CASHLESS FINANCIAL TRANSACTION BEHAVIOUR OF URBAN MIDDLE CLASS IN BHUBANESWAR

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ABSTRACT

India is passing through a window of demographic transition, not only is it converting to a cashless economy but it is also witnessing a drastic makeover in the paradigm of banking sector. With a purpose to transform India into a digitally empowered society and knowledge economy, the "The Digital India Programme" was launched by Government of India, "Faceless, paperless, cashless" is one of the professed role of digital India. Digitalisation without financial inclusion was incomplete hence RBI, in August, 2015, issued banking licences to, 11 payment banks, 2 universal banks and 10 small finance banks. First time in the history of Indian economy, such differentiated banks were introduced. Despite such gigantic moves, the larger question here is how cashless are we? Therefore the main objective of the study is to determine how mobile payments options are associated with demographic factors thereby providing us with the sections of our society that have adopted cashless payments or have failed to do so.

Keywords: Mobile banking, mobile wallets, UPI, financial transaction behaviour

INTRODUCTION

In April, 2018, reports of currency shortages emerged from several parts of the country. This is not the first time that the country faced such a situation. Similar but more grave situation took place in the year 2016 when Prime Minister Narendra Modi announced that Rs 500 and Rs 1000 notes were not legal tender anymore and needed to be exchanged for new currency, thus withdrawing 86% of the cash in the Indian economy. A much worse cash crunch that followed had a significant adverse impact on the informal sector in particular, which predominantly uses cash for transactions and depends largely on informal cash credit.

The consequences can be far reaching for a country like India, as it uses cash extensively for almost all transactions. One way to look at it is by comparing cash in circulation to gross domestic product of the nation. It is one of the highest in the world at 12.42% in 2014, compared to 4% in Brazil or 9.47% in China. Electronic transactions account to less than 5% of all transaction. The number of currency notes

in circulation is also far greater than in other larger economies of the world. In 2012-13, currency notes in circulation in India were 76.47 billion while it was 34.5 billion in the US. Studies suggest that even in places like restaurants, hotels, malls and spas, frequented by people who are likely to own and use credit/debit cards, use cash predominantly. So, it is quite evident that cash will rule in other markets as well.

India is passing through a window of demographic transition, not only is it converting to a cashless economy but it is also witnessing a drastic makeover in the paradigm of banking sector. Demonetisation in 2016 was the landmark to introduce the cash habituated Indians to cashless transactions. But what is "cash less economy"? An economy in which all the transactions are done using cards or digital means is known as a cashless economy. The various modes of digital payments are banking cards, UPI, USSD, AEPS, mobile wallets, internet banking, AadharPay etc

Despite all these gigantic and bold moves, there is a question largely looming over the economy. Has there actually been a change in the financial transaction mode amongst the common people? In 2017, transactions through digital means rose 13.5% to Rs.124.69 trillion in September from Rs109.82 trillion in August, according to provisional data released on 4th of October by the Reserve Bank of India (RBI). As per NPCI data, UPI and BHIM (also using UPI) has recorded a stupendous growth of 56 times(value wise) from October 2016 to may 2017. But RBI has also stated that UPI has replaced only 1% of cash transaction. Till May 2017, 14.54 million downloads of BHIM app has been recording; it is being used by only 0.88% of those people who have downloaded it. USSD is even negligible. Cash dominate all transaction and its importance has hardly made a shift.

The attempt to convert India to a cashless economy should ideally commence with digitalisation of urban India as 70% of India's GDP comes from urban areas. It will expedite the process and will help the government achieve its goal briskly. The process of migration will be comparatively easier as it comprises of mostly educated mass and benefit could be multifold. Hence, the study on payment behaviour of urban middle class in India is crucial as they constitute the major digitalised population through mobile phones and can bring about the ambitious makeover of the economy from cash to cashless through digitalisation.

