

Use of Technology in Unorganized Retail Business: Studying Extended TAM on selected Unorganized Retailers in Indian

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Abstract

As India is stepping towards building up a strong digitized and cashless society, the biggest challenge the country is facing is the adoption of digital mode of payment by the consumers and marketers especially in the rural and semi-urban area. While the organized sector has already adopted the cash less trading practices for quite a long time, the unorganized sector is yet to follow the pace. Behavioral scientists view that adoption of innovations and technology is a greater matter of perception which governs an individual towards adoption/discarding such practices. Hence, it is important to study the perception of the unorganized retailers towards the adoption of Cash Less Trading (CLT) practice. Hence, the present study is an effort in this direction to investigate the demographic influence of unorganized retailers towards CLT adoption. Further, it also studies the perception of these retailers towards the adoption of CLT practices more specifically in context of rural and semi-urban areas.

Key words: Cashless Trading Practices, Technology Acceptance Model, Users' Perception, Unorganized Retail Sector.

1. Introduction

Over the last few decades, Information and Communication Technology (ICT) has completely transformed human and organisational life in all aspects. This transformation happened especially after the invention of computers, internet, cellular phones etc. Technological advancement, more specifically in trade and commerce, has resulted in magnifying growth in the overall economic system. The world business environment is constantly marching from cash-based transaction to cash-less payment system especially after the proliferation of ICT and digital technology. India is one of the most cash-dependent countries in the world, having a high circulation of cash, estimated at 18 percent of the total GDP (NPCI: Driving digital revolution, 2016). The paper currency production cost is estimated at

Rs 40 billion per annum to the RBI. However, smart-phone penetration, internet proliferation in all over India, most importantly in the rural vicinity which (constitutes about 68 percent of total population), increased awareness of digital payment, preference for hassle-free transactions are some of the factors driving emergence of CLT practice. (NPCI: Driving digital revolution, 2016). Compared to the world-wide digital payment proliferation, Indian payment system is far behind. Being at the door step of inception, Indian Economy contributes only 2 percent towards the progress of its cashless journey as compared to China recording 10 percent non-cash payment as per the reports cited by NPCI, 2016. The adoption of technology based payment system in India has challenged most of the retail organisations to shift from more conventional paper based payment system to electronic payment modes.

2. Position of Cash and Non-Cash Transactions in India

The payment system in India is largely dominated by cash but with the rapid development and modernisation of economy, non-cash payments are slowly and steadily penetrating. Compared to other developing countries, cash-intensity in India is very high. Refer Exhibit 1 in Appendix.

Figure no 1 depicts the growth of electronic payment system in India from November 2016 to October 2017. It can be observed from the above figure that UPI had emerged in the market of electronic payment from 0.3 million in November 2017 to 76.8 million in October 2017. Unstructured Supplementary Service Data (USSD) had shown almost a consistent performance throughout the period. During December 2016 and January 2017, just after the introduction of Demonetisation Policy (whereby the Government of India banned the old currency notes of INR 500 and INR 1000 from circulation), the use of USSD and Point of Sale (POS) had displayed highest amongst all.

3. Adoption of Cash less Trading by Unorganised Retailers

As India is stepping towards building more a cashless society, the biggest challenge the country is facing is the adoption of digital mode of payment by the consumers and marketers especially in the rural and semi-urban area. While the organized sector has already adopted the cash less trading practices for quite a long time, the unorganized sector is yet to follow the pace. Demonetisation of Indian currency (on November 2016) had played a prominent role in boosting cashless trading practices more specifically amongst the unorganised retailers (Business Standards, 2016). However, a bigger mass of retailers in the unorganized sector are still out of the ambit. Rapid technological innovations especially in the payment system have brought major challenges for the unorganized retail sector. The major challenges being faced are lacking computer literacy, technology awareness, readiness to adopt, lacking customer demand for CLT, regulatory support (directly/indirectly) etc. Unorganised retailing is the traditional format of low-cost retailing often established near the residential areas, for e.g. local mom and pop stores, convenience stores, owner manned general stores, mobile vendors, paan/beedi shops, hand cart and pavement vendors etc (Kakkar2016).

Besides, behavioural scientists view that adoption of innovations and technology is a greater matter of perception which governs an individual towards adoption/discarding such practices. Hence, it is important at this juncture to study the perception of the unorganized retailers towards the adoption of CLT practice. Hence, the present study is an effort in this direction to investigate the demographic influence of unorganized retailers towards CLT adoption. Further, it also studies the perception of these retailers towards the adoption of CLT practices more specifically in context of rural and semi-urban areas.

4. Review of Literature

There have been number of studies devoted to identify the perception of users towards technology adoption. Various models have been developed to examine the perception of users from time to time. Amongst all the models developed Technology Acceptance Model (TAM) is the most popular and widely adopted to study the perception towards adoption of any technology (e.g. adoption of Internet banking, e-commerce etc).

Technology Acceptance Model (TAM):

The Technology Acceptance Model (TAM) introduced by Davis (1989) (as depicted in figure no 2 in Appendix) identified the reasons behind the acceptance and rejection of Information Technology by the users. It is adapted from various theories to examine the use of information technology, such as Theory of Reasoned Action (TRA) by Fishnein and Ajzen (1975), Theory of Planned Behaviour (TPB) by Ajzen(1991) and Diffiusion of Innovation by Rogrers(2003).

TAM provides a platform for tracing the impact of External Variables over the internal beliefs, intention, attitudes and actual use of users. Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are the two important mediating factors which influences the behaviour intention of users which ultimately leads to its actual use. Davis (1989) explained PU as “the degree to which a person believes that using a particular system would enhance his or her job performance” and PEOU as “the degree to which a person believes that using a particular system would be free of efforts.” Both PU and PEOU are the main constructs of TAM that determine the attitude of users ultimately framing their behavioural intention leading to the actual use.

