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Adoption Intention of UPI Payment Method Using Unified Theory

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Abstract: ***This research was conducted to gather data and understand the perception what the Indian population holds when it comes to using UPI payment method. To do so, a survey was designed using the UTAUT model and was circulated by the means of google forms. A wide range of parameters were considered to avail the maximum possible accuracy for the data collected. Parameters like, the ease of using this payment method, short term and long term benefits, monetary benefits, social benefits were considered. All of these parameters were supposed to be answered on a scale of 5. After collecting all the data, the results were analyzed and evaluated using which the hypothesis made were proved.***

Keywords: UPI, payment, transaction, UTAUT, performance expectancy, effort expectancy, perceived monetary benefits, perceived safety, social influence, adoption intension.

I. INTRODUCTION

A. What is UPI Payment

UPI is an instant real time payment system, allowing users to transfer money on a real time bases, across multiple bank accounts without revealing details of ones' bank account to the other party. The payment system was launched by NPCI the international arm of National Payment Corporation of India ("After Singapore, Bhutan adopts India's BHIM-UPI," 2021). To understand the scale at which this payment system has been adopted by the Indian banking sector and the people living there (Nambisan, 2021; "UPI Product Statistics | NPCI - National Payments Corporation of India," n.d.) states that as of November 2021 there are a total of 274 banks that are now available for UPI payment, summing their monthly volume to 4.18 billion transactions.

B. How and Where was it Introduced

Mankind has come a long way from barter systems of exchanging products to the use of currency. We live in a digital age where everything is at our fingertips and the internet has made our lives easier than ever before. From purchasing food online to paying bills with a single click, digital payments have played an important role("THE RISE OF UPI," 2021).

Payment apps such as Phonepe, Google Pay, Paytm, and others have become ingrained in our daily routines. The Unified Payment Interface (UPI) is a single-interface payment system developed by the National Payment Corporation of India that is used in these apps (NPCI)("THE RISE OF UPI," 2021). The National Payments Corporation of India (NPCI) created a mobile payment system with a single interface (Mobile Payments). There is no need for customers to provide their bank account numbers or other sensitive information every time they make a transaction. In-App payments, cross-screen QR codes, the addition of web-based payments, and the expansion of the range of services to include online payments utilizing UnionPay-powered e-wallets are among the new features provided by UPI. In the last year and a half, tens of thousands of businesses across hundreds of industries have seen the value of UPI Autopay and have switched to it("THE RISE OF UPI," 2021). In the past year, UPI has grown at an exponential rate, capturing a substantial share of the market from firms such as PhonePe, Paytm, and Google Pay. In FY20, transactions totaling 2 lakhs 1,317.0 crores (2,131 trillion rupees) totaled 125.1 billion rupees (12,519 million), reflecting a 13.2 percent rise in volume and a 14.3 percent increase in value over FY19. UPI transactions topped Rs2.3 billion at the conclusion of the fiscal year 2021, with a value of Rs5 lakh crore, the biggest ever. According to the Reserve Bank of India (RBI), the value of UPI transactions increased by INR 2,162 billion to INR 3,290 billion during January to September 2020. Consumer interest in paying bills, charging telephones, and purchasing non-essential goods on e-commerce platforms has surged as a result of the surge in UPI transactions. The influence of UPI Payments on the Indian market is huge, and it has made a significant difference in payment methods and shopping sites used by consumers in payment methods and shopping sites used by consumers.("THE RISE OF UPI," 2021).

C. Advantages of Using It.

The Unified Payment Interface (UPI) in India is speeding up the onboarding process for vendors and merchants who accept rapid payments, allowing them to go entirely digital("Want to pay friends and relatives immediately?," 2020). During this crisis, millions of people are benefiting from quick payments thanks to efforts like this. Merchants may accept rapid payments remotely and access funds in their transaction accounts almost instantly, just like they would with cash. This is especially beneficial to micro- and small-business owners, who can then pay their suppliers on time and meet other pressing financial responsibilities.

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Governments can also immediately distribute emergency funds to individuals and companies. Remittances, which account for a significant amount of the GDP in many developing nations, can reach family members in need quickly and at a minimal cost. Western Union, for example, has connected with India's UPI system to allow monies from senders in other countries to be moved instantaneously to Indian bank accounts using the receivers' UPI identification("Want to pay friends and relatives immediately?," 2020).

