"How Cashless Are We? - An Empirical Study"

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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. Demonetisation in 2016, was the landmark to introduce the cash habituated Indians to cashless transactions. The Digital India Programme which is flag ship of the government of India, was launched with a vision to transform India into a digitally empowered society and knowledge economy. Faceless, paperless, cashless" is one of the professed role of digital India

Keywords: digitalisation, payment behaviour, financial transaction behaviour, cashless economy, modes of payment

1. Introduction

What is cash less economy? A cashless economy is one in which all the transactions are done using cards or digital means. The circulation of physical currency is minimal. India uses too much cash for transactions. The ratio of cash to gross domestic product is one of the highest in the world—12.42% in 2014, compared with 9.47% in China or 4% in Brazil. Less than 5% of all payments happen electronically. The number of currency notes in circulation is also far higher than in other large economies. India had 76.47 billion currency notes in circulation in 2012-13 compared with 34.5 billion in the US. Some studies show that cash dominates even in malls, which are visited by people who are likely to have credit cards, so it is no surprise that cash dominates in other markets as well. 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.

Though it will take time for moving towards a cashless economy, efforts should be made to convert urban areas as cashless areas. As 70% of India's GDP comes from urban areas, if government can convert that into cashless it will be a huge gain. The process of migration will be comparatively easier as it comprises of mostly educated mass and benefit could be multifold. 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.

2. Objectives and hypothesis

OBJECTIVE 1: To study the financial transaction behaviour of urban middle class population.
OBJECTIVE 2: To study the association of financial transaction behaviour by gender, age and employment status.
On the basis of the above objectives, the hypothesis has been formulated.
H_{01} : There is no difference in preference in the mode of payment between different gender at retail outlet and of utility bill
H_{02} : There is no difference in preference in the mode of payment between different age groups at retail outlet and of utility bill
H_{02}: There is no difference in preference in the mode of payment between different employment status at retail outlet and of utility bill

3. Research methodology

The study primarily aimed at understanding the present payment behaviour of urban middle class of Bhubaneswar. It aims to understand the preference of payment methods with respect to gender, age and employment status. Bhubaneswar has been selected because of convenience and also availability of the target group,

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i.e. middle class population. 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. Questionnaire in the form of both Google form as well as hard copy has been administered to the different strata of people so that the objective of the study can be met. The responses of questionnaire depicted the participation of different types of financial transactions such as commodity purchase, payment of school and college fees, utility bills, remittance to family and friends, payment at petrol pumps and online shopping. It was revealed that 93% of sample subjects were involved in commodity purchase, 81% pay utility bills, 71% do online shopping, 67% transact at petrol pumps, 58% remit money to family and friends and 44% are involved in payment of school and college fee. The payment at retail outlet and utility bill has been taken in this study as it is an inevitable expenditure undertaken by majority of the population. It also offers all modes of payment unlike other expenditure so the choices made can be clearly mapped out.

Research design in this study specifies the methods and procedures for conducting the research work. The plan, structure and strategy of investigation have been conceived so as to obtain answers for research questions. The appropriate design has been selected as per the research objectives and is used for obtaining the required data.

Firstly, a descriptive approach has been adopted in the research design; the approach has leaded us to get the desired result by using cross-sectional study. The cross-sectional study among the urban middle class population in Bhubaneswar has been based upon the methodology that is most suitable for empirical analysis has been undertaken. It has been helpful on fulfilment of the objectives of the research. The research method is as Quantitative in nature.

The data analysis has been done with descriptive statistics and also techniques like Chi Square 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. SPSS-19 statistical software has been used for analysis of the data and interpretation done based on the output of the software.

4. 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 in the chapter according to the objective of the study.

Profile of the sample

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.

Table 1: Age Distribution of Study Subjects by Gender

| 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 1: Mean Age of Sample Subjects
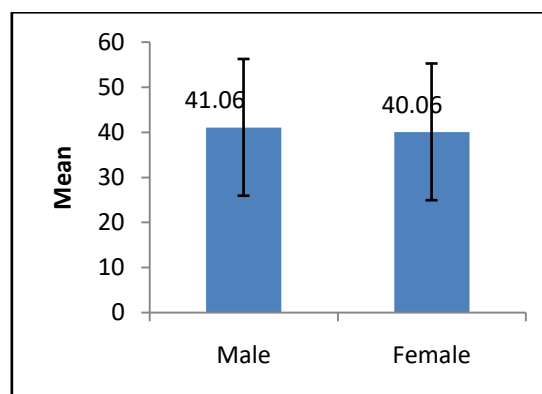
Employment Status