LITERATURE REVIEW

Research has proved that majority of the Indian population that is without a bank account, use cash for almost all transactions while the high income population use non cash medium to pay for high value transactions (Balaji K,2017). "Cross Country Monetary Aggregate" is a useful tool for assessment to compare cash intensity. It is calculated by deriving the ratio of money held in bills and coins to the amount held in demand deposit/

saving account(Korenke et al., 2013).

The understanding of ICT(Information and Communication Technologies) among users and the fright of security breach are identified as the major concern amongst individuals, experts and organisations (Khairun & Yasmin, 2010). The adoption of electronic payment system is much less in government and public sector establishments (Hussein, Mohamed, Ahlan, & Mahmud 2010). Cashless economy is the one where the amount of cash transactions is kept at a bare minimum and not where there is absolutely no cash transaction. It is defined as "one in which there are assumed to be no transaction frictions that can be reduced through the use of money balances, and that accordingly provide a reason for holding such balances even when they earn rate of return" (Woodford, 2003).

The advantages of cashless transactions are many. Firstly, it reduces the fear of theft and botheration of carrying cash. It can be easily reloaded with plastic money and internet banking and at the same time helps in keeping a record of the transactions. Secondly, it reduces the printing cost for the government treasury, reduces counterfeit currency and black/ unaccounted money and in long run, minimises corruption. It also brings down considerably the cost of maintenance of ATM and cash handling for a bank. There is virtually no waiting time for receiving money in case of instant money transfer through cashless means (Rajadhyaksha & Jaiswal, 2017).

The definition of "Financial Inclusion" given in the report of the Committee on financial inclusion in India is "the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost" (Rangarajan, 2008). Studies suggest that the GDP of a nation is positively impacted by the proxies of financial inclusion such as number od bank branches and credit deposit ratio of banks. But ATM growth rate as an indicator has no statistical significant impact on GDP. Therefore the association of progress and development of an economy and the GDP of a nation is strong (Iqbal & Sami, 2017).

Review of papers on mobile banking worldwide

Branchless Banking Model in Africa has been studied by dividing into three categories -, Bank-Led, Nonbank-Led and Bank Focused (Andrew, 2009). Various independent variable such as attitude to technology, access to bank, organisation type and profile, business sector, profile of user, positively impacts the dependant variable which is the success of small scale business using mobile transactions(Andrew, 2009).

The principal reasons for Kenya's success in muster the power of mobile banking to propel its quantum leap over high hurdles to financial inclusion that can be explained from the demand and supply point of view.

Demand side includes demand among low-income households for a more accessible and affordable delivery channel for financial services, political and economic stability for an extended period of time and sufficient population density to exploit economies of scale. Supply side included market dominance of one telecommunications company – Safaricom's market, provision of a safe, reliable, accessible, convenient, and affordable product and extremely competitively priced (Kaffenberger et al., 2015).

Market Penetration and Business Edge of mobile banking companies.

Traditional banks may be hesitant to open branches in every village due to its uneconomic returns, but simple mobile phone coverage is all that is required now. India also serves as a big remittance market and with money transfers possible through mobile phones, workers and migrant labours could simply shift to mobile payments and send their money home. They can avail Government benefits, insurance, loans and interest on savings through mobile banking. PMJDY and IPPB can be accessible from any section of the society in remotest corner of the country {Srinivas2017}.

As only 5% of rural India has bank branches, mobile banking can plan their expansion in villages which should involve greater digitalisation and lower costs. If associated with govt social welfare schemes, more growth can be achieved. Also if easiness, quickness, transparency and security could be ensured, it can easily compete with traditional banks. Simplicity of digital product, support for help and information will boost penetration and profit margins(Garg, Professor, & Kapoor, 2015). Challenges that these new age technology might ecounter include, awareness, competent staff, security and operational profit(Garg et al., 2015). Customers are looking for innovation and service because of which private banks flourished. Soon the shift from private banks to payment banks will be seen (Shivnani, 2017)

Amongst the newly setup payment banks, IPPB (India Post Payment Bank) is likely to achieve higher penetration due to its wide and deep network and diverse services (Srinivas, 2017).

