ADOPTION OF UPI SERVICES AMONG THE UNDERGRADUATE STUDENTS IN TEZPUR TOWN OF ASSAM

Dissertation Submitted in Partial Fulfilment of the Requirements for the Award of the Degree of Master of Commerce (M.Com).



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DECLARATION

I, Prasanta Kalita (COMM-04/23), hereby solemnly declare that I am a bonafide student pursuing M.Com at Mahapurusha Srimanta Sankaradev Vishwavidyalaya, Nagaon. I affirm that the dissertation entitled "Adoption of UPI Services Among Undergraduate Students in Tezpur Town of Assam", submitted by me in partial fulfilment of the requirements for the award of the degree of Master of Commerce, is the result of my original and independent research conducted under the guidance and supervision of Dr. Bhaskar Saikia, Assistant Professor, Department of Commerce, Mahapurusha Srimanta Sankaradev Vishwavidyalaya, Nagaon.

I further declare that this dissertation has not been previously submitted for the purpose of obtaining any other degree at this University or any other academic institution.

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DEPARTMENT OF COMMERCE



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CERTIFICATE

This is to certify that the dissertation titled 'A STUDY ON ADOPTION OF UPI SERVICES AMONG THE UNDERGRADUATE STUDENTS IN TEZPUR TOWN OF ASSAM' submitted by Mr. Prasanta Kalita, Roll No: COMM-04/23 in partial fulfillment of the requirements for the degree of Master of Commerce (M.COM) is a bonafide record of original research work carried out under my supervision. The contents of this dissertation have not been submitted for any other degree or diploma elsewhere.

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With Regards

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ABSTRACT

This study investigates the adoption of Unified Payments Interface (UPI) services among

undergraduate students in Tezpur Town of Assam. With the rapid digitization of financial

transactions in India, particularly after the introduction of UPI, it becomes crucial to

understand how young users engage with this technology in semi-urban areas. The

research aims to assess students' level of awareness, usage patterns, and the perceived

convenience, security, and speed of UPI services. A quantitative approach was adopted,

using a structured questionnaire administered to undergraduate students from various

colleges in Tezpur. The findings reveal that while the majority of students are aware of

UPI and actively use platforms like Google Pay, PhonePe, and Paytm, their usage is

primarily influenced by ease of access, peer influence, and the convenience of cashless

transactions. However, concerns related to transaction failures and digital frauds were

also reported, indicating areas where user education and platform improvement are

needed. The study highlights the growing reliance of students on digital payment systems

and emphasizes the need for financial literacy initiatives to ensure safe and informed

usage. The results offer valuable insights for policymakers, financial service providers,

and educational institutions aiming to promote secure and inclusive digital payment

practices among youth in emerging urban centres.

Place - Nagaon

Date - 14/07/2025

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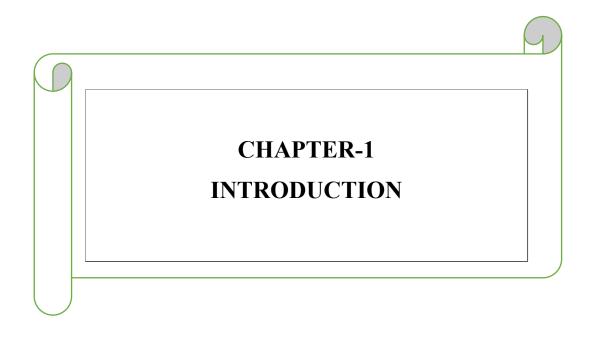
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1.0 INTRODUCTION

The Unified Payments Interface (UPI) is a real-time digital payment system developed by the National Payments Corporation of India (NPCI) in 2016. It allows users to link multiple bank accounts into a single mobile application and facilitates instant money transfers between bank accounts through smartphones. UPI transactions can be conducted 24/7 using a Virtual Payment Address (VPA), QR codes, or mobile numbers, without requiring bank account details or IFSC codes (NPCI, 2021). The system is designed to be user-friendly, secure, and interoperable across different banks and platforms, making it one of the most accessible forms of digital payment in India.

