Customer Satisfaction in Achieving Customer Loyalty through Mediation of Trust: An Empirical Study on Mobile Payment Users

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ABSTRACT

Indian online payment ecosystem has witnessed a very speedy growth in terms of acceptance as well as in volume especially post demonetization which has forced the sellers as well as buyers to switch to alternatives to the cash payments. Due to entry of global tech giants that are facilitating as aggregators for retail transactions, Indian digital payments system has gained an accelerated growth. The present study attempts to contribute to the knowledge of how customer satisfaction and trust influence loyalty as well as mediating effect of trust between satisfaction and loyalty in India. 200 valid responses were used to study the proposed relationship. The proposed hypothesis was tested using Partial Least Square Structural Equation Modelling using software SmartPLS. Our results confirm that customer loyalty of mobile payment users is directly influenced by customer satisfaction and trust. Further, customer trust mediates the relationship between customer satisfaction and customer loyalty. Therefore, mobile payment service providers should work on privacy and security related issue to develop trust of the customers which will further lead to customer loyalty.

Keywords: Customer Satisfaction, Customer Loyalty, Customer Trust, Mobile Payment Service, SmartPLS, Structural Equation Modelling

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1. INTRODUCTION

Indian online payment ecosystem has witnessed a very speedy growth in terms of acceptance as well as in volume especially post demonetization which has forced the sellers as well as buyers to switch to alternatives to the cash payments. Currently more than 120 Fintech firms operating in India have received more than 1 billion USD funding since 2015 (NASSCOM, 2016). Popular business models such as Mobile wallets and prepaid cash cards are becoming popularly acceptable and Mobile wallets has an expected opportunity of 6 billion USD by 2020 as over 130 million mobile wallets have already been issued (NASSCOM, 2016). With a recent initiative the Central Bank has provided license to 11 companies including Paytm for setting up payment Banks.

Until 2 years backs, only 40-50% of mobile owners used the internet on their handsets due to costlier data but since the mobile data has become cheaper especially after the entry of Jio Telecom giving the big telecom companies run for life competing it and hence providing a very competitive and affordable data to the customers making internet a basic need rather a luxury (Viswanathan, 2017)). A number of payment products launched in India in recent times, UPI is certainly a phenomenal innovation for the payment's ecosystem.

EY Fintech Adoption Index 2017, ranks India 2nd (52%) only after china (69%) in a list of 20 countries where as the World's average is 33%. Credit Suisse predicts India's digital payment Framework to grow 1 trillion USD by 2023, as various global Companies leap into the Indian Market. M-payment accounted for approximately 10 billion USD in financial year 2018 though the digital payment system in India currently aggregates to 200 billion USD.

In next 5 years, Payment integration in to well-known apps in India will boost the digital payment market climb to USD 1 trillion. Due to entry of global tech giants that are facilitating as aggregators for retail transactions, Indian Digital payments system has gained an accelerated growth.

Although the increasing competitiveness in mobile payment services in developing countries like India is motivating new players to serve the market. Literatures which may explain the formation of satisfaction, trust and loyalty concepts inadequately available and need further analysis.

2. LITERATURE REVIEW

Trusted processes are key determinants for successful e-commerce business. Therefore, e-commerce companies need to develop an environment where a customer can be certain about electronic transactions. Trust and satisfaction are the two elements for effective long-term relationships with customers (Balasubramanian et al., 2003). Trust, is a significant factor for any business type involving monetary transactions. The trust is even more signification in an online business transaction which is based on the customer's belief in a non-transparent online system. Satisfaction is an important factor, along with trust, for a successful, lasting customer relationship. Consumer satisfaction is formed by a psychological evaluation of expected product and service quality with the perceived quality the consumer actually receives (Oliver 1999, Parasuraman et al., 1988).

Particularly in banking sector, for achieving customer loyalty, one of the most significant factors is Customer satisfaction (Methlie & Nysveen (1999); Leverin & Liljander (2006); Ribbink et al. (2004)). Customer satisfaction is said to be an all-round evaluation on the basis of total buying and consumption experience about the perceived service or product performance in contrast to the expectation prior to the purchase over a period (Beerli et al., 2004). Flow, satisfaction and trust are variables that determine the mobile payment service's continuance intention (Zhou, 2003). System and service quality are the significant determining factor of the trust and satisfaction (Zhou, 2003; Chemingui & lallouna, 2013).

