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A Comparative Study between Digital Transactions and Cash Transactions: An Analytical Study

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Abstract

Long years ago, transactions were made by the help of Barter system, where goods and services were exchanged by goods and services. Later on with the introduction of coins and notes, goods and services were exchanged with coins and notes. But after sometime there was the evolution of digital payment system. Both cash transactions and digital transactions have their pros and cons. After demonetization on November 8th, 2016, India saw an increased use of different internet payment systems for money transfer through various devices. NPCI (National Payments Corporation India) launched Bharat interface for Money (BHIM) an application run on UPI (Unified Payment Interface) in December 2016 to cater the growing online payment needs. The different modes of digital payments saw a drastic change in usage in the last 4 years. Digital transactions include transactions through credit cards, debit cards and other digital wallet platform. In this paper 217 sample has been collected and it was found that there is no significant difference of age with respect to digital transactions and cash transactions. But there is significant difference of gender, income group and education with respect to digital transactions and cash transactions.

Keywords: *Digital transaction, BHIM, Cash transactions, Mobile wallet*

INTRODUCTION

It was in 1920's that e-banking (the use of electronic medium such as telephones, mobiles, internet etc.) for banking services came into being in UK and US with the introduction of telegraphic mode of payments. The usage of electronic fund transfers and credit cards was popular in these countries by 1960.The concept of web based mode of banking started in
1980's. Indian mode of traditional banking namely branch banking got switched to e-banking in 1990's with ICICI bank being the first mover to launch the internet banking services. Cash transaction prevents a person from overspending as every time a person pick his/her wallet, he/she has to make the expenses out of the remaining cash available in his/her wallet. He/she
can't go for over spending due to this problem, which is not in the case of digital transactions. Basically the cash transaction support smaller business like tea shops, local vendors etc. But now-a-days they are also accepting digital payments through various digital wallets like Paytm, Phone Pay, Google Pay etc. In case of digital transactions, reward points can be earned by the user, which is not possible in case of cash transactions. Another major advantage of digital transaction is that it helps the user to increase his/her credit score, which plays a pivotal role in banking. A healthy credit score can help user to gain good reputation in banks, which will help the user to get hassle free loans and overdrafts in near future from banks. Apart from the bank's mobile applications other applications like BHIM, Paytm, Google pay, Amazon Pay, Mobikwik etc. offered provided enhanced features that lead to easy access to banking

services. In addition to this, The Reserve Bank of India has given approval to 80 Banks to start mobile banking services including applications.

SWOT ANALYSIS OF MOBILE WALLETS

Strength: The application is very user friendly and a user can make the transaction 24×7.
Weakness: There is lack of awareness among the customers about mobile wallets and the working of customer service portal system is not satisfactory.
Opportunities: There is a huge growth in the use of digital payment systems across the country and many banks are offering internet banking.
Threats: At the time of transaction, safety and security are the major concerns, which needs to be improved.

REVIEW OF LITERATURE

Kumar, Adlakaha, Mukharjee (2017) found that perceived usefulness and perceived ease of use are the two important factors, which motivate a person in adoption of digital wallets.Deepak Chawla and Himanshu Joshi (2019) found that factors like trust,security, perceived usefulness, perceived ease of use , lifestyle compatibility play an important role in adoption of mobile wallets. Arkady Trachuk, Natalia Linder (2017) found that Perceived ease of use, age of consumers, reliability, technological readiness, network, social pressure are the factors that affect in adaption of mobile wallets. Bagla,Sancheti (2018) found that instant money transfer, attractive cashback and rewards, ease of use are the factors responsible for growing use of digital transactions. Also they found that there are some gaps between customer's expectations and the service provided by the service provider. Singh, Gupta (2018) found that factors like security, convenience, adaptation to mobile applications are the factors, which encourage the customer to go for digital wallets. Rana (2017) found that there is no relationship between genders of the customer with respect to use of digital wallets. Also he found that there is some relationship between the age of the customers with respect to use of digital wallets.

III. Objectives

I. To find (if) there is any relationship of the customer's inclination towards digital transactions with respect to cash transactions
II. To find (if) there is any relationship of the customer's demographics and its impact on digital transactions.
III. To find (if) there is any relationship of the drifts and the reasons for inclination towards digital transactions.
IV. To forecast the future of digital transactions.