Analysis of usage of Paytm in pre and post demonetisation era, purpose of usage, demographic distribution, comparative analysis to existing players reveals a sharp acceleration in the past 5 years (Dixit, Prakash, & Tiwari, 2017). Given below is a distribution of percentage of e-wallet user with respect to companies.

Research suggests ways by which mobile banking can be brought into the current banking ecosystem. Better technology coupled with security and awareness can boost mobile banking. Cashbacks, discounts, royalty points and bonuses can act as incentive to user to motivate them towards cashless transactions (Dixit et al., 2017).

RESEARCH METHODOLOGY

Objective of The Study

The objective was to study the association of cashless financial transaction behaviour by gender, age and employment status. Based on the objectives, the following hypothesis was formulated.

$\mathbf{H_0}$: There is no difference in the cashless financial transaction behaviour between different gender, age group and employment status.

$\mathbf{H_1}$: There is a difference in the cashless financial transaction between behaviour different gender, age group and employment status.

Scope of Study

The study primarily aimed at understanding the present payment behaviour of urban middle class of Bhubaneswar. It aims to understand preference of mode of cashless payment i.e. debit/credit cards (by providing CVV followed by Password or OTP), online wallets (Paytm, Ola money, Mobikwik, Freecharge, Buddy), bank apps, net banking(financial institution's website) and UPI(Unified Payment Interface) with respect to gender, age and employment status. Bhubaneswar has been selected because of convenience and also availability of the target group, i.e. middle class population.

Research design

The path of investigation has been designed keeping the objectives in mind and to derive at answers that can appropriately address the research questions. The approach is descriptive hence a cross sectional study is undertaken to meet the purpose of the research. The study among the urban middle class population in Bhubaneswar based upon the methodology that is most suitable for empirical analysis, has been undertaken.

Sampling procedure and design

The scope of the study has restricted the sample to Bhubaneswar only to fulfil the objective of the study. The sampling method followed has been designed to include urban middle class from all gender, age groups and employment status. Hence stratified convenience sampling method has been followed. The questionnaire was administered to 100 people of both gender in equal proportion i.e. 50male and 50 female. Respondants belong to different age groups and to different occupations *(Govt employee 15%, Private company employee 19%, Business and Self employed 17%, Student 17%, Home maker 16% and Retired/ Unemployed16%)* have been equally balanced for a fair analysis. All the responses were found fit to be used for analysis.

Figure 1: Gender distribution in sample

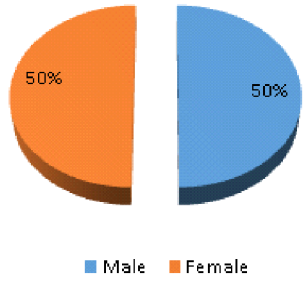
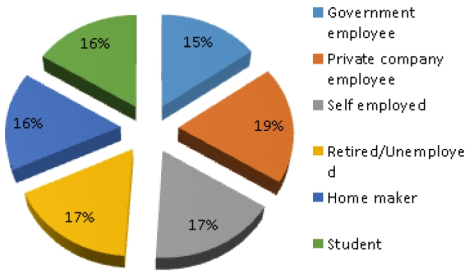


Figure 2: Employment Distribution in Sample



Data Collection, analysis and interpretation
Data was collected from respondents in Google forms and hard copy. The data collected through hard copy was entered in Google form so that all the responses can be tabulated easily in excel sheet. The data analysis has been conducted with descriptive statistics and techniques like Chi Square which has been used to find out if there is a significant relationship between variables among the urban middleclass and their financial behaviour in terms of payment modes for multiple purposes. The registered software of 'SPSS-19' statistical software has been applied for analysis of the data and interpretation done based on the output of the software.