Literature Review on TAM and Other related models:

TAM had been validated and tested in both developed and developing economics for studying the acceptance of information technology by many researchers, such as Amoroso and Gardner (2004) Leyton, et al. (2014) Ramayah et al. (2002) Safeena et al. (2012) and Sinha (2016) . Researchers used this model as a base to elucidate the behavioral intention of users towards the adoption of technologies. Al-Fahim et al. (2016) and Esmaeilpour et al. (2016), Jahangir and Begam (2008) in their extended study of the Technology Acceptance Model (TAM) established two most important factors i.e. PU and PEOU which frame the attitude and intention of users to adopt new technology. However, Ashraf et al, (2014) and Padashetty and K.K (2013) found PEOU played significant role compared to PU in influencing the behavioral intention of users to accept a new technology. On the contrary, Ramayah et al. (2002) confirmed the importance of PU in determining technological use as compared to PEOU. Similarly, Nigam (2017) used TAM as a theoretical model to examine the adoption of Bharat Interface for Money (BHIM) mobile application for cashless payment and revealed PU as an important construct in determining the intention of users other than their attitude. The study also recommended to include additional constructs such as Usage, User Experience and Users Characteristics.

Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003) used independent variables (performance expectancy, effort expectancy, social influence and facilitating conditions) to measure the behavioral intention of users and the use of technology. As identified by Dajani (2016), Janson et al. (2013) and Koenig-Lewis et al.(2015) performance expectancy, effort expectancy, social influence and other external factors exerted positive significant relationship with behavioural intention of users. Koenig-Lewis et al. (2015) used Technological Acceptance Model and Unified Theories of Acceptance and Use of Technology (UTAUT) both as theoretical foundation to

access the adoption of mobile payment and highlighted that mobile payment services can be improved if the perceived risk factor is critically addressed. Moreover, Dajani (2016) identified perceived risk, government support and compatibility as the insignificant factors influencing the behavioural intention. On the contrary, Tai and Liu (2015) in their research concluded that compatibility had the most significant influence on PEOU and PU compared to other factors. Janson et al. (2013) in his study based on Unified Theory of Acceptance and Use of Technology (UTAUT) identified that facilitating conditions and behavioural intention, had a positive impact on actual use of electronic payment. Mohar (2017) also revealed that facilitating conditions played a significant role towards the adoption of technology.

Jiang (2010) in his research framework tried to propose a model called Technological Personal Environment (TPE) which could help to investigate the influence of technological, personal and environmental factors to frame the attitude of individual level technological acceptance. Amoroso and Gardner (2004) tried to establish a link among the construct of TAM i.e. PEOU, PU, Attitude towards using internet, Intention to Use and Actual Use with the help of external variables such as Gender and Experience which enhance the organisation's ability to determine the acceptance level of internet by its consumers. Jahangir and Begam (2008) found that security and privacy had direct negative influence towards the customers' adoption of e-banking. However, Rathore (2016) suggested that organising awareness programmes to look after the security and safety matters, offering discounts and reward points can increase the popularity of digital wallets among customers.

Review of literature explored a number of studies conducted using TAM and other related models. However, most of these studies focused on the users' adoption of e-commerce and internet banking. Studies using TAM model on the acceptance of other electronic payment system are found scanty. Moreover, different authors have incorporated different constructs like PEOU, PU, Perceived Risk (PR), facilitating conditions, compatibility which influence the behavioural intention of users towards the acceptance of a new technology. Whereas variables like Customer pressure (CP), Regulatory Pressure (RP) and ICT readiness etc which are more relevant to such study were ignored in all these studies. These factors also play prominent role to confirm users' acceptance of technological innovation. It has also been noticed that there exist no literature pertaining to use of technology unorganised retailer sector.

Therefore, the present study is an attempt to study unorganised retailers' perception towards adoption of CLT practices in rural and semi-urban areas focusing on the TAM model using additional/unexplored constructs. Cashless trading practices is a new phenomenon for Indian economy and there exists dearth of study in this area so far. Thus in the wake of evident research gaps an attempt has been made to explore the perception of unorganised retailers towards the use of CLT practices in Indian context.

Proposed Model and Hypotheses Formulation:

Against the backdrop of the available literature on Technology Acceptance Model (TAM) (Davis, 1989) and other related models, the study has adopted an extended TAM model (as depicted in Figure 3 in Appendix) to examine the perception of unorganised retailers on CLT Practices.

5. Hypotheses of the Study

Based on the extended proposed model and objectives undertaken following hypotheses have been set:-

H1: Competitive Pressure (COP) has a significant positive impact on Perceived Ease (PE).

H2: Customer Pressure (CUP) has a significant positive impact on Perceived Ease (PE).

H3: ICT readiness has a significant positive impact on Perceived Ease.

- H4: Competitive Pressure (COP) has a significant positive impact on Perceived Usefulness (PU).
H5: Customer Pressure (CUP) has a significant positive impact on Perceived Usefulness (PU).
H6: ICT readiness has a significant positive impact on Perceived Usefulness.
H7: Perceived Ease (PE) of Use have a positive significant impact on the Perceived Usefulness.
H8: Perceived Risk (PR) has a significant negative impact on Perceived Usefulness.
H9: Perceived Ease (PE) of Use have a positive significant impact on Behavioural Intention
H10: Perceived Usefulness (PU) has a significant positive impact on Behavioural Intention.
H11: Perceived Risk (PR) has a significant negative impact on Behavioural Intention.

6. Data Analytical Tools and Techniques

The study collected data from the unorganized retailers from Hailakandi district of Assam, India in 2017. Data have been gathered from the three sub divisions of Hailakandi district consisting of Hailakandi town, Algapur area and Lala town. Primary and secondary data were used in the study. Primary data which plays a pivotal role for carrying out the research work were collected from the respondents by drafting a schedule based on proposed TAM. Additionally, secondary data were collected from different published and unpublished sources such as books, government reports, research journals, articles, thesis, and internet sources written on the subject for the smooth accomplishment of the current study.

