

A STUDY ON PERCEPTION OF CONSUMERS TOWARDS DIGITAL PAYMENT

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Abstract

The study main aims to identify the demographic variables of the consumers, to analysis the relationship of the demographic variables of the consumers and their perception towards digital payments mode and to identify the impact of consumer perception towards the digital payments. The study was conducted in Tamil Nadu and the data collected from 95 consumers by Google form survey in the month of May 2020. The Percentage, average, standard deviation, range, F-test, cross table, Chi-square test, Regression analysis and Factor analysis methods were applied on the data to get the results which are analyzed. The study concluded that the digital payment system should be strengthened to improve safety and security of financial transactions of consumers and it must be simplified and make it user friendly. In addition, digital payment system should minimize risk associated with transactions of consumers and it must adopt appropriate measures to overcome undue delay in its processes.

Keywords: Perception, Consumers, Digital payment, Google Form

INTRODUCTION

India is moving forward along the path of the most significant digital revolution, and in the coming years, the digital payment system will be an important milestone in a cashless economy. A digital payment system is an electronic environment that allows consumers to make electronic commerce transactions for their purchases, financial transactions, making bill payments like mobile bill, land line service etc . The development of digital payments in India is expected to depend on digital payment service providers, an effective banking regulatory mechanism and consumer experience, as well as on factors driving the growth of digital payments in India (Sumathy and Vipin, 2017). The digital payment system is gaining momentum, especially after demonetization in India. The Government of India has taken various steps to effectively use digital payment platforms to eliminate corruption and black money in the Indian economic system. Currently, about 60 percent of transactions in India are

made through digital platforms. Although digital payments are generally accepted by the public, there are few criticisms regarding the processing of the digital payment system (Sivasubramanian et al, 2017). In order to popularize and accelerate the adoption of digital payments, many digital payment systems have been launched in India. Against this background, it is extremely important to study consumer perceptions of digital payments in the state of Tamil Nadu.

REVIEW OF LITERATURE

Bamasak (2011) concluded that there is a more favorable future for mobile payments. The illegal use of mobile phones and the security of payments via mobile phones were serious problems in the digital payment system. Liu et al. (2012) found that payments through a digital wallet provide additional convenience for consumers by providing flexible payment methods and increasing the speed of transactions. Padashetty and Kishore (2013) showed that ease of use, expressiveness, and trust influence the acceptance of digital payments through wallets, and they are also motivators for accepting digital payments. Roy and Sinha (2014) indicated that electronic payment systems have grown significantly in India, and there are great opportunities to increase the use of digital payments. They also found that innovation, incentives, convenience, and legal provisions help improve electronic payment systems.

Rouibah (2015) showed that poor security, lack of trust, fear of failure, high fees, and poor awareness were the main obstacles affecting electronic payments. In addition, the features of Internet security, banking services, confidentiality and quality of services also influenced the adoption of electronic payments. Rathore (2016) stated that payment with a digital wallet is very convenient for consumers when buying goods via the Internet without physically moving to different places. Singh (2017) concluded that there is a significant difference between consumer education and the adoption of digital payments. Consumer perceptions of digital payments have had a positive and significant impact on the adoption of digital payments among consumers. Gokilavani et al., (2018) concluded that half of consumers have moderate level of perception towards digital payment. Significant difference exists between perception of consumers towards digital payment and their socioeconomic status. The superiority, efficiency, safe and secured, convenient, cost and time savings, user friendly, easiness and protection of privacy of digital payment have positive and significant influence on the rate of adoption of digital payment of consumers.

OBJECTIVES

The objectives of the study are to identify the demographic variables of the consumers, to analysis the relationship of the demographic variables of the consumers and their perception towards digital payments mode and to identify the impact of consumer perception towards the digital payments.

METHODOLOGY

The study was conducted in Tamil Nadu state. Google form survey was carried out on email and social media within the Tamil Nadu State in the month of May 2020. There were 95 completed form received. The responses were coded and entered in the computer using Microsoft Excel. Required analysis was done with the help of SPSS (Statistical Package for Social Sciences) 21.0 Version. The Percentage, average, standard deviation, range, F-test, cross table, Chi-square test, Regression analysis and Factor analysis methods were applied on the data to get the results which are analyzed.