Limitations :

The study had been carried out with a limited sample size, a larger sample size can give a different result, which may be more useful. The study also has limited to one tier II city only. An inclusion of middle class population from different tiers of cities and towns across the state or nation can give more comprehensive and better analysis. It would help to understand the financial transaction behaviour over different region, economic status and culture.

DATA ANALYSIS

Data collected on a sample of 100 urban middle class populations was analysed using statistical tools and techniques as explained in the methodology and analysed along with the interpretation and are presented according to the objective of the study.

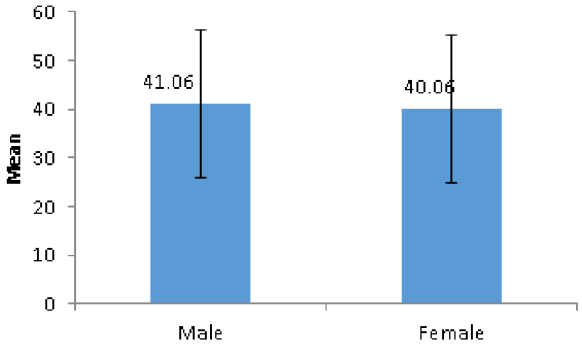
Profile of the sample

i. Age Distribution

The mean age of the sample was 40.56 ± 15.60 years. The median year was 37.5 with inter-quartile range 29 - 45 years. That means a quarter of our sample have age less than 29 years and a half of the sample are below the age 37.5 years. And another quarter of the sample subjects are above 45 years age. The sample has equal proportion of male and female.

Age group	Male		Female		Total	
	No.	%	No.	%	No.	%
18-29	15	30	13	26	28	28
30-39	12	24	20	40	32	32
40-50	14	28	7	14	21	21
>50	9	18	10	20	19	19
Total	50	100	50	100	100	100
Mean ± SD	41.06 ± 16.18		40.06 ± 15.15		40.56 ± 15.60	
Q_1	27.75		29		29	
Q_2	38		37		37.5	
Q_3	47.25		45		45	

Figure 3: Mean Age of Sample Subjects



i. Employment Status

Table 2 and **Figure 4**, furnished the employment status of the sample subjects. The major chunk of the sample subjects was employed or self employed which was a little higher than 50%. Homemaker, students and retired/unemployed constituted the remaining half of the sample approximately in equal proportions. Employed and self employed were 68% among males while the corresponding proportion amongst females were 34%. The males have higher association with employment than females (P=0.000)

Table 2: Employment Status of Sample Subjects by gender

Employment status	Male		Female		Total		□ p .
	No.	%	No.	%	No.	%	
Homemaker	0	0	16	32	16	16	
Student	7	14	10	20	17	17	
Retired/unemployed	9	18	7	14	16	16	□ □=22.446
Employed/Self employed	34	68	17	34	51	51	p=0.000
Total	50	100	50	100	100	100	

Figure 4: Employment Status of Study Subjects by Gender

Mode of Cashless Financial Transaction By Gender, Employment Status And Age

Table 3: Preference of mode of cashless financial transaction by gender

Financial transaction of Mobile	Male		Female		Total		
	No.	%	No.	%	No.	%	χ^2, p
Debit/credit card by entering CVV/ OTP/PASSWORD							
Moderately preferred	18	41.9	11	32.4	29	37.7	
Least preferred	4	9.3	3	8.8	7	9.1	
Most preferred	18	41.9	18	52.9	36	46.8	χ^2=0.994
Never	3	7	2	5.9	5	6.5	p=0.803
Total	43	100	34	100	77	100	
Wallets like Paytm, Ola money, Mobikwik, Freecharge, Buddy							
Moderately preferred	18	47.4	12	35.3	30	41.7	
Least preferred	5	13.2	5	14.7	10	13.9	
Most preferred	8	21.1	9	26.5	17	23.6	χ^2=1.107
Never	7	18.4	8	23.5	15	20.8	p=0.775
Total	38	100	34	100	72	100	
Bank apps							
Moderately preferred	16	44.4	10	33.3	26	39.4	
Least preferred	4	11.1	9	30	13	19.7	
Most preferred	3	8.3	4	13.3	7	10.6	χ^2=4.744
Never	13	36.1	7	23.3	20	30.3	p=0.192
Total	36	100	30	100	66	100	
Net banking							
Moderately preferred	16	42.1	11	36.7	27	39.7	
Least preferred	5	13.2	6	20	11	16.2	
Most preferred	9	23.7	4	13.3	13	19.1	χ^2=2.086
Never	8	21.1	9	30	17	25	p=0.555
Total	38	100	30	100	68	100	
UPI (Unified Payment Interface) through Tez, BHIM, PhonePe							
Moderately preferred	5	13.9	4	12.9	9	13.4	
Least preferred	7	19.4	5	16.1	12	17.9	
Most preferred	4	11.1	2	6.5	6	9	χ^2=0.742
Never	20	55.6	20	64.5	40	59.7	p=0.863
Total	36	100	31	100	67	100	