- a) Sample size:** The present study is confined to a sample of 200 respondents from six broader categories of unorganised retail business. List of population of the registered number of unorganised retailers were collected from the municipality office of each area. Table 1 in Appendix provides the description of the sample.
- b) Sampling method:** The number of retailers from each of the categories is selected on a proportional basis following the Probability Proportionate to Size. (PPS) sampling with 90 per cent confidence level and 10 percent confidence interval. According to PPS sampling technique larger clusters have bigger probability of being sampled.
- c) Period of data collection:** The survey had been conducted from July 2017 to August 2017.
- d) Tools for data collection:** Interview schedule has been developed and categorised into three sections. The first section is associated with the demographic profile of retailers. The second part deals with the specific parameters on perception of retailers about CLT practices considering PEOU, PU and behavioural intention as latent variables and competitive pressure, customer pressure, ITC readiness, perceived risk as independent variables. The final part of schedule deals with the factors driving and obstructing the use of CLT. Field investigation was conducted personally in order to get accurate and valid information. Responses were mainly noted in five point likert Scale 1 to 5 ranging from Strongly Agree to Strongly Disagree respectively.

7. Tools and Techniques for Data analysis:

The responses from Interview schedule have been edited, analysed and interpreted by SPSS 17. Moreover, AMOS 24 is used to get desired results. Besides, MS Excel has been used to construct charts, diagrams and frequency table etc wherever necessary. Following statistical tools are employed for empirical investigation:

- a) Reliability test:** Reliability is the degree to which observed variable measures the “true” value and is “error free” values (Hair et al., 2009). Internal consistency reliability finds out the inter-

correlation and consistency of multiple variables with one another defining an individual construct. Higher reliability represents greater consistency and vice versa (Churchill, 1979). Thus, it is an assessment device which obtains stable and consistent results. The commonly used Internal consistency reliability is Cronbach's co-efficient α . (Roy & Sinha, 2014 and Heir et al., 1995) suggested Cronbach's co-efficient α more than 0.70 is considered as highly reliable.

- b) Validity:** Validity is the degree to which measuring device truly attains what it intends to find out. It is the accuracy of the measured value. Convergent Validity is the extent to which two different variables designed to measure the same latent variables correlates with each other. High correlation specifies that the scale is measuring its concept (Hair et al., 2009). Average Variance Extracted is calculated to measure the convergent validity.
- c) Exploratory Factor Analysis (EFA):** Since a large number of factors under each construct were included in the process of data collection, factor analysis is used to facilitate data reduction and in order to arrive at a relatively small number of factors that account for the almost explained variability.
- d) Structured Equation Modelling (SEM):** Structural Equation Modelling is a statistical procedure that is used to impart the structural relationships between observed variables and unobserved latent variables. SEM incorporates confirmatory (i.e. hypothesis-testing) factor analysis, path analysis, partial least squares path modelling. It is very useful where certain variables cannot be directly observed, such as intelligence, achievement, or beliefs.
- e) ANOVA:** To measure if there is any significant difference in the CLT usage behaviour among different groups by Age, Income, Education, Nature of business, and Numbers of years in business, Analysis of variance (ANOVA) was performed for each of the selected demographic variable.

8. Data Analysis and Results

The demographic profile of respondents is presented in Table 2 in Appendix with a total sample size of 200 respondents. The data indicated that majority of retailers (42.5%) falls under the age group of 31-40 years. In education level, the survey explained that retailers using CLT are mostly graduates (44.5%) followed by HS (32.5%) passed. Most of the retailers practicing CLT (38%) are earning within 10-20 thousands monthly. Considering nature of business, it is seen that majority of retailers (23.5) operating stationary shops followed by (21%) grocery stores. The sample shows that the highest response rate has come from retailers operating business (40%) more than 10 years.

Details of Preference regarding the different means of cashless trading:

It is seen that NEFT is the highly operated CLT equipment with 141 users (Refer Table 3 and figure 4 in appendix), followed by RTGS with 98 users. However, the penetration of latest CLT equipments such as swipe machine, e-wallets and BHIM are comparatively less among the unorganised retailers under study. The one way analysis of variance (ANOVA) displays that retailers' Cashless Trading (CLT) usage intention across all the demographic variables have significant difference except Age and Educational Qualifications (Refer Table 4 in appendix). Income level indicated that there is significant difference in CLT usage behaviour over the six Income groups with p value less than 0.05 level of significance which infers that high income retailers who are more likely to transact in higher volume of trade and maintained current account with banks have greater potentiality to use CLT through the mode

like NEFT, RTGS etc. This result conforms with earlier studies viz; Annin et al. (2013),Teka (2017) which tried to establish the demographic influence on e-banking adoption.

Similarly, usage of Cashless Trading (CLT) across all the categories of business reveals that there is significant difference in CLT usage behaviour over the six retail businesses with, p value less than 0.05 level of significance. This outcome exposes that different categories of retailers have different CLT usage behaviour.

The one way analysis of variance (ANOVA) output of use of Cashless Trading (CLT) across the No of years in business which also indicates that there is significant difference in CLT usage behaviour over the No of years in business with p value less than 0.05 level of significance. The analysis reveals that most of the retailers operating business more than 10 years feel hesitant to adapt new technologies. However, young retailers feel that adopting any innovation in the particular field would help to smoothen the functioning.

Reliability test

To verify the reliability and internal consistency of the eight constructs, it is observed that Cronbach's α co-efficient and Convergent Reliability were conducted before the confirmatory factor analysis. Chronbach's alpha in case of all the 8 constructs were found to be more than .70 except based on the framework constructed for the study (Refer Table 5 in appendix). Table 5 in appendix displays the overall reliability value of Chronbach's alpha is .861 which more than the recommended value.