RESULTS AND DISCUSSION

The distribution of sample consumers according to their demographic variables and their perception towards digital payments mode is shown in the table-1.

Table-1: Demographic Variables of the consumers and their perception score towards digital payments

Demographic Variables		N	% of Total N	Mean	Std. Deviation	Range	
						Minimum	Maximum
Gender	Male	73	76.84	41.68	4.60	26	50
	Female	22	23.16	41.05	4.78	32	49
Age Group	Less than 30 years	38	40.00	42.97	3.61	35	50
	30-40 years	41	43.16	40.95	5.02	26	50
	40-50 years	9	9.47	37.00	4.53	32	46
	Above 50 years	7	7.37	43.00	3.21	38	47
Family Type	Joint family	50	52.63	41.54	4.68	26	50
	Nuclear family	45	47.37	41.53	4.62	32	50
Educational qualification	Up to HSC	6	6.32	42.67	7.58	32	50
	UG/diploma	32	33.68	40.94	3.69	33	47
	PG/Professional	57	60.00	41.75	4.78	26	50
Occupation	Business	9	9.47	42.11	5.71	32	50
	Employee	80	84.21	41.49	4.53	26	50

	Others	6	6.32	41.33	5.05	34	46
Monthly income	Less than Rs.25000	22	23.16	42.00	4.56	34	50
	Rs.25000-Rs.50000	57	60.00	41.79	4.19	32	50
	More than Rs.50000	16	16.84	40.00	6.03	26	49
	Total	95	100.00	41.54	4.63	26	50

Source: Calculated data

It is clear from the table-1 that the maximum level of consumer perception towards digital payments among the male consumers perception ranged between 26 and 50 with an average of 41.68, the 30-40 age group consumers perception ranged between 26 and 50 with an average of 40.95. The joint family consumer's perception towards digital payments ranged between 26 and 50 with an average of 41.54. The professional education consumer's perception ranged between 26 and 50 with an average of 41.75. Whereas employed consumers perception ranged between 26 and 50 with an average of 41.49. The Rs.25000-Rs.50000 monthly income group consumer's perception ranged between 32 and 50 with an average of 41.79.

In this manner, the variation in mean score value of consumers perception among demographic profiles are observed through 'F' test (ANOVA) with null hypothesis. The null hypothesis affirms that there is no significant variation in mean score among demographic profiles of the consumers. The results are furnished in table-2.

Hypothesis-1

H₀: There is no significant association between Demographic Variables of the consumers and their perception towards digital payments

Table-2: Association between Demographic Variables of the consumers and their perception towards digital payments: F-test

Variables		Sum of Squares	df	Mean Square	F	Sig.
Perception Scores * Gender	Between Groups	76.913	1	76.913	3.697	.573
	Within Groups	1934.708	93	20.803		
	Total	2011.621	94			
Perception Scores * Age Group	Between Groups	192.745	3	64.248	3.214**	.032
	Within Groups	1818.876	91	19.987		
	Total	2011.621	94			
Perception Scores * Educational qualification	Between Groups	81.851	2	40.926	1.951	.507
	Within Groups	1929.770	92	20.976		
	Total	2011.621	94			

Perception Scores * Occupation	Between Groups	213.411	2	106.706	5.459*	.004
	Within Groups	1798.210	92	19.546		
	Total	2011.621	94			
Perception Scores * Monthly income	Between Groups	46.147	2	23.074	1.080	.344
	Within Groups	1965.474	92	21.364		
	Total	2011.621	94			
Perception Scores * Family Type	Between Groups	69.001	1	69.001	3.303	.449
	Within Groups	1942.620	93	20.888		
	Total	2011.621	94			

Source: Calculated data

* Significant at 1% level, ** Significant at 5% level,

The calculated F-value shows that 3.214 in Age groups and 5.459 in Occupation are more than the theoretical values. As a result, it directs to reject the null hypothesis and it can be inferred that there is significant variations in mean score among Age groups and Occupational groups of the consumers. With a view to find the degree of relationship between demographic variables of the consumers and their level of perception towards digital payments mode, two-way table was prepared and result is shown by the table-3.