Kaur & Kiran (2014) in their paper established that customer satisfaction plays an important role in retention in context of Internet banking. According to the study, the 3 important constituents which generate Customer Loyalty are - customer Retention, Security and Virtual Banking, and Technology invasion. Out of these factors, the most important factor which affects loyalty of customer is Customer Retention. This has been also confirmed in previous researches (Zeithaml et al., 1996). The study reveals that customer satisfaction positively affects retention on Internet banking. Hence, banks should focus on providing customer satisfaction to online customers for better customer loyalty. According to results, the Customer satisfaction and Customer loyalty are interrelated phenomena.

To understand the complexity of relationship, various researches have been conducted to understand the factors which retain bank customers (Beerli et al., 2004). The result confirms that that the customer satisfaction is the strongest one besides switching costs.

Liebana-Cabanillas et al. (2014), proposed and evaluated an integrative framework that enables us to identify relative importance of factors such as convenience attitude, usefulness, external influences, trust and risk for new m-payment system adoption. In similar study, Riquelme & Rios (2010) asserted that usefulness, social norms and social risk are the factors that have a major impact on the Customer intention for acceptance of m-banking services. M-banking improves service delivery of Banks through several means such as reduction in service cost, savings of time, convenience of transaction and instant transaction alert which has improved the customer's satisfaction and relationship.

Ali et al. (2011) in their study confirmed the effects of satisfaction and proposed quality factors on consumer loyalty in Mobile Payment Systems. The research emphasized that satisfaction is a key factor for customer loyalty. It further, revealed that responsiveness and interactivity indirectly influence customer loyalty. Likewise, lack of trust is one of the most substantial hurdles for successful m-payment system (Gao & Waechter, 2017)

3. OBJECTIVES

- To study the influence of customer satisfaction and trust on customer loyalty of mobile payment users.
- To study the mediating effect of trust between customer satisfaction and customer loyalty.

4. RESEARCH HYPOTHESES

Several studies have shown that customer satisfaction and trust has a positive and significant relationship with loyalty (Amin et al., 2013; Gul, 2014; Hassan, 2013).

H1: Customer satisfaction positively influence customer loyalty of mobile payment users.

H2: Customer trust positively impact customer loyalty of mobile payment users.

Trust is an important factor along with satisfaction which influence customer loyalty. Trust in the electronic medium is believed to increase online customer loyalty (Ribbink et al., 2004). Trust mediates the relationship between satisfaction and loyalty (Leninkumar, 2017; Madjid, 2013).

H3: Trust mediates the association between customer satisfaction and customer loyalty.

5. RESEARCH METHODOLOGY

Instruments for this study were extracted from instruments used in the previous studies shown in Table 1. The wordings of the items in the scales have been changed to fit the mobile payment service. A five point Likert scale system was used for each item where 5 represents Strongly Agree and 1 represents Strongly Disagree. Instrument had 12 items related to the three constructs used in the study. Customer satisfaction, customer trust and customer loyalty are the three constructs used in the study. Customer Loyalty is the dependent constructs in the current study. List of item along with the respective construct are listed in Table 2.

Table 1: Constructs Validity

Constructs	Items Adapted from Author(s)
Customer Trust (CT)	Bagram (2010)
Customer Satisfaction (CS)	Donnelly (2009), Chandrashekaran et al., (2007)
Customer Loyalty (CL)	Chandrashekaran et al., (2007), Donnelly (2009)

Table 2: List of item

Construct	Item	
Customer Loyalty (CL)	CL1	I have intention to recommend this payment service provider to others
	CL2	I have no intention to switch over to other payment service provider
	CL3	I like to use the services provided by this payment service provider
	CL4	will prefer new service offered by this payment service provider

Customer Satisfaction (CS)	**CS1**	Complaints are welcomed and individual attention is given to every customer complaint
	CS2	This payment service provider maintains personal relationship with the customer
	CS3	Periodic feedback review is sought after raising complaints
	CS4	I am satisfied with the overall interaction with customer care executive
Customer Trust (CT)	**CT1**	I feel secure while authorizing transactions with mobile payment service provider
	CT2	I prefer this payment service provider every time I make any financial transaction
	CT3	This payment service provider maintains the RBI norms fully
	CT4	I trust the know-how of this payment service provider

The data was collected from the residents of Delhi who had used mobile payment services at least once through a structured questionnaire. 200 valid responses were used to study the proposed relationship. The proposed hypotheses were tested using Partial Least Square Structural Equation Modelling using software SmartPLS. Structural Equation Modelling is a multivariate data analysis used in marketing research as it can test linear and additive causal models which are theoretically supported (Wong, 2013). Covariance based SEM (CB-SEM), Partial Least Square Structural Equation Modeling (PLS - SEM) are two widely used approaches to SEM. PLS SEM is best suitable for less restrictive distributional assumptions and small sample sizes (Sarstedt, 2014; Wong, 2013). Since the sample size is small (200), therefore SmartPLS is considered for analyzing the results in current study.