Exploratory Factor Analysis Results

The results of Exploratory Factor Analysis as presented in Table 6 in appendix represents the factor loading of all the observed variables or items ranging from 0.613 to 0.890.

Composite Reliability and Discriminant Validity of the Constructs:

In order to ensure convergent validity, the Average Variance Extracted (AVE) for each attribute is calculated as exhibited in Table 7 in appendix, using their factor loadings. As per the rule of thumb, the AVE should be more than 0.5 or above to confirm convergent validity which in this case is high for five out of eight constructs. Eventually, the Composite Reliability of each construct is more than 0.60.

Measurement Model:

The construct validity of the measurement model is estimated using measurement model. AMOS (Analysis of Moments Structures) with maximum likelihood estimation was used to analysis the data. The measurement model is tested using CFA to assess the reliability and validity of the seven constructs: four exogenous variables i.e. Customer Pressure (CUP), Competitive Pressure (COP), Perceived Risk (PR), ICT Readiness (ICTR),two mediating factors Perceived Ease (PE) and Perceived Usefulness (PU) and endogenous factor Behavioural Intention (BI).The indices of measurement model proved the overall validity and reliability of measurements. As a result, our model is reasonable acceptable to assess the results of SEM techniques. Refer Figure 5 in appendix.

Strucural Equation Modeling

SEM is applied to test the relationship between factors in the proposed research model. The SEM after adjusting the theoretical model is exhibited in Figure No 6 in appendix.

Table 8 in appendix depicts the results of Measurement model and Structural Model along with their recommended values. The overall CFA and structural model generated a relatively good fit observing the following combination of common model-fit measures: normed chi-square ($\chi^2/\text{d.f.}$) comparative Fit Index(CFI), Normalized Fit Index(NFI), Goodness-of-fit(GFI), Root mean square error of approximation(RMSEA).

Results and Discussion:

The empirical investigation of the study highlighted that **ICTR has the most significant influence on Perceived ease of use** having regression weight .482 with p-value less than .05. The retailers those who have already installed and connected ICT tools and equipments such as computers, e-banking facilities etc. with their business or the retailers those who are ready to install all these ICT equipments, find it easy to adopt CLT practices. Thus, ICTR (being an exogenous variable) is indirectly associated with the behavioural intention towards the adoption of CLT through mediating factor perceived ease.

Competitive pressure positively influences Perceived usefulness having regression weight .145 with p-value .037 less than .05. Thus, the findings of the study highlight that competitive forces from other retailers whether organized or unorganized retailers influences the Perceived Usefulness which ultimately enhances their productivity and job performances.

The regression weight of **Perceived ease on Perceived Usefulness** is .242 with p-value less than .05. The relationship of Perceived ease and Perceived usefulness revealed that when the unorganized retailers find it easy to learn and operate CLT, their perception about its usefulness also enhances. This points out that when operating a system is stress free, it does not require much mental and physical effort, the retailers will perceive it as capable of improving their work performance.

The regression weight of **Perceived ease on Behavioural intention** is .543 with p-value less than .05. Thus, Perceived Ease of use positively affects Behavioural Intention. The final outcome of the study reveals that when the retailers find it easy to learn, operate, maintain CLT practices, the behavioural intention towards the adoption of CLT is automatically framed. This means that there is a direct relation between adoption of CLT and perceived ease of use i.e behavioural intention is directly influenced by perceived ease.

The regression weight of **Perceived usefulness on Behavioural intention** is .227 with p-value .026 less than .05. Thus, Perceived usefulness positively affects Behavioural Intention. The findings of the study reveals that using CLT system minimizes mental and physical stress, work load, maintenance cost, brings safety and assurance etc. which directly influences the behavioural intention towards the adoption of it.

The regression weight of **Perceived risk on behavioural intention** is -.10 with p-value .044 less than .05. Therefore, Perceived risk negatively impacts with Behavioural intention. The results of the findings disclosed that Behavioural intention towards the adoption of CLT is directly and negatively associated with Perceived risk. If the retailers perceive that operating CLT is safe, secured and encrypted, it will directly influence their Behavioural intention negatively towards the adoption of CLT and vice-versa. Refer Figure 7 in appendix to see the resulted model of the study.

9. Recommendations and Suggestions

Based on the findings of the study, following recommendations and suggestions are offered to encourage the adoption level of CLT amongst unorganised retailers and to improve the position of CLT in India more specifically in Unorganised retail sector:-

1. Since ICT readiness has a significant association with Perceived Ease, the policy makers and regulatory authority should try to make adequate arrangements so that retailers deliberately come forward to adopt such practices. Offering CLT equipments at subsidised and marginal rates to the unorganised retail sector more specifically in semi-urban and rural locations may induce adoption. Awareness and training programmes should also be arranged from time to time to provide an operational knowledge and benefits associated with different CLT equipments. Further, ease to handle digital appliance should be launched to promote the use of CLT practice.
2. The early adopters should take a lead role in persuading and influencing the other retailers towards the use of CLT practices as there is a need for overall digitization both forward as well as backward. So that competition will intensify the adoption of CLT practices and will develop a healthy competition amongst the retailers.
3. As retailers perceives risk as the main barrier towards the acceptance of CLT practices. Hence, ensuring safety, security and privacy in this field will prove to be an effective solution. In addition, conducting awareness programmes, developing mobile apps to bring awareness amongst the users, providing toll-free numbers to answer any query related to digital payments will also be helpful to emerge Cash-less as a risk free settlement mode.
4. The findings of the study recommends that both perceived ease and perceived usefulness directly influence the behavioural intention to CLT practices. Offering proper advertisements, training and showing the performance of other retailers in this area can be helpful to frame positive intention of retailers.

