test H_4. The R^2 value was found to be .813 which explains 81.3% variance in the model.

Table 2

Hypothesis	Regression Weight	Beta coefficient	R^2	F	p-value	Hypothesis supported
H_1	PU to A	.518	.269	77.529	.000	Yes
H_2	A to B	.757	.588	300.833	.000	Yes
H_3	PU to B	.489	.240	66.482	.000	Yes
H_4	B to U	.902	.813	916.163	.000	Yes

Figure 6



Other than the variables of the study, question related to usage of e payments platforms with reference to COVID were asked which helped to make the following inferences:

1) 57.7 % people in the survey agreed to the statement that they were not making online payment before pandemic; They started making it after pandemic. The statement indicate that users have developed inclination to use e payments platforms post the spread of pandemic.

CONCLUSIONS AND FINDINGS

In the present scenario, it is important that people develop a positive attitude towards usage of e payment platforms as it is a means to maintain social distances. E commerce have developed a lot and online payments and e-payments on delivery must be prefers rather than cash on delivery to maintain COVID guidelines. The secondary data available is also indicative of the fact that e payments in the country have significantly increased post spread of COVID.

In the study, it was found that the behavioral intention for usage of e payment platforms is the most influencing factor (.902). Since the literature review indicated that behavioral intention is dependent on attitude and perceived usefulness (which was also found in the study), it is important to develop a positive attitude towards usage of e payments. People needs to understand its benefits so that they can find out the usefulness of such products. Digital and financial literacy are a major step in this concern.

Since secondary data indicates that e payment usage have increased post the spread of COVID, risks associated with them has also increased. Risk may affect the attitude in a negative way so awareness needs to be created related to such risks. Further studies can be done in order to understand that how financial and digital literacy can improve the attitude and usefulness towards e payments as well as risks related can be analyzed.

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