6. ANALYSIS

Table 3: Respondents Statistics

Gender		Education	
Male	54.17	High School and below	11.11
Female	45.83	Graduate	30.56
Age		Post Graduate and above	58.33
Young(<35Years)	76.39		
Old (>= 35 Years)	23.61		

Table 3 encapsulates the respondents' statistics. The respondents were about 54 percent male and 46 percent female. Similarly, approx. 76% of the respondents were classified as young users and approx. 24 % of them were old users. Further, approx. 58% of the respondents were Post graduate and above. Two models are available, i.e. measurement model and structural model to analyze using SmartPLS in SEM.

6.1. Measurement Model

The reflective indicator is assessed on the basis of Indicator reliability, construct reliability, convergent validity and discriminant validity.

Outer Loading number is used to measure the Indicator reliability. This value should be 0.70 or higher, as per Hulland (1999), but a value of 0.4 or higher is acceptable in the case of exploratory research. Outer Loadings of all the indicators are demonstrated in Table 4. All of the values are above the recommended limit which confirms the indicator reliability. Furthermore, in PLS-SEM Internal Consistency Reliability is examined through the value of composite reliability. The value of composite reliability should be 0.70 or more. (Bagozzi &Yi, 1988). Table 4 depict the value of composite reliability. Composite reliability for customer loyalty (CL), customer satisfaction (CS) and customer trust (CT) are 0.925, 0.905 and 0.949 respectively. All of these values are above cutoff limit which confirms internal consistency reliability.

The value of the average variance obtained (AVE) examines convergent validity. It should be "0.5 or higher" (Bagozzi &Yi, 1988). AVE score for the latent construct are shown in Table 4. AVE score of CL (0.758), CS (0.705) and CT (0.823) are above the threshold level.

The Variance Inflation Factor (VIF) is used to measure the collinearity between the indicators. VIF values are presented in Table 4. All values are below 5, indicating no issues with collinearity among the indicators.

Table 4: Measurement Model Statistics

Constructs	Indicators	Outer Loadings	Composite Reliability	Average Variance Extracted (AVE)	VIF
CL	CL1	0.922	0.925	0.758	3.557
	CL2	0.693			1.503
	CL3	0.925			4.385
	CL4	0.921			4.09
CS	CS1	0.73	0.905	0.705	1.47
	CS2	0.824			2.615
	CS3	0.911			3.471
	CS4	0.883			2.565
CT	CT1	0.912	0.949	0.823	3.702
	CT2	0.872			2.46
	CT3	0.922			4.161
	CT4	0.921			3.883

Further, As per Fornell and Larcker (1981) "the square root of AVE of each latent variable should be greater than the correlations among the latent variables" to meet the discriminant validity. The square root of AVE is represented by diagonal components in Table 5, and non-diagonal components denote the correlation between latent variables. Discriminant validity has been accepted as it meets the above-mentioned criteria. Hence, indicator reliability, internal consistency reliability, convergent validity as well as discriminant validity of the model is established.

Table 5: Discriminant Validity

	CL	CS	CT
CL	**0.871**		
CS	0.797	**0.840**	
CT	0.774	0.749	**0.907**

6.2. Structural Model

Structural model is assessed based on the values of R^2, f Square, path coefficient. The coefficient of determination is R^2 which is shown in Table 6. "R^2 values of 0.75, 0.50 and 0.25 are considered as high, moderate and low" (Hair et al., 2011). R square value for CL is 0.706 which means that 70.6 % variance is explained by CS and CT. Similarly, R square value for CT is 0.561 which indicates that 56.1% variance is explained by CS.