Figure 5 : Graphical representation - Preference of mode of cashless financial transaction by gender

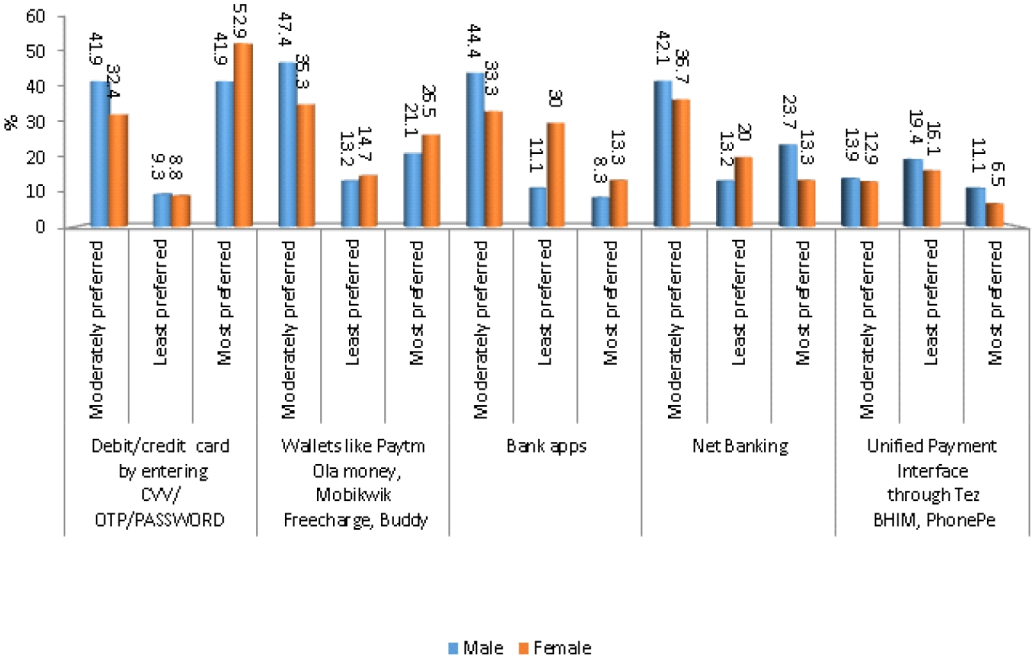


Table 3, Figure 5 illustrates the preference of cashless payment technology by different gender. Usage of Debit/credit cards (by providing CVV followed by Password or OTP) was preferred 'moderately' and 'mostly' together by 83.8% of males and 85.3% of females. There was no significant difference in their preference (p=0.803). Usage of online wallets (Paytm, Ola money, Mobikwik, Freecharge, Buddy) displayed similar association with both gender (p=0.775). While it was moderately preferred by 47.4% males, 35.3% females also did so. It was least preferred by 13.2% and 14.7% males and females respectively. Bank apps as a mobile banking tool was also not particularly associated with gender (p=0.192). It was most preferred by 8.3% males and 13.3% females and moderately preferred by 44.4% and 33.35 of males and females respectively. Net banking (financial institution's website) and UPI (BHIM, Tez, PhonePe etc) displayed no significant difference in preference. Net banking was moderately preferred by 42.1% males and 36.7% females (p=0.555) and UPI was never used by 55.6% males and 64.5% females (p=0.863).