Table 2 and **Figure 2**, 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		χ2, 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	χ2=22.446 p=0.000
Employed/Self employed	34	68	17	34	51	51	
Total	50	100	50	100	100	100	

Figure 2 : Employment Status of Study Subjects by Gender
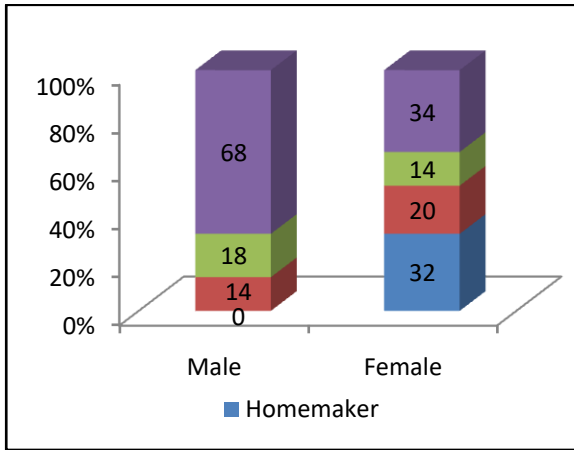
Preferred Mode of Payment at Payment Points

Preferred Mode of Purchase at Retail Outlet

By Gender

     Table 3, **Figure 3**: At retail outlets, cash transaction is mostly preferred by 34% and moderately preferred by 47% and least preferred by 19%. The moderately preferred and the most preferred together constituted 81%. Net banking is least preferred mode of transaction by 73% respondents. Debit/credit card swiping is most preferred mode of transaction by 68% respondent. This shows that even though there is a preference for cash transaction, debit/credit card swiping is also becoming popular at retail outlet. There is no significance difference in cash usage as the preferred mode of payment at retail outlet between male and female (p=0.909). Figure 3 reveals that at retail outlets, cash transactions was most preferred and moderately preferred mode of transaction among 4/5th of the respondent, followed by cards and then net banking.

Figure3: Preferred Mode of Payment at Retail Outlet by Gender by Age group
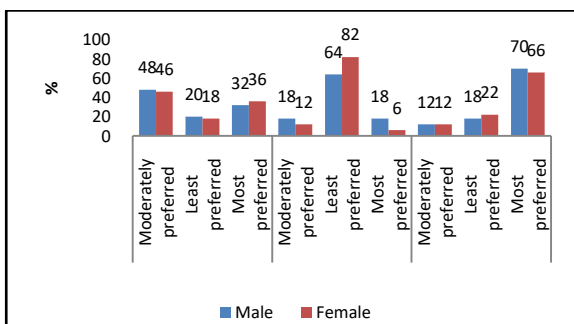

    Table 4, **Figure 4** presents preferred mode of payment at retail outlet by age group. Cash transaction is the most preferred mode of payment among 68.4% respondent above the age of 50 years. The older people prefer to make payment through cash (p=0.010). Among the 18-29 years age group 32.1% stated that net banking is their most preferred mode of transaction, while that proportion reduces to 6.3% in the 30-39 years age group, 4.8% in 40-50 years age group and 0 in more than 50 years age group. Net banking is more associated with younger age group (p=0.001). Debit/credit card swiping was most preferred mode of payment stated by 67.9% respondent in 18-29years age group, 78.1% respondent in 30-39 years age group, 76.2% respondent in 40-50 years age group while 42.1% above 50 years age group stated that debit/credit card swiping is their most preferred mode of payment. Debit/ credit card swiping has more association among people below the age of 50 (p=0.006).

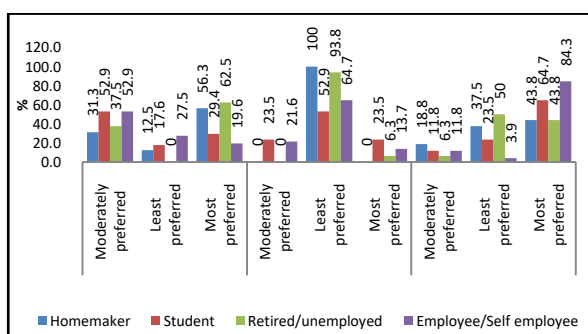**Figure 4: Preferred Mode of Payment at Retail Outlet by Age Group**
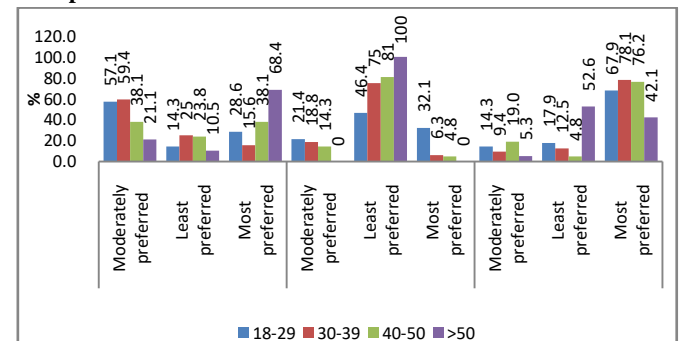
By Employment Status