Below are some additional benefits of using UPI payments:

1) Transfer funds at minimal costs:
2) Suitable for small transactions:
3) Enhanced security:
4) Immediate transfer:
5) No requirement for registration:
6) Universal payment system:
7) Multitude of apps to choose from:
8) Request for money facility:
9) More advantageous than a digital wallet

D. Other Benefits

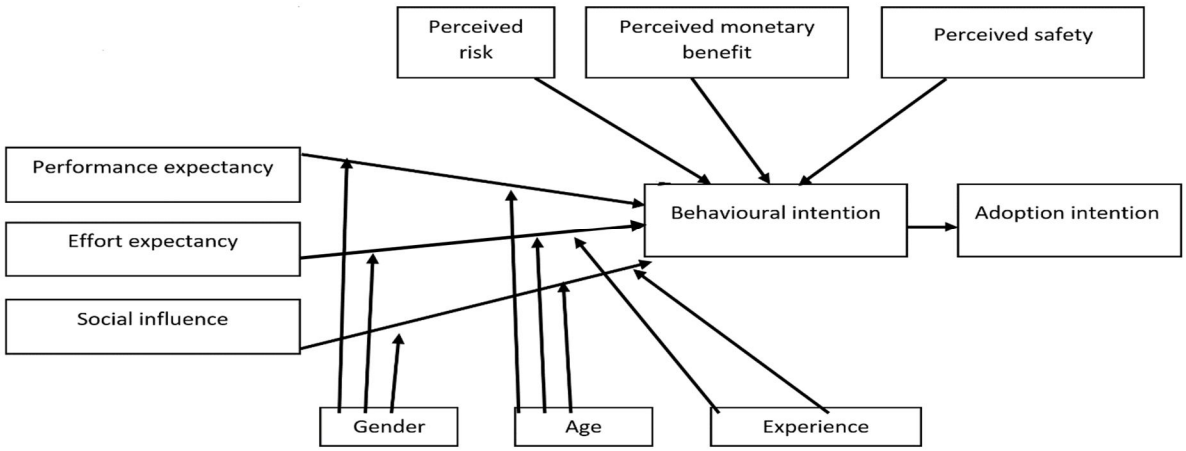
You can also get access to several benefits with the best UPI-based apps, like the RBL Mobile Bank App. These include requests for call-back from customer care, blocking/unblocking of your debit card, applying for loans and credit cards, access to customized account statements, making standing instructions for scheduled payments, sharing transaction details, and a seamless shopping experience with partners, like BookMyShow, Urban Clap etc.

II. HYPOTHESIS

1) *Performance Expectancy*- Using UPI payment method has improved my quality of life and performance.
2) *Effort Expectancy*- People will find it easy to make payments using UPI method.
3) *Social Influence*- The society is very supportive when it comes to using UPI payment method.
4) *Behavioral Intension*- Individuals show a positive intend to use UPI payment method.
5) *Monetary Benefit*- It is intended to see people have a positive prospective of them having to earn a reasonable amount.

In this paper the main goal is to understand what perception does the Indian population holds to use UPI payment method. For doing so I have designed a questionnaire using the frame work, "UTAUT" which was first presented by (Venkatesh et al., 2003). By adding a few more constructs to his designed framework, the survey was ready to be published. By conducting the survey many parameters were analyzed resulting in the maximum possible accuracy for the results collected. Constructs like; performance expectancy, effort expectancy, social influence, perceiver safety, perceived risk, behavioral intention, perceived monetary benefits and adoption intention were taken into account while designing the questionnaire.

III. RESEARCH MODEL



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IV. LITERATURE REVIEW

A. Performance Expectancy

Performance expectancy (PE) is the degree to which an individual believes that using a system or a product will help him/her increase his job performance (Venkatesh et al., 2003). Performance expectancy, itself being a construct, finds its roots from the theory of planned behavior, extraneous inspiration from the motivational model, and results desired from Social Cognitive Theory. Performance expectancy is a trunk which holds 5 different branches; job-fit, Perceived usefulness, extrinsic motivation outcome expectations, and relative advantage. There are many studies done which have used this construct to prove their hypothesis using the construct performance expectancy. (Zhenhua Yu et al., 2019; Sandra M.C.Loureiro et al.; Jian-LiangChen ; Mansour Naser Alraja1 et al.)(Patel, 2021). From the prospective of people investing in crypto it can be said that, it is a person's recognition that the utility degree of them having crypto in their portfolio, will make it stronger when seen from the long term financial returns prospect.

B. Effort Expectancy

Effort expectancy (EE) is referred to as the degree of ease associated with the consumer's use of technology (Venkatesh et al., 2003). Numerous analysts found that effort expectancy has a noteworthy impact on intention to adopt new technology (Chang et al., 2007; Alraja, 2015; Schaper and Pervan, 2007; Al-Shafi, 2009 Gupta et al., 2008; Zhenhua Yu et al., 2019)(Patel, 2021). In the investigation of (Venkatesh et al., 2003) he found that the exertion hope is huge just in beginning phase of innovation appropriation. Talking about today's time, it has become quite an easy task to invest in crypto currency, all because of the boon of the online applications. With an add on to invest in a universal currency "dollar" it has become even more convenient for people to invest.