IV. Research Design

In this Study, basically Exploratory Research is used. Data is collected from customers through Questionnaire as well as from different sources such as Websites, Books, Journals and Newspapers etc. A sample is anything, which is extracted from the population as it is difficult to perform the research by taking the whole population into account. The technique, which is used to collect data from the population is known as "Sampling". The respondents are from Khordha area. They are digital tranasactions type of customers and offline food ordering type of customers. Total sample size is 217. In this study, Stratified Random Sampling is used. Data is analysed by the help of chi-square tests.

V. Data Analysis and Interpretation

Table 1 shows that 25.81% respondents prefer digital transactions, where as 74.19% respondents prefer cash transactions.

H0= There seems no significant difference amongst Age group and preference for digital transactions.

H1= There seems some relationship amongst Age group and preference for digital transactions.
In this case, chi-square test is used at 1 per cent level of significance. Here the degrees of freedom is "2" as there are two rows and three columns.
Table values of chi-square for df =1 and α=0.01 is 6.965
Expected frequency for Age group 18-30 preferring digital transactions =56×95/217=25
Expected frequency for Age group 31-40 preferring digital transactions
=56×62/217=16
Expected frequency for Age group 41-50 preferring digital transactions
=56×43/217=11
Expected frequency for Age group greater than 50 preferring digital transactions
=59×17/217=4
Expected frequency for Age group 18-30 preferring cash transactions=161×95/217=70
Expected frequency for Age group 31-40 preferring cash transactions
=161×62/217=46
Expected frequency for Age group 41-50 preferring cash transactions
=161×43/217=32
Expected frequency for Age group greater than 50 preferring cash transactions
=161×17/217=13
As the calculated value, which is 0.449 is less than the critical value, i.e 6.965.So, null hypothesis is accepted. Hence, from Table 2, there is no relation between age group and preference for digital transactions.

Table 1. Age Group

			Age				
			18-30	31-40	41-50	>50	Total
Preference Redefined	Cash transactions	Count	70	46	31	14	161
		% within age	43.47	28.57	19.25	8.7	74.19
	Digital transactions	Count	25	16	12	03	56
		% within age	44.64	28.57	21.42	5.35	25.81
		Count	95	62	43	17	217
		% within age	43.77	28.57	19.81	7.83	100.0

Source: Primary data

Table 2. Frequency Table

			Age				
			18-30	31-40	41-50	>50	Total
Preference Redefined	Cash transactions	Observed frequency	70	46	31	14	161
		Expected frequency	70	46	32	13	
	Digital transactions	Observed frequency	25	16	12	03	56
		Expected frequency	25	16	11	04	
Total		Count	95	62	43	17	217

Source: Primary data

Table 3 shows that 25.81% respondents prefer digital transactions, where as 74.19% respondents prefer cash transactions. Furthermore 75% males prefer digital transactions services, while 49.06% females prefer cash transactions.

H0= There seems no connection amongst Gender and preference for digital transactions

H1= There seems some connection amongst Gender and preference for digital transactions
In this case, chi-square test is used at 1 per cent level of significance.
Here the degrees of freedom is "1" as there are two rows and two columns.

Chi-square value= (82-92)2/92 + (79-69)2/69 + (42-32)2/32 + (14-24)2/24
=1.0869+1.4492+3.125+4.1667
=9.8277
Here the calculated value is more than the critical value 6.63; hence, null hypothesis is rejectted. Hence from Table 4, gender and preferences for digital transactions are highly dependent.

Table 3. Gender

			Gender		
			Male	Female	Total
Preference Redefined	Cash transactions	Count	82	79	161
		% within gender	50.93	49.06	74.19
	Digital transactions	Count	42	14	56
		% within gender	75	25	25.81
Total		Count	124	93	217

Source: Primary data

Table 4. Frequency Table

-			Gender		
			Male	Female	Total
Preference Redefined	Cash transactions	Observed frequency	82	79	161
		Expected frequency	92	69	
	Digital transactions	Observed frequency	42	14	56
		Expected frequency	32	24	
Total		Count	124	93	217

Source: Primary data
Table 5 shows that a majority of customers belongs to high income group, i.e, 46.80 per cent prefers cash transactions. On the other hand, most of the customers from higher income group, i.e, 66.07% prefers digital transactions.
Validation with chi-square test:
H0: There seems no association amongst Income level and preference for digital transactions
H1: There seems some association amongst Income level and preference for digital transactions
In this case, Chi-square test is used at 1 per cent level of significance
In this case, chi-square test is used at 1 per cent level of significance. Here the degrees of freedom is "2" as there are two rows and three column
Chi-square Value=1.44+0.2667+1.3157+4.5+0.7619+3.7037=11.9880
As the calculated value, which is 11.9880 is more than the critical value, i.e, 6.965.Hence as per Table 6, income groups and preferences for digital transactions are strongly dependent.