    Table 5, Figure 5 depicts the preferred mode of payment at retail outlet on the basis of employment status. 56.3% of homemakers and 62.5% of retired/unemployed prefer cash transaction at retail outlets. While 29.4% students and 19.6% of employed people prefer cash. Therefore there is more association of cash with homemakers and retired/unemployed (p=0.012). While net banking is predominantly preferred by students and unemployed group (p=0.017) then the other two groups. Debit/credit card swiping at retail point appears to be the popular with all groups except the retired/unemployed who seem to be using it but not to a great extent. Hence there is a significance difference in the usage of debit/credit card at retail outlet by employment status (p=0.001).

Table 5: Preferred Mode of Payment at Retail outlet Employment Status

Retail outlets mode of payment	Homemaker		Student		Retired/ un-employed		Employee/ Self employee		χ2, p
	No.	%	No.	%	No.	%	No.	%	
Cash									
Moderately preferred	5	31.3	9	52.9	6	37.5	27	52.9	χ2=16.356 p=0.012
Least preferred	2	12.5	3	17.6	0	0	14	27.5	
Most preferred	9	56.3	5	29.4	10	62.5	10	19.6	

Total	16	100	17	100	16	100	51	100	
Net banking (incl mobile banking like debit cards apps, wallets)									
Moderately preferred	0	0	4	23.5	0	0	11	21.6	χ2=15.421 p=0.017
Least preferred	16	100	9	52.9	15	93.8	33	64.7	
Most preferred	0	0	4	23.5	1	6.3	7	13.7	
Total	16	100	17	100	16	100	51	100	
Debit/credit card swiping(at point of sale)									
Moderately preferred	3	18.8	2	11.8	1	6.3	6	11.8	χ2=22.190 p=0.001
Least preferred	6	37.5	4	23.5	8	50.0	2	3.9	
Most preferred	7	43.8	11	64.7	7	43.8	43	84.3	
Total	16	100	17	100	16	100	51	100	

Figure 5: Preferred Mode of Payment at Retail Outlet by Employment

Moderately preferred	9	18	9	18	18	18
Least preferred	24	48	30	60	54	54
Most preferred	17	34	11	22	28	28
Total	50	100	50	100	100	100
Debit/credit card swiping						
Moderately preferred	9	18	10	20	19	19
Least preferred	32	64	36	72	68	68
Most preferred	9	18	4	8	13	13
Total	50	100	50	100	100	100

χ2=1.952 p=0.377

χ2=2.211 p=0.331

Figure 6: Preferred Mode of Payment of Utility Bill by Gender

Preferred Mode of Payment Of Utility Bills
By Gender

Table 6, Figure 6 shows preferred mode of payment for utility bills by gender. Cash is preferred by both gender in equal proportions of 42% each (p=0.965). Therefore, no significant difference exists. There is also no significant difference in the use of net banking to pay utility bill as both agree in equal proportions, i.e. 18% that it is their moderate preferred mode of payment (p=0.377). Both males and females rarely use debit/credit swiping at PoS (Point of Sale) to pay their utility bills. Hence in the usage of net banking and debit/credit card swiping no significant difference is seen.

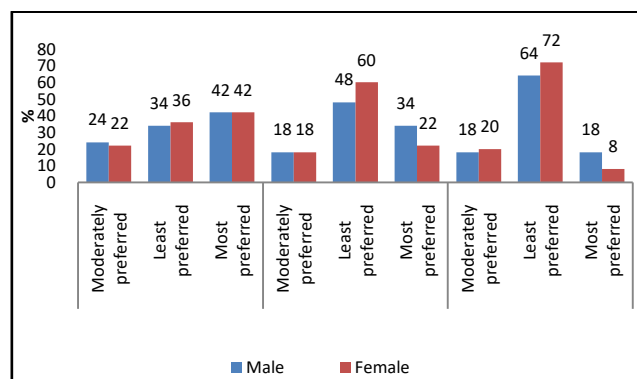**Table 6: Preferred Mode of Payment of Utility Bill by Gender**