Table 4: Preference of mode of cashless financial transaction by age group

Financial transaction of Mobile	18-29		30-39		40-50		>50		Total		χ^2, p
	No.	%	No.	%	No.	%	No.	%	No.	%	
Debit/credit card by entering CVV/ OTP/PASSWORD											
Moderately preferred	13	48.1	8	26.7	8	47.1	0	0	29	37.7	
Least preferred	3	11.1	4	13.3	0	0	0	0	7	9.1	
Most preferred	9	33.3	16	53.3	9	52.9	2	66.7	36	46.8	χ^2=11.993
Never	2	7.4	2	6.7	0	0	1	33.3	5	6.5	p=0.214
Total	27	100	30	100	17	100	3	100	77	100	
Wallets like Paytm, Ola money, Mobikwik, Freecharge, Buddy											
Moderately preferred	13	50	11	37.9	5	35.7	1	33.3	30	41.7	
Least preferred	3	11.5	5	17.2	2	14.3	0	0	10	13.9	
Most preferred	10	38.5	6	20.7	1	7.1	0	0	17	23.6	χ^2=18.159
Never	0	0	7	24.1	6	42.9	2	66.7	15	20.8	p=0.033
Total	26	100	29	100	14	100	3	100	72	100	
Bank apps											
Moderately preferred	7	30.4	13	48.1	6	46.2	0	0	26	39.4	
Least preferred	7	30.4	3	11.1	3	23.1	0	0	13	19.7	
Most preferred	2	8.7	4	14.8	0	0	1	33.3	7	10.6	χ^2=10.2
Never	7	30.4	7	25.9	4	30.8	2	66.7	20	30.3	p=0.335
Total	23	100	27	100	13	100	3	100	66	100	
Net banking											
Moderately preferred	10	43.5	12	42.9	5	35.7	0	0	27	39.7	
Least preferred	5	21.7	3	10.7	2	14.3	1	33.3	11	16.2	
Most preferred	2	8.7	7	25	3	21.4	1	33.3	13	19.1	χ^2=5.411
Never	6	26.1	6	21.4	4	28.6	1	33.3	17	25	p=0.797
Total	23	100	28	100	14	100	3	100	68	100	
UPI (Unified Payment Interface) through Tez, BHIM, PhonePe											
Moderately preferred	3	12	4	15.4	2	15.4	0	0	9	13.4	
Least preferred	5	20	6	23.1	1	7.7	0	0	12	17.9	
Most preferred	6	24	0	0	0	0	0	0	6	9	χ^2=14.884
Never	11	44	16	61.5	10	76.9	3	100	40	59.7	p=0.094
Total	25	100	26	100	13	100	3	100	67	100	

Figure 6 : Graphical representation - Preference of wallets as a cashless mode of financial transaction by age group