Table 6: Coefficient of Determination

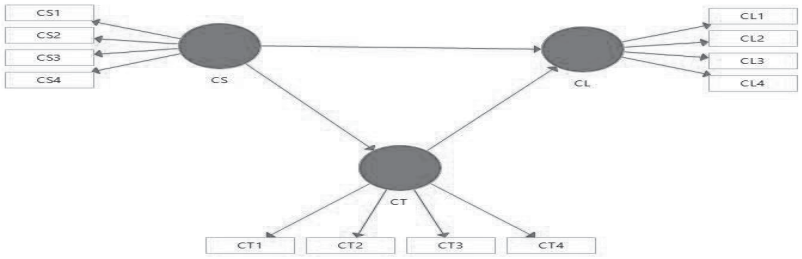
	R^2
CL	0.706
CT	0.561

Bootstrapping test examine the path relationships among the dependent and independent variables. Table 7 represents the results of bootstrapping. The association of customer satisfaction with customer loyalty (O = 0.641, p = 0.000) and customer trust (O =0.836, p = 0.000) are significant at 5 % significance level and T statistics value greater than 1.96. Similarly, customer trust has positive significant relationship with customer loyalty (O = 0.304, p = 0.004). Therefore, we can say that customer satisfaction affects customer loyalty more than customer trust depending on effect size. Path Diagram of the current study is demonstrated in Figure 1.

Table 7: Bootstrapping Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
CS -> CL	0.641	0.654	0.096	6.702	**0.000**
CS -> CT	0.836	0.835	0.040	21.152	**0.000**
CT -> CL	0.304	0.291	0.104	2.931	**0.004**

Figure 1: Path Diagram



6.3. Mediation Test

In order to examine the mediation effect of customer trust on the relationship between customer satisfaction and customer loyalty, the criteria mentioned in Table 8 must be verified.

Table 8: Mediation

Existence of direct relationship between independent and dependent variables	Existence of indirect relationship between independent and dependent variables	Mediation Effect
Significant	Significant	Partial
Significant	Not Significant	No Mediation
Not Significant	Significant	Full Mediation

Table 9: Indirect effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
CS -> CL	0.254	0.241	0.085	2.990	**0.003**

Indirect relationship between CL and CS is demonstrated in Table 9. The indirect relationship between CS and CL is significant at 5 % significance level and T statistics greater than 1.96. In our study, direct as well as indirect relationship between CS and CL variables are significant. Hence, there is a partial mediating effect between customer satisfaction and customer loyalty through customer trust.

7. CONCLUSION & IMPLICATION

Our findings confirm that customer loyalty of mobile payment users is directly influenced by customer satisfaction and trust. Since the loyal customers are profitable, mobile service providers should enhance the customer loyalty through customer satisfaction and trust. In addition, the association between customer satisfaction and customer loyalty is partially mediated by customer trust. As the trust partially mediates, mobile banking service providers should pay attention towards consumer's trust which will further improve consumer's usage behavior. In this sense, they are also reluctant to be loyal as users of mobile payment apps are unwilling to trust. If mobile payment service provider can inculcate trust in its customers then they will recommend others being loyal to the service provider. The research findings suggest that customer loyalty of mobile payment services can be improved by enhancing the factors contributing towards customer satisfaction and trust. Therefore, mobile payment service providers should work on privacy and security related issue to develop trust of the customers which will further lead to customer loyalty. Achieving customer-oriented objectives is key for success in competitive business environment. This study has provided an opportunity for future studies on customer satisfaction, trust and loyalty of mobile payment service users which is at nascent stage in India. This study is also useful for the different stakeholders (Bank, mobile network operators, merchants, consumers of mobile payment) of mobile commerce.

8. LIMITATIONS

Our study is based on the sample response of residents of Delhi. Therefore it may not generalize to other region. The replication of this study on wider scale with large sample is essential for further research which may provide different findings. Comparison of mobile payment users and non-users will give more understanding.

REFERENCES

Ali, F., Zhou, Y., Hussain, K., Nair, P. K., & Ragavan, N. A. (2016). Does higher education service quality effect student satisfaction, image and loyalty? A study of international students in Malaysian public universities. *Quality Assurance in Education*, *24*(1), 70-94.

Amin, M., Isa, Z. and Fontaine, R. (2013), Islamic banks: Contrasting the drivers of customer satisfaction on image, trust, and loyalty of Muslim and non-Muslim customers in Malaysia. International Journal of Bank Marketing, 31(2), 79-97.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the academy of marketing science*, *16*(1), 74-94.

Bagram, M. M. M. (2010). *Customer relationship management in the banking sector of Pakistan* (Doctoral dissertation, NATIONAL UNIVERSITY OF MODERN LANGUAGES ISLAMABAD).