Social influence

Social influence (SI) refers to the degree to which an individual perceives that how important others [e.g., family and friends] believe that he or she should use the new system (Venkatesh et al., 2003).

As social individuals, consumers are effortlessly affected by the companions, family, commercials and social patterns around them. It discovers its underlying foundations in ideas, for example, abstract standards from the Theory of Reasoned Action and the Theory of Planned Behavior, social variables from the Theory of Human Behavior, and picture in Innovation Diffusion Theory (Lucas and Spitler (1999)).

Social impact alludes to the degree to which the earth around the consumer incorporates the help of family members and companions for driving electric vehicles out and about. This construct was also used to prove the hypothesis in (Zhenhua Yu et al. (2019), Spears, R., & Lea, M. (1992), Scott W. Campbell & Tracy C. Russo (2010), (Patel, 2021).

C. Perceived Risk

Perceived risk (PR) refers to the degree to which users are worried about situations that will occur while using the stated technology Venkatesh et al (2003). Numerous scientists found that perceived risk affects the client's reception expectation of another innovation (Zhenhua Yu et al. (2019), Mauricio S.Featherman Paul A.Pavlou, Andrew Lepp, Heather Gibson (2003), Madfis, E. Erratum(2016), (Patel, 2021).

In this paper perceived risk refers to the challenges one could face while investing in crypto. Challenges like the volatility of crypto and its unpredictable price fluctuations could be experienced.

D. Behavioral Intentions

Behavioral intention (BI) is defined as a person's perceived likelihood or "subjective probability that he or she will engage in a given behavior" Ajzen I. (1985).

Many researchers found that behavioral intentions have a significant influence on the user adoption intention of a new technology (Seuwou P et al. (2020), Jin-Soo Lee et al. (2010), (Patel, 2021). In this paper behavioral intention refers to how a person feels to having a crypto in his portfolio.

E. Perceived Monetary Benefits

Perceived monetary benefits (PMB) refers to the consumer's perception of saving money from the given system. Buyers may contrast the cost of advancement and that of the options when choosing to receive such development, and they would shape view of the charge of the development dependent on this correlation. Earlier examinations showed that perceived fee is one of central point for purchasers' protection from advancements (Egbue et al. 2017: Luar and Lin, 2005: Adepetu and Keshav, 2017), (Patel, 2021).

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F. Questionnaire Design

Sr. No.	Conditions for questions	Questions
1	Performance expectancy	1. Using UPI payment method has improved my quality of life and performance. 2. Using UPI payment method can help me accomplish tasks quicker. 3. I think making payments through UPI is quicker. 4. I think it is convenient for me to use UPI payment method.
2	Effort expectancy	1. I think it is easy to use UPI payment method.
3	Social influence	1. My family is very supportive of me using UPI payment. 2. Advertising and media campaigns will make me want to use UPI payment. 3. I think using UPI payment is in line with the social trend and looks very fashionable.
4	Perceived safety	1. I think using UPI payment is safer.
5	Perceived risk	1. I am worried about using UPI payment.
6	Behavioral intensions	1. I think it is good to use UPI payment. 2. I would like to recommend to others to use UPI payment .
7	Perceived monetary benefit	1. Using UPI payment will gain me monetary benefit. (application provides cashbacks & coupons)
8	UPI payment method adoption intention:	1. Next time I make a payment, it will be done using UPI payment method. 2. I expect to start using UPI payment method.

V. RESULTS & DISCUSSION

To understand people's perspective on using UPI payment method a survey was conducted using google forms. The survey focused on the participants' knowledge and interest in using the stated payment method. In this article I will be discussing the results of the survey and the challenges faced in the process of conducting the survey. The survey's results are based on a sample of 200 participants in India. The survey was conducted from September to November 2021. The research was carried out in 3 phases. The first phase was the collection of data, while the second phase was data analysis. The third phase consisted of the presentation of the results. The received 200 replies, with 65 % of people between the ages of 18 and 30, 24 percent between the ages of 30-45, and 6% between the ages of 60 and up, with 69 percent of men and 30 percent of women, of which 57% are graduates, responding to the initial questions. Also, a basic and vital question was asked about whether they have been using UPI payment method, with 60% saying "No" and 40% saying "Yes." A Unified theory of acceptance and use of technology (UTAUT) is used in this study to determine the user's purpose to use that particular information as well as their behavior in relation to that information.