10. Conclusion

The outcome of the result signified that out of all the external variables *ICT Readiness* has the most significant influence on Perceived Ease. Retailers with higher level of ICT Readiness, find it easy to adopt CLT practices. The results also demonstrated that *Competitive Pressure* has a significant impact on perceived usefulness which justifies the role of early adopter to make the other retailers in framing a positive perception and to emulate the CLT practices. The retailers with high-level of perceived ease of use do not find it difficult to learn, operate CLT equipments, instead they perform it very efficiently than those with lower-level of perceived ease.

The results also highlighted that both Perceived Ease and Perceived Usefulness exerted significant impact on the Behavioural Intention towards the adoption of CLT. Perceived Ease comparatively played greater role in motivating the behavioural intention of retailers at the early adoption stage of CLT. Perceived usefulness in turn has a positive influence on the behavioural intention of retailers. Perceived usefulness could further be improved by introducing hassle free cash less services without increasing the complexity in use. Further, it has been noticed that Perceived risk has a direct significant impact on Behavioural intention towards the use of CLT. Retailers perceive risk when they face uncertainty and

worry about undesirable consequences. It is found that most of the retailers felt reluctant to operate CLT equipments because they perceive it to be risky and insecured.

11. Future Implications

The present study has been performed taking five variables i.e. competitive pressure, customer pressure, ICT readiness, Perceived risk, perceived ease and perceived usefulness (Independent variables) to measure the behavioural intention (dependent variable) of unorganised retailers towards CLT adoption. On the basis of model summary results, it is recommended that future research should be conducted considering other variables those are absent in the present study. Further, the study is limited to the perception of unorganised retailers. Therefore, future research could be performed to access the customers' behavioural intention towards CLT usage.

12. Limitation of the study

Conducting any research work involves limitations and this research is also not out of this. One of the limitations of the study was the limited number of sample size due to time constraint. The study area was confined to only semi-urban and rural backdrop of India i.e. Hailakandi district which restricted the number of data collected. Thus the results may as well change in urban localities. Also the study is confined only to the perception of five categories of unorganised retailers. This also imposes a restriction on the final outcome of the study. Moreover, the study was carried out in short run; therefore the results may vary in long run due to technological proliferation, implementation of various lucrative schemes and incentives offered by the government.

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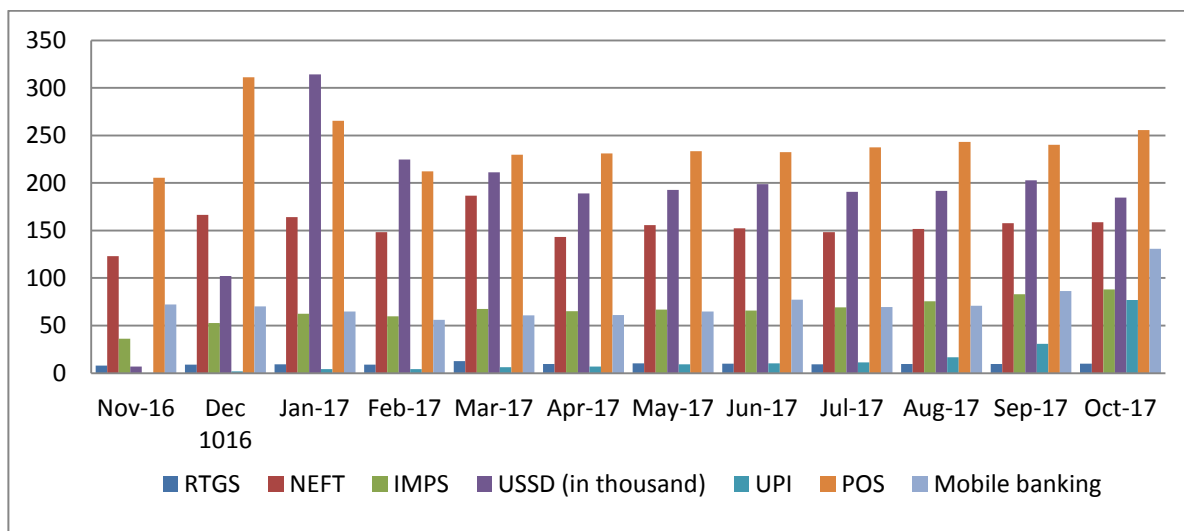
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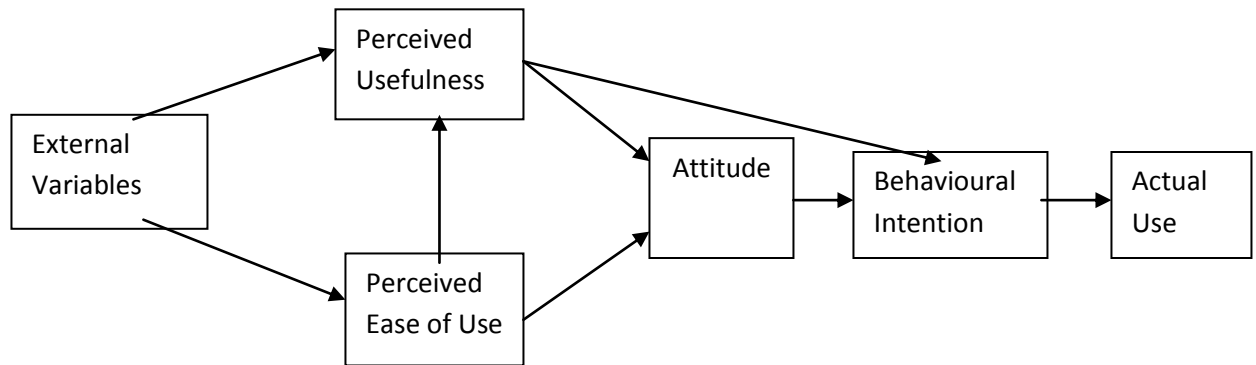
Appendix

Figure 1: Growth of Electronic Payment System from November 2016 to October 2017 (volume in million)