Utility bills mode of transaction	Male		Female		Total		χ2, p
	No.	%	No.	%	No.	%	
Cash							
Moderately preferred	12	24	11	22	23	23	χ2=0.072 p=0.965
Least preferred	17	34	18	36	35	35	
Most preferred	21	42	21	42	42	42	
Total	50	100	50	100	100	100	
Net banking (incl mobile banking like debit cards apps, wallets)							

By Age Groups

Table 7, Figure 7 tells about the preferred mode of payment of utility bills by age groups. Cash is most preferred by the elderly, i.e. >50 years by 78.9% and least preferred by 18-20 age group by 46.6% there is more association of cash with the elderly in payment of utility bill (p=0.009). Net banking is more associated with 18-29 and 30-40 age groups. None of the respondents of age 50 years and above use net banking to pay their utility bills (p=0.003).debit/credit swiping is moderately preferred by the age group of 18-29 but not by the other age group (p=0.007).

Table 7: Preferred Mode of Payment of Utility Bill by Age Group

Mode of payment for Utility bills	18-29		30-39		40-50		>50		χ2, p
	No.	%	No.	%	No.	%	No.	%	
Cash									
Moderately preferred	6	21.4	11	34.4	5	23.8	1	5.3	χ2=17.204 p=0.009
Least preferred	13	46.6	13	40.6	6	28.6	3	15.8	
Most preferred	9	32.1	8	25	10	47.6	15	78.9	

Total	28	100	32	100	21	100	19	100	

Net banking (incl mobile banking like debit cards apps, wallets)

Moderately preferred	5	17.9	7	21.9	5	23.8	1	5.3	$\chi2=20.182$ p=0.003
Least preferred	13	46.4	11	34.4	12	57.1	18	94.7	
Most preferred	10	35.7	14	43.8	4	19	0	0	
Total	28	100	32	100	21	100	19	100	

Debit/credit card swiping

Moderately preferred	9	32.1	9	28.1	1	4.8	0	0	$\chi2=17.585$ p=0.007
Least preferred	14	50	21	65.6	15	71.4	18	94.7	
Most preferred	5	17.9	2	6.3	5	23.8	1	5.3	
Total	28	100	32	100	21	100	19	100	

Figure 7: Preferred Mode of Payment of Utility Bill by Age Group By Employment Status
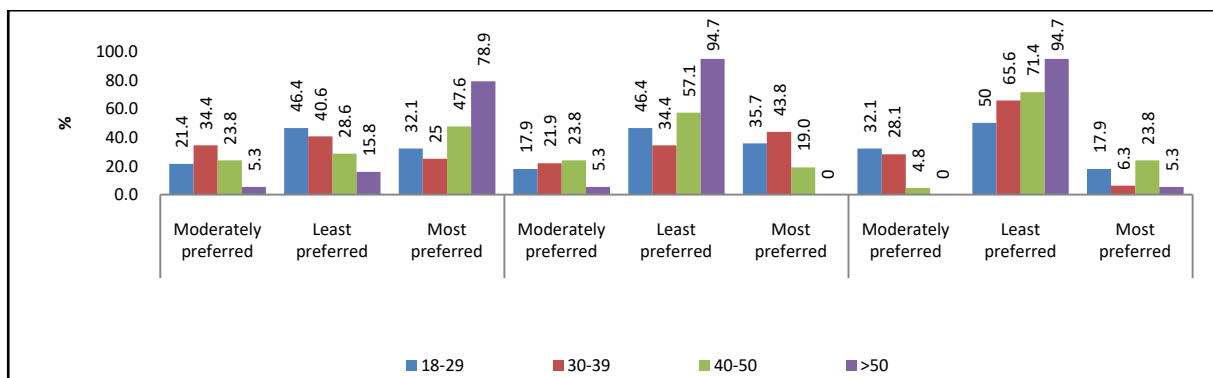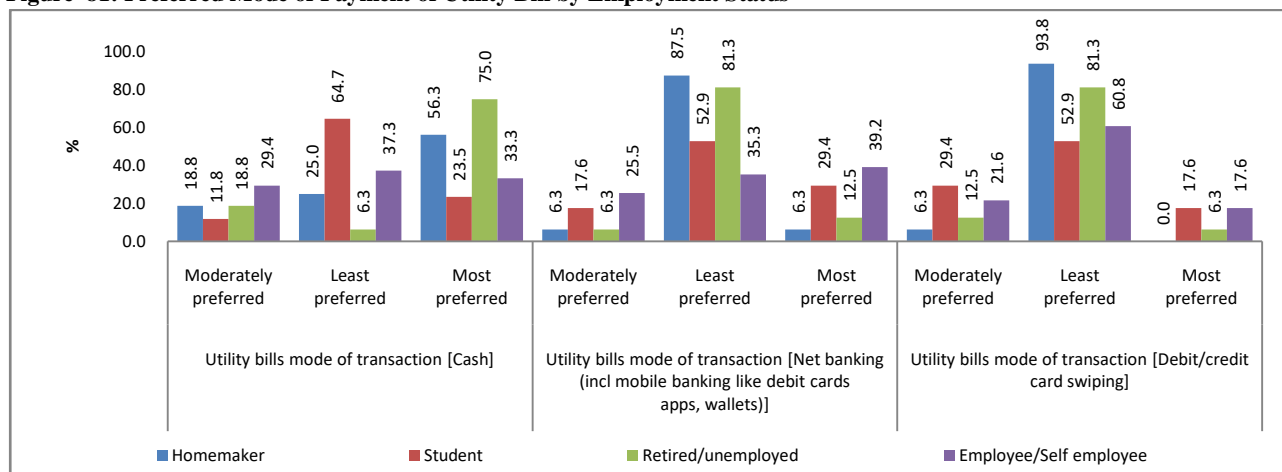