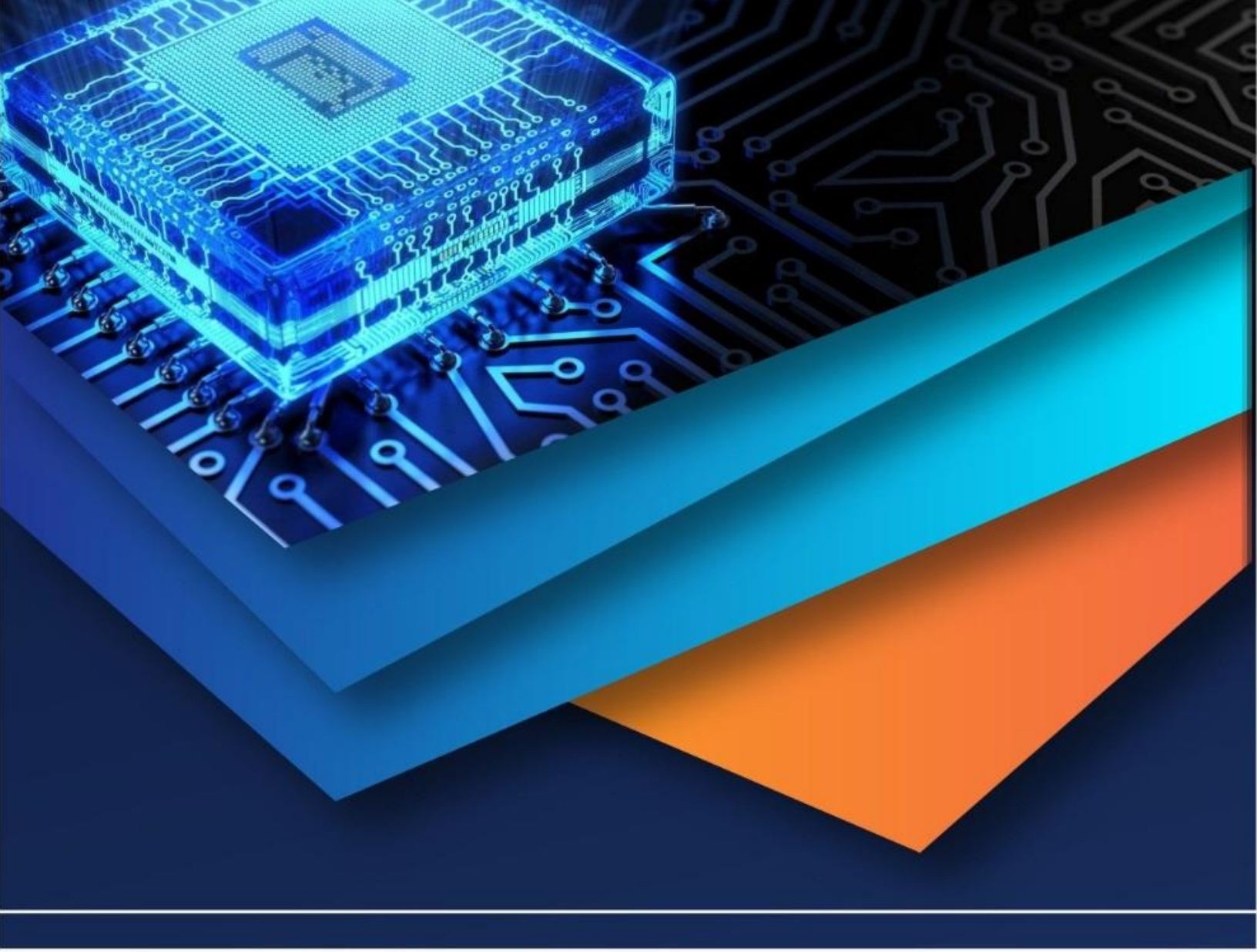
From the survey questions falling under the construct performance expectancy came up to 69% as strongly agree. Questions related to ease of access in investing in crypto 72% believed it was easy to use UPI payment method having the advantage of making a payment through application. A bit of a push from the society and other factors like advertising show a significant impact quantifying to 65% of people agreeing to get influenced by these factors. Data collected also shows a positive side of how people believe that it is not risky to make payment through UPI method scoring a 88% to the agreement of the question. In addition, there are 58% of the people are very sure of them having monetary benefits.

VI. CONCLUSION

After presenting all the statistical data collected in the survey, it is now time to analyze and evaluate the results to come to a conclusion. To reach to a conclusion, only the scores which reached 4 and 5 on a scale of 5 have been considered which mean the respondent either agrees or strongly agrees. Talking about performance expectancy it is seen that about 69% of the respondents believe that using UPI payment method will have a positive impact on their daily living. Addition data from the construct effort expectancy states that people actually agree to the statement that it is not difficult to use UPI payment method, being boomed by the presence of the interactive applications. Accepting the fact of having a decent internet connection while making the payment, the Indian population is very keen to use this payment method as they cannot deny the fact of having satisfactory monetary benefits via cashbacks and discount coupons. The same can be seen and supported by the statistical data obtained from the survey questionnaire. Having such positive intend towards all other construct it can be derived that all of these positively intended responses directly affect to the behavioral intentions and the adoption intensions which again is proved using the survey conducted.

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