Table 5. Preference with respect to Income Level

			Income Level			
			Low Income	Middle Income	High Income	Total
Preference Redefined	Cash transactions	Count	31	64	66	161
		% within income	19.25	39.75	46.80	
	Digital transactions	Count	02	17	37	56
		% within income	3.57	30.35	66.07	
Total		Count	33	81	103	217
		% within income	15.20	37.32	47.46	100

Source: Primary data

Table 6. Frequency Table

			Income Level

			Low Income	Middle Income	High Income	Total
Preference Redefined	Cash transactions	Observed frequency	31	64	66	161
		Expected frequency	25	60	76	
	Digital transactions	Observed frequency	02	17	37	56
		Expected frequency	08	21	27	
Total		Count	33	81	103	217

Source: Primary data

From Table 7, it is clear that most of the graduate respondents, 53.41 per cent, prefers cash transactions, on the other hand most of post graduate respondent, and 66.07 per cent prefers digital transactions.
Validation with chi-square test:
H0: There seems no relationship amongst Preference for the digital transactions and the education level groups
H1: There seems some relationship amongst Preference for the digital transactions and the education level groups
In this case, chi-square test is used at 1 per cent level of significance. Here the degrees of freedom is "2" as there are two rows and three columns.
Tabulated value of chi-square for df =2 and α=0.05 is 5.991.

Table 7.Preference with respect to Education

			Education			
			UG	Graduate	PG	Total
Preference Redefined	Cash transactions	Count	34	86	41	161
		% within education	21.11	53.41	25.46	74.19
	Digital transactions	Count	07	12	37	56
		% within education	12.5	21.42	66.07	25.81
		Count	41	98	78	217
Total		% within education	18.89	45.16	35.94	100

Source: Primary data

Table 8. Frequency Table

			Education			
			UG	Graduate	PG	Total
Preference Redefined	Cash transactions	Observed frequency	34	86	41	161
		Expected frequency	30	73	58	
	Digital transactions	Observed frequency	07	12	37	56
		Expected frequency	11	25	20	
Total		Count	41	98	78	217

Source: Primary data

In this case, chi-square test is used at 1 per cent level of significance. Here the degrees of freedom is "2" as there are two rows and three columns.
So, now,
Chi-square Value= (34-30)2/30+ (86-73)2/73+ (41-58)2/58+ (7-11)2/11+ (12-25)2/25+ (37-20)2/20
=0.5333+2.3150+10.3214+1.4545+6.76+14.45
=35.8342
Hence the calculated value, i.e 35.8342 is more than the tabulated value, i.e 5.991. Hence, the null hypothesis is rejected. So, there is some difference between preferences for digital transactions with respect to education of the customers.

Conclusion:

Gender of respondents don't impact inclination for digital transactions, still the rate in male respondents favouring cash transactions is more when contrasted with female respondents. The respondent's age impacts inclination for cash transactions. The youthful and middle age respondents incline toward digital transactions, though a dominant part of more seasoned age lean towards the cash transactions. Education level of respondents have some inclination for digital transactions. The respondents under graduation and graduation favour cash transactions, while the post-graduate respondents lean toward digital transactions, though the lower income group of respondents incline toward cash transactions, thus the general pattern is more inclination for cash transactions, yet the thing that matters isn't exceptionally noteworthy. This is a result of different clear focal points of digital transactions, however they have certain downsides. Along these lines, the eventual fate for digital transactions is verified and however the volume is will in general lower pretty much nothing, in not so distant future, cash transactions are not going to be shut down. With the evolution of digital transactions, we are moving towards cashless society as there are many advantages of digital transactions over cash transactions. Government has also taken some excellent steps to encourage the people to move from cash transactions to digital transactions. In this scenario, the internet speed and the smart phone are playing a significant role across the nation.

Scope for Future Research

The Study was conducted within the areas of Bhubaneswar city. It can be studied in other parts of Odisha or other parts of India. Further studies can be done on consumer satisfaction to measure the satisfaction level of the customers, who are using digital transactions. The marketer or merchandiser perception was not analysed in the research paper. There is scope for study about the perceptions of the marketers.

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