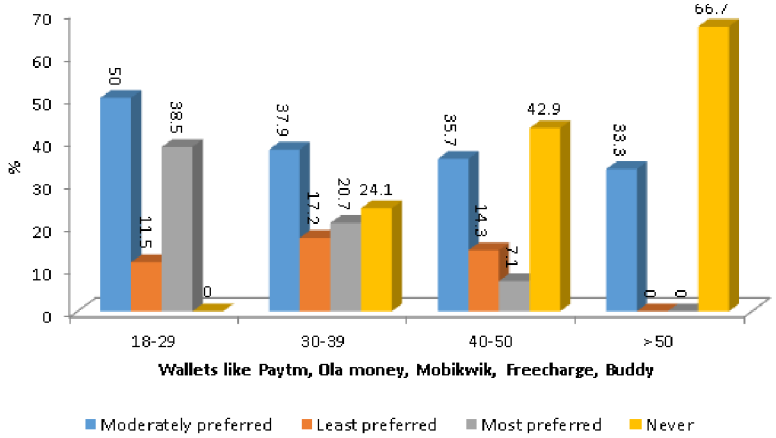


Table 4 depicts preference of cashless transaction modes by different age groups. Debit/credit cards (by providing CVV followed by Password or OTP) is the most preferred mode by all age groups and no significant difference exists (p=0.214). 66.7% in the age group of >50 years, 52.9% in the age group of 40-50 years and 53.3% in the age group of 30-39 years stated it as their most preferred mode of cashless payment technology. Wallets ((Paytm, Ola money, Mobikwik, Freecharge, Buddy) were associated with younger age group (p=0.033). 88.5% of 18-29 years age group preferred it as 'most' and 'moderate'. >50 years old did not prefer wallets as 66.7% have stated of never preferring it (refer to **Figure 6**). Bank apps as a mobile payment technology do not show any association to age group in particular. It was moderately preferred by 30.4%, 48.1%,

Table 5 : Preference of mode cashless financial transaction by employment status

Financial transaction of Mobile	Homemaker		Student		Retired/ unemployed		Employee/ Self employee		Total		χ^2, p
	No.	%	No.	%	No.	%	No.	%	No.	%	
Debit/credit card by entering CVV/ OTP/PASSWORD											
Moderately preferred	2	28.6	7	43.8	2	50	18	36	29	37.7	
Least preferred	0	0	1	6.2	0	0	6	12	7	9.1	χ^2=5.975
Most preferred	4	57.1	7	43.8	1	25	24	48	36	46.8	p=0.742
Never	1	14.3	1	6.2	1	25	2	4	5	6.5	
Total	7	100	16	100	4	100	50	100	77	100	
Wallets like Paytm, Ola money, Mobikwik, Freecharge, Buddy											
Moderately preferred	0	0	6	35.3	1	25	23	51.1	30	41.7	
Least preferred	2	33.3	2	11.8	0	0	6	13.3	10	13.9	χ^2=26.24
Most preferred	0	0	9	52.9	1	25	7	15.6	17	23.6	p=0.002
Never	4	66.7	0	0	2	50	9	20	15	20.8	
Total	6	100	17	100	4	100	45	100	72	100	
Bank apps											
Moderately preferred	1	16.7	5	38.5	0	0	20	46.5	26	39.4	
Least preferred	2	33.3	3	23.1	0	0	8	18.6	13	19.7	χ^2=10.086
Most preferred	0	0	2	15.4	1	25	4	9.3	7	10.6	p=0.344
Never	3	50	3	23.1	3	75	11	25.6	20	30.3	
Total	6	100	13	100	4	100	43	100	66	100	
Net banking											
Moderately preferred	1	16.7	8	57.1	0	0	18	40.9	27	39.7	
Least preferred	1	16.7	2	14.3	1	25	7	15.9	11	16.2	χ^2=12.827
Most preferred	0	0	1	7.1	1	25	11	25	13	19.1	p=0.171
Never	4	66.7	3	21.4	2	50	8	18.2	17	25	
Total	6	100	14	100	4	100	44	100	68	100	
UPI (Unified Payment Interface) through Tez, BHIM, PhonePe											
Moderately preferred	1	16.7	2	13.3	0	0	6	14.3	9	13.4	
Least preferred	1	16.7	4	26.7	0	0	7	16.7	12	17.9	χ^2=7.246
Most preferred	0	0	3	20	0	0	3	7.1	6	9	p=0.612
Never	4	66.7	6	40	4	100	26	61.9	40	59.7	
Total	6	100	15	100	4	100	42	100	67	100	

46.2% amongst 18-29, 30-39 and 40-49 age groups respectively(p=0.335). Net banking (financial institution's website) also did not display association with age (p=0.797). UPI (BHIM, Tez, PhonePe etc) was never preferred by 44% in 18-29 years age group, 61.5% in 30-39 years age group, 76.9% in 40-49 years age group and 100% in >50 years age group. Therefore there is no significant difference in the preference of UPI as a mobile payment technology with respect to age group (p=0.094).