Hypothesis-2

H₀: There is no significant relationship between Demographic Variables of the consumers and their level of perception towards digital payments

Table-3: Demographic Variables of the consumers and cluster of perception towards digital payments: Chi-Square test

Demographic Variables		Cluster of Perception			Total	Chi-Square	Asymp. Sig. (2-sided)
		Disagree	Neutral	Agree			
Gender	Male	22	23	28	73	1.061	.588
	Female	9	5	8	22		
Age Group	Less than 30 years	7	12	19	38	15.026**	.020
	30-40 years	16	11	14	41		
	40-50 years	7	2	0	9		
	Above 50 years	1	3	3	7		
Educational qualification	Up to HSC	2	4	0	6	6.244	.182
	UG/diploma	12	7	13	32		
	PG/Professional	17	17	23	57		
Occupation	Business	2	6	1	9	8.517***	.074
	Employee	26	20	34	80		
	Others	3	2	1	6		
Monthly	Less than	9	5	8	22	5.618	.230

income	Rs.25000					1.428	.490
	Rs.25000- Rs.50000	14	18	25	57		
	More than Rs.50000	8	5	3	16		
Family Type	Joint family	14	17	19	50	1.428	.490
	Nuclear family	17	11	17	45		
	Total	31	28	36	95		

Source: Calculated data

** Significant at 5% level, *** Significant at 10% level

From the table-3, it is indicated that the Chi-square value of 15.026 in Age groups and rural, 8.517 in occupation are more than table values. It directs to reject null hypothesis at 5% and 10% significant level. Therefore, it can be inferred that there is significant relationship between consumer perception and age group and occupation of the consumers. The impact of the consumer perception towards digital payment mode analyzed using multiple regression methods, the results are given in the table-4.

Table-4: Determinants of consumer's perception towards digital payments

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Gender	3.964**	1.910	0.123	2.075	0.041
Age Group	3.164*	1.029	0.047	3.074	0.000
Educational qualification	4.071*	1.272	0.254	3.200	0.002
Family Type	2.982***	1.646	0.111	1.811	0.073
Occupation	7.968*	1.874	0.383	4.252	0.000
Monthly income	3.702*	1.285	0.180	2.880	0.005
R	.983				
R Square	.967				
Adjusted R Square	.965				
F	431.393*				.000

Source: Calculated data

* Significant at 1% level, ** Significant at 5% level, *** Significant at 10% level

The regression results, shown in Table-4, reveal that six independent variables have emerged as contributing significantly to the dependent variable namely consumers perception towards digital payment. With the multiple R of 0.983 and R square at 96.7 percent, this dimension of consumers perception significantly gets affected by the gender, ($\beta=0.3.964$, $p<0.041$), age group ($\beta=0.3.164$, $p<0.000$), educational qualification ($\beta=4.071$, $p <0.002$),

Family type ($\beta=2.982$, $p<0.073$), Occupation ($\beta=7.968$, $p<0.000$) and Monthly income ($\beta=3.702$, $p<0.005$). The F test of the model (431.393) shows that the significance of the model is high as the significance of F is $p<0.000$ which is less than .01.

Factor analysis intends to examine underlying factors that explain the pattern of association with a set of observed variables. It is employed to condense data and to find the number of factors that explain most of the variance that is determined in more number of manifest variables. Factor analysis used to get high degree of flexibility among the variables. The consumer perception in digital payment mode is identified with 10 statements. Consumer perception in digital payment on each factor is measured through five point scale with the rank from 5 to 1. In this way, the factor analysis has been conducted.

Table-5 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.856
Bartlett's Test of Sphericity	Approx. Chi-Square	368.187
	Df	45
	Sig.	.000

Source: Calculated data

Table-5 depicts that in order to check the correctness of factor model, the Bartlett's test and Keiser-Meyer-Olkin measure of sampling adequacy is implemented. It was found that the KMO measure of sampling adequacy is 0.856, it is higher than the standard level of 0.5. Bartlett test is administered to examine the null hypothesis and used to observe the correlation of variables. Since, the calculated chi-square value is found at 368.187, which is significant at 1% level, the test directs to reject the null hypothesis. The value of KMO statistics is also high; hence factor analysis considers this method for examining the correlation matrix. The communality values with initial and extraction values are furnished in table-6.

