

Main aspects of the near field communication technology

[Sociology](#), [Communication](#)



The near field communication technology (NFC) is regarded as one of the most innovative and quick modes of doing payments using mobile phones. In the following report the various aspects of NFC technology are taken into consideration to get a better understanding and learning about the different factors that are related to the consumer behavior towards adopting payment system using near-field communication technology, Marketing model for NFC payment system from TAM model, safe and comfortable user experience while using NFC payment system, etc.

According to Slade, Dwivedi, Piercy and Williams, (2015), the factors that influence the customers towards the adoption of payment system using near-field communication technology are Compatibility, Mobile banking payment knowledge, perceived risk, Social Influence, satisfaction, habit etc. Compatibility affects the customers the most. The users in Jammu and Kashmir are found to be highly influenced by the application of NFC as it provides easy connectivity by developing a natural method of connecting devices, broadening the scope of networking application via the devices used by the consumers. The NFC connections are highly acceptable by banking mobile systems that operate in Jammu and Kashmir. There are very limited connections available in this valley due to security reasons and NFC provides a perfect medium to connect the banking services to the customers. The knowledge regarding the banking payment to be done using mobile phones play an important role in the mobile banking participation of people in using NFC service.

As per Sharma and Thakur, (2017) views of the consumers in Jammu and Kashmir are found to be of mixed background. As per the collected data, it was found that in March 2015 Jammu and Kashmir had an about 33.4 lakh internet users and by the end of June it reached 35.3 lakh internet users. The registration of about 96 lakh mobile phone subscribers was found in the valley. An increased level of knowledge has highly affected the mode of doing mobile banking payment and the application of NFC in the region. The perceived risks also affect the customer behavior as the consumer evaluates the risk before using any product. Teo, Tan, Ooi and Lin, (2015), the risk involved in using NFC is regarding the security of the transactions and the various personal data involved in the transactions related to monetary aspects and personal security. The user ascertains the security and safety factor before adopting the new mobile banking payment systems emerging in the markets. Slade, Williams, Dwivedi and Piercy, (2015), the social influence plays a major in developing and making decisions of the consumers. The reviews and opinions which are given by relatives, peers, friends and other users especially those who are avid users of mobile phones are taken into consideration by the probable consumers prior to using any product, application or appliances. The satisfaction and the habitual nature of the consumers also affect the application on NFC by the users. Most the users are not habituated of using new technologies and applications which hinders their attitude towards the adoption of new forms of payments and technologies. Jammu and Kashmir are hilly and cold areas where frequent commutation is not possible in such cases the NFC technology adopted by the users become highly beneficial as they can remain connected to the

outside world with the help of their network and NFC services. Even during the extreme cold climatic conditions when there no human commutation possible due to high freezing temperatures the people who are connected with NFC services remain in contact with their family and friends and get to know about the well-being of each other. These factors also impact the consumer behavior towards adopting payment system using near field communication technology.

Marketing model for NFC payment system from TAM model

Technology Acceptance Model (TAM) is used in a number of fields like online services, mobile phones, mobile ticketing, social networking, healthcare information systems and mobile payments, etc. The model is guided by a few theories like perceived usefulness, ease of use by an individual etc. that influences the attitude and preference of the individuals towards the usage of a new technology or service. It enables the users also analyze the end effects that might procure after adopting the new technology or change in the users' conduction and behavior. As per the views of Pala, (2018), the concept of perceived usefulness of the payment system is applied to influence the intention of the consumers to use through user's attitude toward the NFC payment system. For the adoption of any new technology attitude of the consumers matters a lot. The NFC marketing model lays stress on capturing perceived usefulness attitude of the consumers which effectively carters to the concerns of the consumers related to the user of the particular system. Whitmore, Agarwal and Da Xu, (2015), the Perceived ease-of-use aspect of TAM model is well utilized and the application of NFC is

made easier to use and well-matched with the users' ability so that the user can use the technology in an effective manner. These factors have considerably increased the trust and usability of new innovative modes of payments in the valley. Ooi and Tan, (2016), the data released data by Telecom Regulatory Authority of India (TRAI), it was found that about 1, 04, 28, 635, mobile connections were found to be active in Jammu and Kashmir by the end of October 2016. It was recorded to the highest number of mobile subscribers in the state.

There are certain factors like frauds, malware, card data security, data leakage etc. that needs to be taken care for safe and comfortable user experience while using NFC payment system. The online transaction of payment follows the protocol of passwords to conduct the monetary transmissions. The password and the security questions are the mediums which identify the validity of the cardholder or the online payers are not very secure in nature. Xu, Thong and Tam, (2017), Safety is regarded as one of the major factors that need to be taken care of so it is essential that the users keep their passwords safe and secure. Malware is related to mishandling of activities such as recording calls, instant messages, locating via GPS, forwarding call logs and other vital data which are regarded as personal data of the users. Hence, the users must keep their systems upgraded with anti-malware systems which will provide safety and security to the user's activities done through NFC payment system.

Data leakage is regarded as another factor which must be taken care of while using NFC payment system. The transactions that are carried by using

online mediums go through a series of channels like mobile wallet service provider, mobile payment as POS service provider, merchant, acquiring the bank, and issuing bank before the payment is finally done. This could lead to leakage of data at any level. The users must secure their mode of payments by using strong passwords and not revealing it to unknown or suspicious individuals. Yang, (2005), the data released by global digital security firm Gemalto's 'Breach Level Index, it was found that about 36.6 million data breaches were recorded in India in 2016. Hence it is necessary to secure the transactions done by using online payments. Additionally, the use of long and complicated passwords, non-sharing of passwords to unknown individuals, use of safe login screen, updated operating systems, use of security assessment tools etc. could make the experience of payments done through NFC transactions safe and comfortable.

Customer-centric models using NFC payment technology

Some of the customer-centric models using NFC payment technology are Mobile Business Service Provider model (MASP), Mobile Network Operator (MNO) model, Banks and financial institutions (BFIs), MPSP, auxiliary participants like Mobile Internet Services Provider. MASP will provide enough mobility and acceptability to the mobile users. Through the provision of mobility factor, the NFC payment technology can be used from anywhere and from any place which will make the availability of service independent of the users' location. It provides instant connectivity and personalization as the phone used by the customer is a personal device which can store personal information. NFC payment technology can be used to provide

personalized services. MNO facilitates the transaction across all stages and involves the contribution of both authorization and completion. It enables switching the device connectivity for the provider, simplifying logistics, connecting any device on demand at anytime and anyplace, adapting the subscription to the device location etc. This helps the customers to establish connectivity and render payments from any place anytime.

Banks and financial institutions (BFIs) can also be involved in transaction authorization and completion using NFC payment technology. The banks are highly engaged in to provide mobile banking services these days which could be further exploited to provide adequate services to the customers. The collaboration of NFC payment technology with banking and financial institutions will ensure that the customers get the best services and facilities at great speed from anyplace anytime. The MPSP acts as a mediator amid the account holder and the financial institution. Its responsibility is to maintain full details of the transactions made by the customers and provides them with all the details at the demand of the users.