Sources: Reserve Bank of India, November 2017, Excel output

Figure 2: Technology acceptance Model (TAM) Davis et al., (1989)



Source: Review of Literature

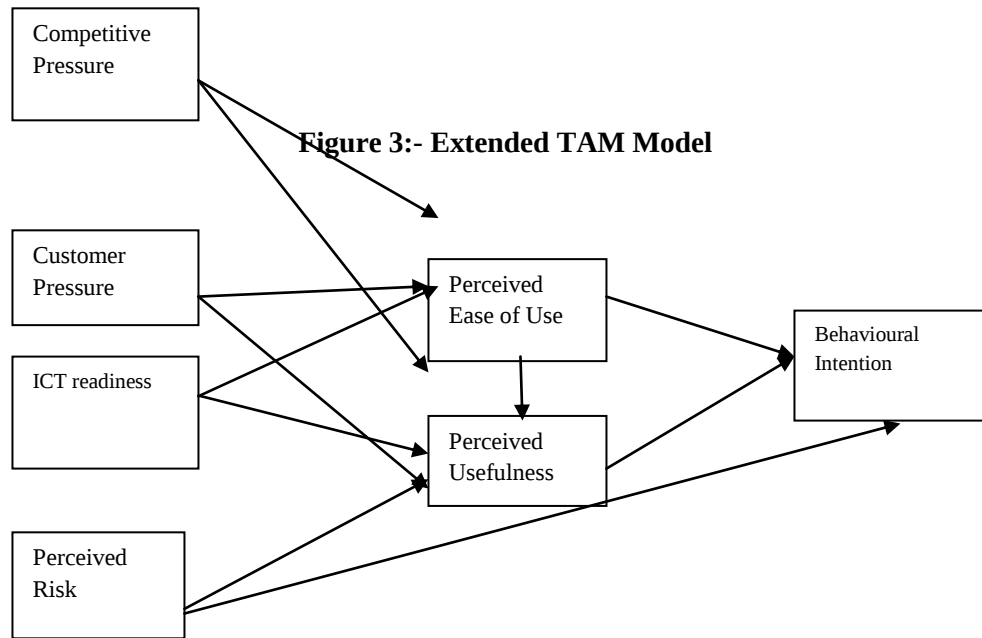


Table 1: Different categories of unorganised retailers with sample size

Format	Sample size	Description
Grocery	42	Sells pulses, cereals, wheat, sugar, butter, sauce, spices, jelly, edible oil, home and personal care, bakery and milk products, paan, cigarette etc.

Stationary	47	sells gifts, lighting, toys, books, note books, pen, pencils etc.
Pharmaceutical	25	Sells medicines, drugs etc.
Hardware	38	Sells utensils, sanitary ware, cleaning products, hand tools, power tools, electronic supplies, paints, cements, rods etc.
Telecoms	17	sells mobile phones and services like issuing sim cards etc.
Hotels and Restaurants	31	provide accommodation, meals, fast foods, beverages etc.

Source: Field Survey

Table 2: Personal characteristics of the respondents:-

Category	F	C.F	%	Category	F	CF	%
Age				Qualification			
21-30	40	40	20	<HSLC	21	21	10.5
31-40	85	125	42.5	HS	65	86	32.5
41-50	44	169	22	Graduate	89	175	44.5
51-60	25	194	12.5	Post-Graduate	25	200	12.5
>60	6	200	3		200		100
Total	200		100				
Monthly Income				No of Years in Business			
<10000	27	27	13.5	Grocery	42	42	21
10K-20K	76	103	38	Stationary	47	89	23.5
20K-30K	60	163	30	Pharmacy	25	114	12.5
30K-40K	15	178	7.5	Hardware	38	152	19
40K-50K	15	193	7.5	Hotel	31	183	15.5
>50K	7	200	3.5	Telecom	17	200	8.5
Total	200		100		200		100
Nature of Business				CLT usage in Years			
< than a year	11	11	5.5	Non-user	28	28	14
1-2 years	17	28	8.5	< than a year	62	90	31
2-5 years	42	70	21	1-2 years	40	130	20
5-10 years	50	120	25	2-5 years	35	162	17.5
>than 10 years	80	200	40	>than 6 years	35	200	17.5
	200		100		200		100

Source: Field Survey

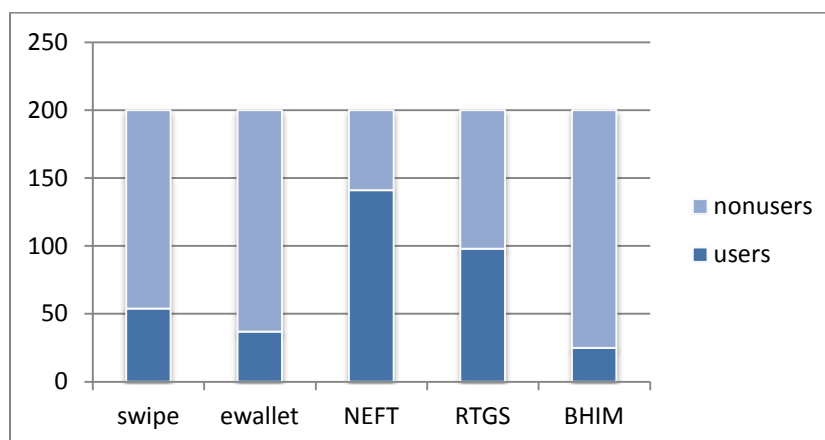
Table 3: Different means of CLT with percentage

Means of CLT	Users	Percentage	Non users	Percentage
Swipe machine	54	27	146	73
E-wallet	37	18.5	163	81.5
NEFT	141	70.5	59	29.5
RTGS	98	49	102	51

BHIM	25	12.5	175	87.5
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Source: Field Survey

Figure 4: Graphical presentation of Users and Non-users of different CLT modes



Source: Field Survey

Table 4: One-way ANOVA results of usage of CLT with different demographic variables:-