Figure 7: Preference of mode of cashless financial transaction by employment status

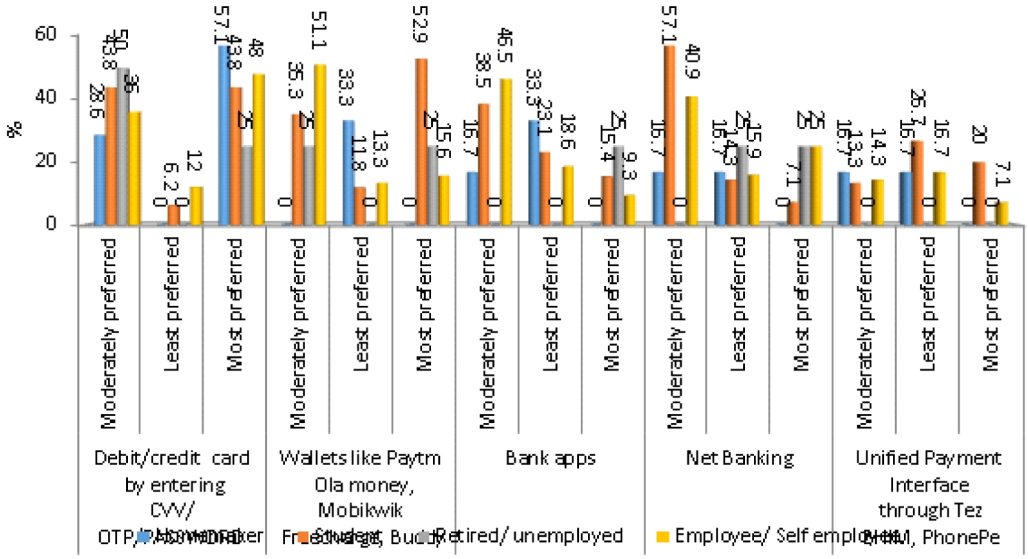


Table 5, Figure 7 depicts the preference of mode of cashless financial transactions on the basis of employment status. Debit/credit card is most preferred by 57.1% of homemakers, 43.8% students, 25% of retired/ unemployed and 48% of employed. There is no significant difference in preference of debit/credit card by employment status (p=0.742). Wallets (Paytm, Ola money, Mobikwik, Freecharge, Buddy) are associated with students as 52.9% preferred it the most. On the other hand, 66.7% homemakers and 50% of retired/unemployed never preferred it (p=0.002). Banks apps showed no particular association to employment status as it was most preferred by 15.4% of students, 25% of retired/unemployed and 9.3% employed population. Net banking (financial institution's website) with p value of 0.171 and UPI with p-value of 0.612, did not display any significant difference in preference amongst population of different employment status.

CONCLUSION

The purpose of the study was to identify the association of modes of cashless financial transactions with demographic factors of age, gender and employment status. Based on the findings, following conclusions are drawn.

1. It was observed that there was no significant difference in preference of cashless modes of financial transactions based on gender. UPI was least popular and debit/ credit card (by providing CVV followed by Password or OTP) was most preferred by both genders.
2. Debit card was most popular amongst all age groups and net banking, bank apps and UPI showed no significant difference in preference. Younger age group i.e. 18-29 years old and 30-39 years old, were more associated with wallets than the older age group. Hence, can be concluded that there is a difference in preference of mobile technology for financial transaction on the basis of age group.
3. Employment status also displayed varied association. Students associated with use of wallets but the rest were not. UPI was universally never popular with people of different employment status. Therefore, it can be deducted that there exists a difference in preference of mobile technology for financial transaction based on employment status.

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