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Adoption of Fin Tech services:
A study among consumers of Kerala

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Abstract

The study proposes a research framework to identify the key facilitators/inhibitors of consumer adoption of Unified Payment Interface, an Indian innovation in the Fin Tech payment segment. The study uses Unified Theory of Acceptance and Use of Technology -2 model with the integration of online trust, perceived risk and personal innovativeness to explain the adoption process. As evidenced by the literature review, enough studies have not been undertaken to understand the adoption/non adoption of UPI. This research intends to address this gap which is important if it is to be replicated across several other emerging countries.

Keywords: Fin Tech, Unified Payment Interface, UTAUT-2, behavioural intention

1. Introduction

Unmet financial needs, changing consumer demographics, launch of Unified Payment Interface (UPI), availability of internet at a reduced cost, government's initiative to improve digital literacy, increasing investments in Fin Tech start-ups (44 bn US $ in 2017), responsive market place and incumbents are the key factors driving the growth of Fin Tech in India   Among the various business segments of Fin Tech services, the most dominant and mature segment in the Indian Fin Tech market is digital payments because of sustained funding, government support and huge untapped market. The major forms of digital payment modes in India are cards; retail electronic clearing (NEFT), Unified Payment Interface (UPI), mobile banking and prepaid instruments. Among these, UPI and PPI have gained major traction in recent years. The data given by RBI's Annual report for 2018-19(RBI, 2019) and Bank for International Settlements show that Unified Payment Interface (UPI),an Indian innovation in digital payments has overtaken other digital payment modes. Bank of International settlements in the paper '' The design of digital financial infrastructure: Lessons from India" has mentioned the need and importance of UPI, adding that it can become an international model for quick and seamless payments(Silva, Filková, Packer, & Tiwari, 2019).

However, reports indicate that cash is still the preferred mode of transaction (RBI, 2019, Nilekani et.al. 2019).The Government of India has invested huge amount of resources for the development and deployment of digital payment system for its citizens, but the success ultimately depends on the user adoption and acceptance. Hence, the research investigates the factors facilitating/ inhibiting adoption of UPI, the dominant mode of payment in the Indian Fin Tech payment segment.

2. Literature Review and Hypotheses

Extant literature on Fin Tech payment focused on the adoption of innovations in the developed world such as mobile payments (Slade et.al. 2015, Violeta et.al. 2019, Zhou, 2014) mobile wallets (Shin, 2009), bit coin (Jin et al., 2019), wireless finance (Kleijnen et.al 2004),mobile banking (Alalwan et.al. 2017,Pal et.al 2019, Singh et.al.2018).Critical review of UPI (Gupta et al., 2018), customer satisfaction of UPI(Chaudhari, 2019), customer awareness and perception towards UPI(Sarma, 2019) are the few studies focused on UPI.

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As evidenced by the literature review, enough studies have not been undertaken to understand the adoption/non adoption of UPI, which is an Indian innovation. This research intends to address this gap which is important if it is to be replicated across several other emerging countries. This study proposes a research framework to identify the key facilitators/inhibitors of consumer adoption of UPI using UTAUT -2 model with the integration of online trust(Kim & Forsythe, 2009), perceived risk (Yang, Liu, Li, & Yu, 2015,Featherman & Pavlou, 2003)personal innovativeness (Liébana-Cabanillas et.al 2015) to explain the adoption process.

Compared to other technology acceptance models, UTAUT-2 better explains technology acceptance in a consumer context. The variance explained in behavioural intention (74%) and technology use (52%) is also substantial.

Based on the extant literature, researcher has arrived at the following hypotheses:

H1 : Performance Expectancy has a significant effect on behavioural intention to use Unified Payment Interface

H2 : Effort Expectancy has a significant effect on behavioural intention to use Unified Payment Interface

H3 : Social Influence has a significant effect on behavioural intention to use Unified Payment Interface

H4 : Facilitating Conditions has a significant effect on behavioural intention to use Unified Payment Interface

H5 : Hedonic Motivation has a significant effect on behavioural intention to use Unified Payment Interface

H6 : Facilitating Conditions has a significant effect on use of Unified Payment Interface

H7 : Habit has a significant effect on behavioural intention to use Unified Payment Interface

H8 : Habit has a significant effect on use behaviour of Unified Payment Interface

H9 : Perceived Risk has a significant effect on behavioural intention to use Unified Payment Interface

H10 : Online Trust has a significant effect on behavioural intention to use Unified Payment Interface

H11 : Personal Innovativeness has a significant effect on Attitude towards the use of Unified Payment Interface

H12 : Age will moderate the effect of facilitating conditions on behavioural intention to use Unified Payment Interface

H13 : Age will moderate the effect of hedonic motivation to use Unified Payment Interface

H14 : Gender will moderate the effect of facilitating conditions on behavioural intention to use Unified Payment Interface

H15 : Gender will moderate the effect of hedonic motivation on behavioural intention to use Unified Payment Interface

3. Research Methodology

Population

The population of the study consists of people who are familiar with or having at least some experience in using any of the UPI apps and above the age of 18 years.

Data Sources and Data Collection

Primary data will be collected from users of UPI apps. Details and statistics of UPI apps will be collected through secondary sources published online. The survey research method will be used to collect data and questionnaires will be distributed to eligible respondents both in person and through online using Google-docs.

Research design

The units of observation are users who use UPI apps. The sample will be chosen from Kerala. Quota sampling method will be used for data collection. Here, age and gender are identified based on judgement

and from national statistics available. The sample elements are then chosen from these assigned quotas to match the requirements.

Age and gender are significant demographic factors that affect the acceptance and use of Information Technologies. Age and gender act as moderators in UTAUT -2 (Venkatesh, 2012). The quota is fixed according to the statistics available on age and gender profiles of users of Fin tech services in India.

The following table shows the distribution of users as per their age in the case of Fin Tech adoption in India.

Age	18-24	25-34	35-44	45-54	55-64	65-74
FinTech adoption	49	74	70	54	46	27

Source: EY Fin Tech adoption Index 2017

The sample will be chosen to suit the age wise distribution as per the statistics available. The sample will be chosen from Kerala from the users of UPI apps to meet the criteria of age distribution. For the age group of 18-24, data will be collected from different colleges across the state. For the rest of the age group, data will be collected from different organizations. The statistics indicates that male users are higher than female users and gender would also be a criterion to choose the sample. Hence the quota will be fixed to meet the proportion of age and gender accordingly.

Analysis

The analysis will be done using Structural Equation Modelling (SEM) and hence need sufficiently large samples.

4. Study Implications:

Potential Practical Implication:

The research could be useful for new entrants, start-ups, investors, future researchers and policy makers in the payment domain of Fin Tech. The research will highlight the important areas that have to be considered by the Government of India, FinTech start-ups in India, and traditional financial service providers for the FinTech services to be used by a wide spectrum of consumers. The research is expected to highlight the key drivers and barriers of FinTech payment adoption and the moderating effect of personal and sociodemographic variables such as age, gender etc

Potential Theoretical Implications:

The research is expected to highlight the key drivers and barriers of UPI adoption and the moderating effect of personal and socio demographic variables such as age, gender, etc. The research contributes to understanding consumers' adoption of UPI.

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