Since its inception, UPI has gained immense popularity for offering a seamless and cashless payment experience. According to the Reserve Bank of India (2022), UPI recorded over 45 billion transactions in a single financial year, surpassing all other digital payment modes in both volume and value. Its growth is attributed to factors such as smartphone penetration, affordable internet access, and an increasing push towards a digital economy, especially after the demonetization drive and during the COVID-19 pandemic (KPMG, 2020).

As digital payment platforms become more widespread, understanding the adoption behaviour of different user groups becomes essential. Among these, undergraduate students form a significant and rapidly growing segment of UPI users. Being digital natives, students are quick to adapt to mobile-based technologies for various purposes including shopping, food delivery, fee payments, and peer-to-peer transfers (Deloitte, 2021). UPI serves as an essential tool for financial independence and ease of transaction among this group.

However, while UPI usage among students may appear high, actual adoption behaviour can be influenced by various factors such as awareness, perceived convenience, security concerns, and socio-economic background. Some students may still hesitate to use UPI due to digital trust issues, lack of familiarity, or limited access to banking services. Hence, it becomes important to examine what motivates or hinders their use of UPI services.

This study seeks to explore the patterns and factors affecting the adoption of UPI services among undergraduate students. It aims to assess their level of awareness, frequency of usage, and the impact of perceived benefits and barriers. The findings may offer valuable insights for policymakers, fintech companies, and educators aiming to enhance financial inclusion and digital literacy among youth.

The advent of financial technology has revolutionized the way individuals manage and conduct financial transactions, particularly in emerging economies like India. In recent years, the Indian government has made significant efforts to promote a cashless economy through initiatives like Digital India and demonetization. Among the various digital payment innovations, the Unified Payments Interface (UPI) has emerged as one of the most transformative and widely adopted systems (NPCI, 2021). Introduced by the National Payments Corporation of India (NPCI) in 2016, UPI enables instant, secure, and seamless money transfers across banks through smartphones and is considered a major milestone in India's digital payment evolution.

UPI integrates multiple bank accounts into a single mobile application, allowing users to perform transactions using just a Virtual Payment Address (VPA) without disclosing their bank details. Its interoperability, 24/7 availability, user-friendly interface, and support for small-value transactions make it particularly attractive to the youth and urban population (KPMG, 2020). Moreover, the COVID-19 pandemic further accelerated the shift toward

contactless digital payments, reinforcing the importance of platforms like UPI in maintaining transactional safety and convenience (RBI, 2022).

Among the key demographics using digital platforms, undergraduate students represent a unique and important segment. This group is not only digitally literate but also highly engaged in mobile-based financial transactions, given their active participation in ecommerce, food delivery, ride-sharing, and peer payments (Deloitte, 2021). As students increasingly rely on UPI for everyday needs, understanding the factors influencing their adoption behaviour becomes essential. While many studies have examined digital payment adoption in the general population, limited research has focused specifically on the undergraduate segment.

Furthermore, adoption of technology is rarely uniform. It is influenced by various factors such as perceived ease of use, perceived usefulness, security concerns, transaction speed, demographic characteristics (e.g., gender, income, academic background), and digital awareness. The Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) are often used to explain how such factors drive or inhibit adoption behaviour (Davis, 1989; Venkatesh et al., 2003).

Given this context, the present study aims to explore the level of awareness, usage patterns, and key determinants influencing the adoption of UPI services among undergraduate students. By examining both enabling and inhibiting factors, this research seeks to contribute valuable insights that can inform the development of more inclusive, secure, and user-friendly digital financial services targeted toward youth.

This chapter provides the background of the study, outlines the problem statement, and presents the research objectives, questions, significance, scope, and definitions of key terms used throughout the dissertation.

1.1 BACKGROUND OF THE STUDY

In the past decade, the Indian financial ecosystem has undergone a transformative shift, driven by the growth of digital technologies and government-led initiatives promoting a cashless economy. A key innovation in this digital transition is the Unified Payments Interface (UPI), launched in 2016 by the National Payments Corporation of India (NPCI). UPI enables users to link multiple bank accounts into a single mobile platform, facilitating seamless and instant fund transfers without the need for traditional bank details. With features such as interoperability, QR code integration, 24/7 availability, and minimal transaction costs, UPI has revolutionized the way Indians conduct daily financial transactions (NPCI, 2021).