Age	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.339	4	2.085	1.060	.378
Within Groups	383.581	195	1.967		
Total	391.920	199			
Education	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.465	4	2.366	1.206	.309
Within Groups	382.455	195	1.961		
Total	391.920	199			
Monthly Income	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	51.408	5	10.282	5.858	0.000
Within Groups	340.512	194	1.755		
Total	391.920	199			
Nature of Business	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34.137	5	6.827	3.702	.003
Within Groups	357.783	194	1.844		
Total	391.920	199			

No of years in Business	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	116.036	5	23.207	16.319	.000
Within Groups	275.884	194	1.422		
Total	391.920	199			

***Significant at $p < 0.05$**

Table 5: Reliability Statistics, Mean and SD

Scales	Construct	No. of Items	Cronbach Alpha	Mean	SD
Perceived Ease of Use	PEOU	5	0.754	11.80	4.03
Perceived Usefulness	PU	7	0.729	17.29	4.42
Behavioural Intention	BI	5	0.814	11.98	3.24
Competitive Pressure	COP	2	0.727	6.64	1.79
Institutional Support	INS	2	0.822	6.71	1.64
Customer Pressure	CUP	2	0.875	6.06	1.71
ICT Readiness	ICTR	2	0.819	4.92	1.53
Perceived Risk	PR	4	0.820	12.21	2.91
Overall Reliability		29	.861		

Sources: Calculated using SPSS and Excel

Note: N=200

Table 6: Factors Loading Results

Variables	Code	Attributes	Factor Loading
Factor 1	PE1	Learning to use CLT is ease for me	0.765
	PE2	I find CLT is Ease to Operate	0.727
	PE3	Only a few steps are required to complete a transaction in CLT practice	0.827
	PE4	Confirmation of settlement is done instantly in CLT	0.784
	PE5	using CLT is a secured mode of settlement	0.799
	PE6	Cost of managing and storing cash have also reduced with CLT.	0.613
Factor 2	BI1	I always persuade my customers to go for cashless	0.655
	BI2	I want to get myself updated with the recent developments and trends in CLT practices.	0.645
	BI3	If I use CLT, customers will spend more for buying goods.	0.640

	BI4	Using CLT brings excellence in my job	0.671
Factor 3	PR1	There is a risk of wrong debiting/crediting	0.858
	PR2	Error of double entry of payment/receipt.	0.875
	PR3	Frequent Chances of fraud and hacking.	0.890
Factor 4	COP1	Most of the customers ask for CLT payment	0.753
	COP2	Customers visit those shops which have CLT facility.	0.689
	COP3	I may easily get loan from bank if I use CLT	0.871
	COP4	Financial institutions and banks provide CLT equipments at subsidised rates.	0.803
Factor 5	CUP1	Most of the customers ask for CLT payment	0.869
	CUP2	Customers visit those shops which have CLT facility.	0.840
Factor 6	ICTR1	My shop is well equipped with CLT infrastructure.	0.775
	ICTR2	I am ready to accept payments in CLT modes.	0.817
Factor 7	PU1	Practicing CLT is useful in minimizing the number of staffs	0.798
	PU2	When I use CLT, I can devote my saved time in other developmental work of my business.	0.650
Total		23Items	

Table 7: Factor loadings, AVE, CR

Variables	Factor Loading	AVE	CR
Perceived Ease of Use			
PE1	0.765	0.571	0.887
PE2	0.727		
PE3	0.827		
PE4	0.784		
PE5	0.799		
PE6	0.613		
Behavioural Intention			
BI1	0.655	0.426	0.748
BI2	0.645		
BI3	0.64		
BI4	0.671		
Perceived Risk			

PR1	0.858	0.765	0.907
PR2	0.875		
PR3	0.89		
Competitive Pressure			
COP1	0.753	0.611	0.862
COP2	0.689		
COP3	0.871		
COP4	0.803		
Customer Pressure			
CUP1	0.869	0.730	0.844
CUP2	0.84		
ICT Readiness			
ICTR1	0.775	0.634	0.775
ICTR2	0.817		
Perceived Usefulness			
PU1	0.798	0.530	0.690
PU2	0.65		