Balasubramanian, S., Konana, P., & Menon, N. M. (2003). Customer satisfaction in virtual environments: A study of online investing. *Management Science*, *49*(7), 871-889.

Beerli, A., Martin, J. D., & Quintana, A. (2004). A model of customer loyalty in the retail banking market. *European journal of marketing*, *38*(1/2), 253-275.

Chandrashekaran, Murali, Kristin Rotte, Stephen S. Tax, and Rajdeep Grewal. "Satisfaction strength and customer loyalty." *Journal of Marketing Research* 44, no. 1 (2007): 153-163.

Chemingui, H., & Ben lallouna, H. (2013). Resistance, motivations, trust and intention to use mobile financial services. *International Journal of Bank Marketing*, *31*(7), 574-592.

Donnelly, M. (2009). *Building customer loyalty: a customer experience based approach in a tourism context* (Doctoral dissertation, Waterford Institute of Technology).

EY (2017). EY FinTech Adoption Index 2017: The rapid emergence of FinTech Available At https://www.ey.com/Publication/vwLUAssets/ey-fintech-adoption-index-2017/$FILE/ey-fintech-adoption-index-2017.pdf

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.

Gao, L., & Waechter, K. A. (2017). Examining the role of initial trust in user adoption of mobile payment services: an empirical investigation. *Information Systems Frontiers*, *19*(3), 525-548.

Gul, R. (2014). The relationship between reputation, customer satisfaction, trust, and loyalty. *Journal of Public Administration and Governance*, *4*(3), 368-387.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, *19*(2), 139-152.

Hassan, M. U., Malik, A. A., Imran, M., Hasnain, A., & Abbas, J. (2013). Relationships among customers‟ perceived service quality, satisfaction and loyalty in the retail banking sector of Pakistan'. *World Applied Sciences Journal*, *24*(8), 1020-1030.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic management journal*, *20*(2), 195-204.

Kaur, N., & Kiran, R. (2015). E-banking service quality and customer loyalty: Changing dynamics of public, private and foreign bank consumers in India. *Global Business & Management Research*, *7*(1).

Leninkumar, V. (2017). The relationship between customer satisfaction and customer trust on customer loyalty. *International Journal of Academic Research in Business and Social Sciences*, *7*(4), 450-465.

Leverin, A., & Liljander, V. (2006). Does relationship marketing improve customer relationship satisfaction and loyalty?. *International journal of bank marketing*, *24*(4), 232-251.

Liébana-Cabanillas, F., Sánchez-Fernández, J., & Muñoz-Leiva, F. (2014). Antecedents of the adoption of the new mobile payment systems: The moderating effect of age. *Computers in Human Behavior*, *35*, 464-478.

Madjid, R. (2013). Customer trust as relationship mediation between customer satisfaction and loyalty at Bank Rakyat Indonesia (BRI) Southeast Sulawesi. *The International Journal of Engineering and Science (IJES)*, *2*(5), 48-60.

Methlie, L. B., & Nysveen, H. (1999). Loyalty of on-line bank customers. *Journal of Information Technology*, *14*(4), 375-386.

NASSCOM (2016). Payments Landscape in India - Solidifying the Financial Transaction Process**.** Available at:

https://www.nasscom.in/knowledge-center/publications/payments-landscape-india-solidifying-financial-transaction-process

Oliver, R. L. (1999). Whence consumer loyalty?. *Journal of marketing*, *63*(4_suppl1), 33-44.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). Servqual: A multiple-item scale for measuring consumer perc. *Journal of retailing*, *64*(1), 12.

Ribbink, D., Van Riel, A. C., Liljander, V., & Streukens, S. (2004). Comfort your online customer: quality, trust and loyalty on the internet. *Managing Service Quality: An International Journal*, *14*(6), 446-456.

Riquelme, H. E., & Rios, R. E. (2010). The moderating effect of gender in the adoption of mobile banking. *International Journal of bank marketing*, *28*(5), 328-341.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2014). PLS-SEM: Looking back and moving forward.

Viswanathan, V (2017). How payments industry may shape up in India. Available at: https://www.livemint.com/Technology/W1WnSJkxHFxZcPLelM9MVN/How-payments-industry-may-shape-up-in-India.html

Wong, K. K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, *24*(1), 1-32.

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of marketing*, *60*(2), 31-46.

Zhou, T. (2011). An empirical examination of initial trust in mobile banking. *Internet Research*, *21*(5), 527-540.