Table-6: Communalities

Variables	Initial	Extraction
Digital payment is superior than conventional payment modes	1.000	.650
Digital payment saves cost for my financial transactions	1.000	.583
Digital payment is convenient to me	1.000	.715
Digital payment is easier to make my financial transactions	1.000	.700
Digital payment is safe	1.000	.644

Digital payment is user friendly	1.000	.657
Digital payment is delay in its processes	1.000	.968
Digital payment protects my privacy	1.000	.593
Digital payment has 2 level of risk	1.000	.719
Digital payment is 4ly efficient comparing to conventional payment methods	1.000	.520

Source: Calculated data

Extraction Method: Principal Component Analysis.

Table-6 demonstrates the calculated communality values. It is regarded as the proportion of variance of the original variables; it is restrained by the extracted factors. The record of derived components is provided in the total variance explained. Accordingly, its results are furnished in table-7.

Table-7: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.511	45.108	45.108	4.511	45.108	45.108	3.654	36.541	36.541
2	1.190	11.899	57.007	1.190	11.899	57.007	1.995	19.951	56.492
3	1.048	10.480	67.487	1.048	10.480	67.487	1.100	10.995	67.487
4	.753	7.533	75.020						
5	.620	6.204	81.224						
6	.536	5.356	86.581						
7	.423	4.229	90.809						
8	.358	3.582	94.391						
9	.309	3.093	97.484						
10	.252	2.516	100.000						

Source: Calculated data

Extraction Method: Principal Component Analysis.

Table-7 demonstrates the calculated initial Eigen values with variance and cumulative variance. It is found in extraction sums of squared loadings, the first factor has Eigen value of 4.511 with variance of 45.108, the second factor has Eigen value of 1.190 with variance of 11.899 and the third factor has Eigen value of 1.048 with variance of 10.480. The Eigen value with more than 1 is considered as a separate factor and condensed in data analysis, if the values are in less than 1 ignored. Therefore, three factors have Eigen value more than 1, out

of 10 factors loaded. In an attempt to find Eigen value for all factors component matrix is executed and its results are given in table-8.

Table-8: Rotated Component Matrix

Variables	Component		
	1	2	3
Factor-1			
Digital payment is superior than conventional payment modes	.801	.083	.023
Digital payment is easier to make my financial transactions	.834	.068	.015
Digital payment is convenient to me	.763	.349	-.106
Digital payment saves cost for my financial transactions	.759	.070	-.047
Digital payment is 4ly efficient comparing to conventional payment methods	.645	.314	-.072
Factor-2			
Digital payment protects my privacy	.426	.628	.131
Digital payment has 2 level of risk	-.091	.840	.068
Digital payment is safe	.461	.599	-.271
Digital payment is user friendly	.583	.546	-.139
Factor-3			
Digital payment is delay in its processes	-.032	.029	.983

Source: Calculated data

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Table-8 depicts the statement of loadings for the rotated component matrix. The factor loadings found more than 0.5 are acknowledged for grouping of factors. Accordingly, the variables such as “Digital payment is superior than conventional payment modes, Digital payment is easier to make my financial transactions, Digital payment is convenient to me, Digital payment saves cost for my financial transactions and Digital payment is 4ly efficient comparing to conventional payment methods” are grouped together and it creates first factor (F1) with 45.108% of the total variance. The second factor (F2) is created from the variables “Digital payment protects my privacy, Digital payment has 2 level of risk, Digital payment is safe and Digital payment is user friendly” with 11.899% of the total variance. The third factor (F3) is created from the variables “Digital payment is delay in its processes” with 10.480% of the total variance. Therefore, factor analysis simplified and condensed these 10 variables and grouped it into 3 factors explaining 67.487% of the variance in data.

CONCLUSION

From the above findings, it is concluded that more than 37 percent of consumers have agreed digital payment. Significant difference exists between perception of consumers towards digital payment and their demographic variables. The gender, age group, educational qualification, Family type, Occupation and Monthly income have positive and significant influence on the rate of adoption of digital payment of consumers. Therefore, digital payment system should be strengthened to improve safety and security of financial transactions of consumers and it must be simplified and make it user friendly. In addition, digital payment system should minimize risk associated with transactions of consumers and it must adopt appropriate measures to overcome undue delay in its processes.

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