Figure 5: Measurement model

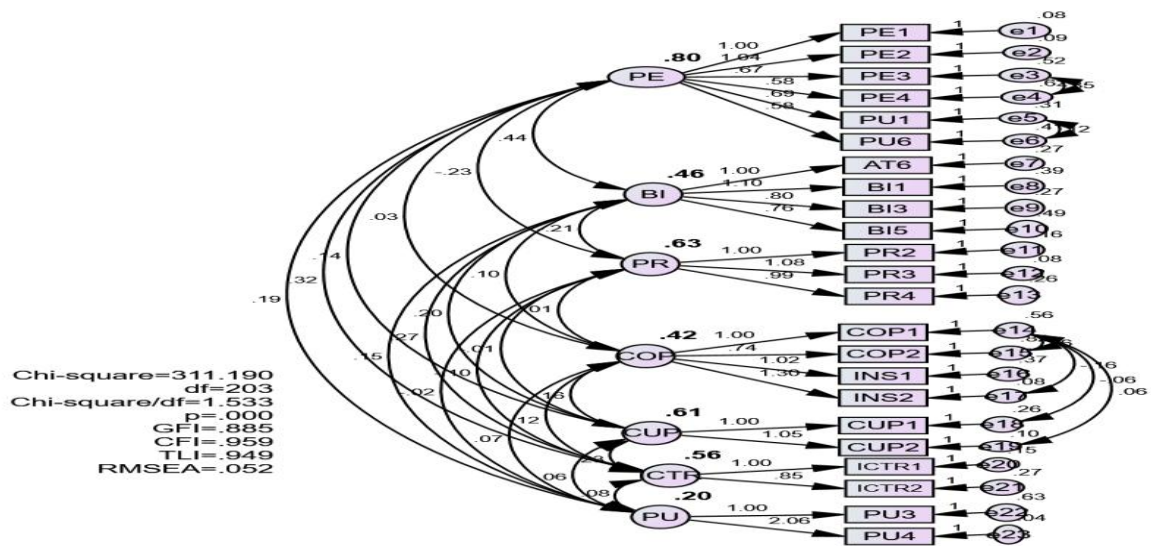
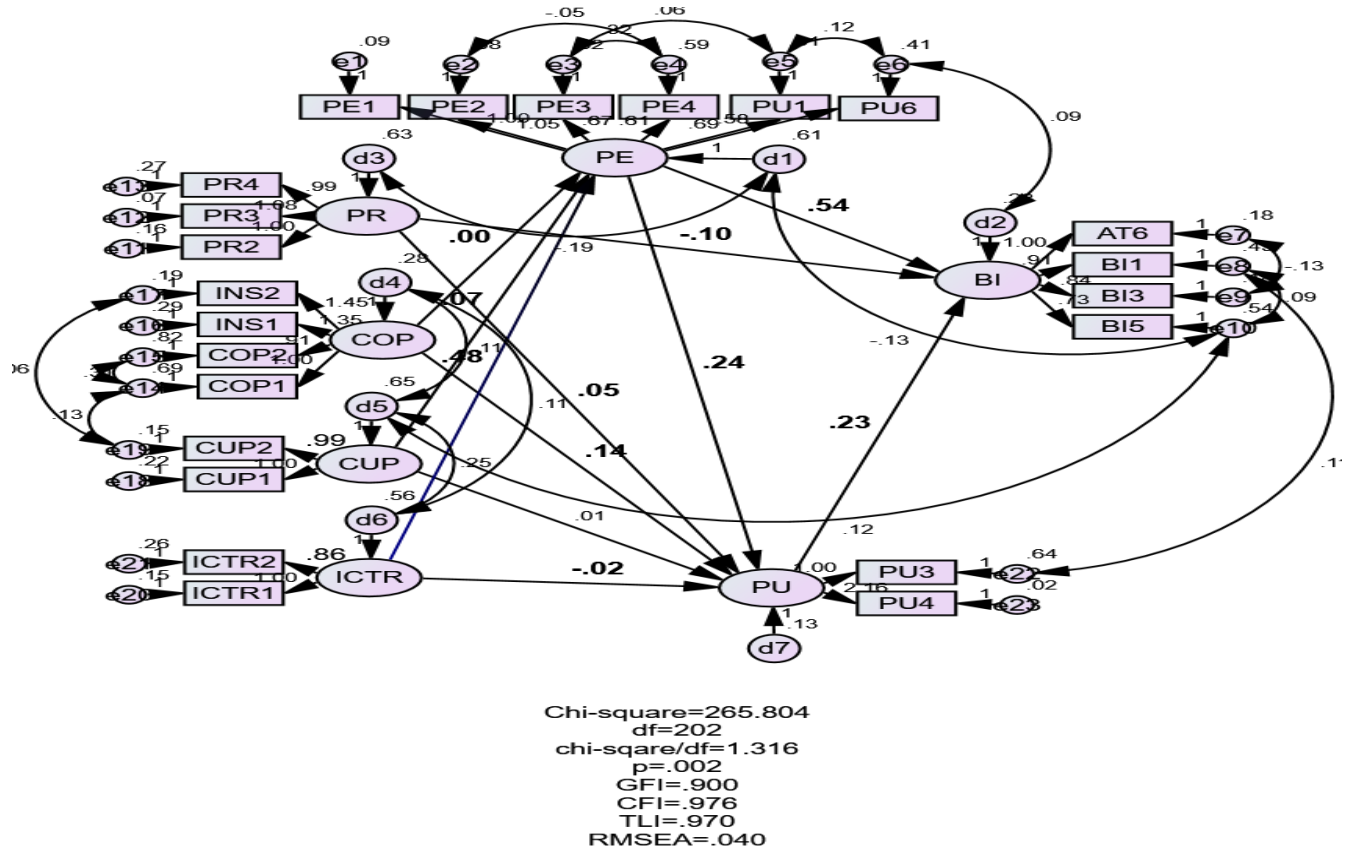


Figure No 6: Structural Model



Source: Drawn using AMOS 24

Table 8: Model fit indices

Index	$\chi^2/d.f.$	RFI	CFI	IFI	NFI	GFI	RMSEA
Recommended values	≤ 3	$\geq .90$	$\geq .90$	$\geq .90$	$\geq .90$	$\geq .90$	$\leq .10$
Measurement model	1.533	.866	.959	.960	.893	.885	.052
Structural model	1.316	.885	.976	.976	.908	.90	.040

Source: AMOS 24

Table 9: Hypotheses testing Results of Proposed Model through SEM

H	Relation between Endogenous and Exogenous Variables			Estimate	S.E.	C.R.	P	Results
H ₁	PE	<---	COP	.000	.117	-.003	.997	Unsupported
H ₂	PE	<---	CUP	.070	.084	.827	.408	Unsupported
H₃	PE	<---	ICTR	.482	.103	4.698	.000	Supported
H₄	PU	<---	COP	.145	.070	2.083	.037	Supported
H ₅	PU	<---	CUP	.014	.040	.359	.720	Unsupported
H ₆	PU	<---	ICTR	.023	.050	-.465	.642	Unsupported
H₇	PU	<---	PE	.242	.071	3.416	.000	Supported
H ₈	PU	<---	PR	.053	.039	1.353	.176	Unsupported
H₉	BI	<---	PE	.543	.060	9.063	.000	Supported
H₁₀	BI	<---	PU	.227	.102	2.225	.026	Supported
H₁₁	BI	<---	PR	-.10	.049	-2.016	.044	Supported

Source: AMOS 24

Figure 7: Resulted Model