Table 8, Figure 8 depicts the preferred mode of payment for utility bills by employment status. 56.3% homemakers and 75% retired/unemployed group prefer cash as a mode of payment for utility bills. While cash was least preferred by students and employed groups by 64.7% and 37.3% respectively. Hence there is a significant difference in the use of cash as a mode of payment for utility bills (p=0.006). The most preferred mode of payment was net banking in case of employed group (p=0.004). Debit/credit card was least and moderately preferred by students and employed but was not seen in use amongst homemaker and retired/unemployed group (P=0.144). Therefore there exists a significant difference in the mode of payment of utility bills by employment status in case of cash and net banking.

Table 8: Preferred Mode of Payment of Utility Bill by Employment Status

Retail outlets mode of payment	Homemaker		Student		Retired/ unemployed		Employee/ Self employee		$\chi2$, p
	No.	%	No.	%	No.	%	No.	%	
Cash									
Moderately preferred	3	18.8	2	11.8	3	18.8	15	29.4	$\chi2$=17.907 p=0.006
Least preferred	4	25	11	64.7	1	6.3	19	37.3	
Most preferred	9	56.3	4	23.5	12	75	17	33.3	
Total	16	100	17	100	16	100	51	100	
Net banking (incl mobile banking like debit cards apps, wallets)									
Moderately preferred	1	6.2	3	17.6	1	6.3	13	25.5	$\chi2$=19.258 p=0.004
Least preferred	14	87.5	9	52.9	13	81.2	18	35.3	
Most preferred	1	6.3	5	29.4	2	12.5	20	39.2	
Total	16	100	17	100	16	100	51	100	
Debit/credit card swiping									
Moderately preferred	1	6.2	5	29.4	2	12.5	11	21.6	$\chi2=9.573$ p=0.144
Least preferred	15	93.8	9	52.9	13	81.3	31	60.8	
Most preferred	0	0	3	17.6	1	6.2	9	17.6	
Total	16	100	17	100	16	100	51	100	

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Figure 81: Preferred Mode of Payment of Utility Bill by Employment Status

5. CONCLUSION

The objective of the study was to identify two important aspects of financial transaction behaviour of urban middle class people. The first one was to study the kind of transaction they undertook and the second one was to study the association of financial behaviour with demographic factors like gender, age and employment status.

It was seen that out of the major expenditure incurred by urban middle class, purchase at retail outlet and utility bills ranked first and second in terms of occurrence hence considered for this study.

It was observed that gender, age and employment indulged in different types of payments modes and to varied extent. The various modes of payment such as cash, debit/credit card(PoS) and net banking(apps, wallets etc) with respect to different kinds of transaction such as commodity purchase and utility bill showed varied association with gender, age and employment, concluding that there exists a disparity in the choice of mode of payment depending upon gender, age and employment status in the urban middle class population in Bhubaneswar.

In case of using different modes of payment at retail outlet, debit /credit card has shown considerable preference as cashless means of payments over all gender, age and employment. But net banking was only associated with the youth. Hence the need to encourage the usage of net banking has to brought about at retail outlets and to buyers at these outlets.

The importance to introduce cashless transaction for utility bills has been noticed as cash dominates this area. If special attention could be given to homemakers, retired people and population above the age of 40 to incorporate cashless transaction for utility bills then a big difference could be accomplished in the direction of cashless economy.

LIMITATION

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.

IMPLICATIONS

This research attempts to find out the extent to which digitalisation has touched every segment of population around us. It throws light on the dominance of cash and the preference of digital payments only by limited population. This paper is useful for differentiating the preference of mode of payment vis a vis different transaction across various demography

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