The adoption of UPI has seen exponential growth. According to the Reserve Bank of India (2022), UPI accounted for over 40 billion transactions in 2021–22 alone, surpassing traditional modes like credit cards, NEFT, and IMPS. Factors contributing to this widespread acceptance include increased smartphone penetration, affordable internet access, and a growing awareness of digital literacy. The onset of the COVID-19 pandemic further accelerated the shift toward contactless payments, making platforms like UPI not just a convenience but a necessity (Deloitte, 2021).

Among the diverse user groups embracing digital payment systems, undergraduate students represent a particularly dynamic and influential demographic. As digital natives, they are well-acquainted with mobile apps, online shopping, and fintech platforms. Their reliance on digital tools for daily expenses—such as paying for food delivery, commuting, tuition fees, and personal purchases—positions them as key participants in the digital economy (KPMG, 2020). However, while usage may be high, the patterns and drivers of UPI adoption among students are influenced by multiple factors including awareness, perceived ease of use, security concerns, transaction speed, and socio-economic background.

Despite the increasing relevance of UPI in students' lives, there is a notable gap in empirical research focusing specifically on how and why undergraduate students adopt this technology. Most existing studies focus on general consumers, merchants, or banking customers, leaving the student segment under-examined. As future consumers, professionals, and influencers, understanding the adoption behaviour of students is essential for designing youth-oriented financial products and enhancing digital inclusion.

This study therefore seeks to investigate the awareness, usage patterns, and influential factors behind the adoption of UPI services among undergraduate students. By examining both quantitative and qualitative dimensions of their behaviour, the research aims to contribute to the growing body of literature on digital payment systems and inform policy, product development, and financial literacy initiatives tailored to the youth population.

1.1.1 FEATURES OF UPI TECHNOLOGY

The Unified Payments Interface (UPI) is a mobile-based, real-time payment system developed by the National Payments Corporation of India (NPCI) in 2016. It facilitates instant inter-bank transactions through smartphones using a Virtual Payment Address (VPA), eliminating the need for bank account numbers or IFSC codes (NPCI, 2021). UPI integrates multiple banking features into a single platform, allowing users to perform transactions with ease and security.

Key Features of UPI

➤ Real-Time Money Transfer:

Enables instant transfer of funds between bank accounts 24/7, including weekends and holidays (RBI, 2022).

➤ Virtual Payment Address (VPA):

Transactions are done using a VPA (like abc@bankname), so users don't need to share sensitive bank details (NPCI, 2021).

➤ Interoperability Across Banks and Apps:

UPI works seamlessly across multiple banks and mobile apps (e.g., PhonePe, Google Pay, Paytm, BHIM), providing flexibility to users (KPMG, 2020).

➤ Multiple Account Linking:

Users can link more than one bank account to a single UPI app and manage them under one dashboard.

➤ QR Code-Based Payments:

Supports merchant and peer payments through quick and secure QR code scanning.

> Two-Factor Authentication:

Offers strong security through mobile verification and UPI PIN, ensuring safe transactions (Deloitte, 2021).

➤ Low or No Transaction Charges:

Most UPI transactions are free or involve minimal fees, making it cost-effective for all users

➤ AutoPay for Recurring Payments:

Allows users to automate bill payments, subscriptions, and EMIs with pre-authorized instructions.

➤ Request Money Feature:

Users can request payments from others by entering the payer's VPA or scanning their QR code.

> Support for Overdraft Accounts and Credit Lines:

In recent updates, UPI supports linking to overdraft facilities, expanding its utility for formal credit access (RBI, 2022).

1.1.2 EVOLUTION OF UPI

The Unified Payments Interface (UPI) was introduced by the National Payments Corporation of India (NPCI) in April 2016 with the objective of simplifying digital payments and promoting a cashless economy. What began as a basic platform for peer-to-peer bank transfers has evolved into a robust, multi-functional payment system that caters to individuals, merchants, and institutions.

UPI's evolution can be understood in terms of three major phases:

➤ Phase 1: Initial Launch and Adoption (2016–2017)

UPI started with basic money transfer functionality using a Virtual Payment Address (VPA).

Limited to a few banking apps (e.g., BHIM, SBI Pay, ICICI Pockets).

Initial adoption was slow due to lack of awareness and limited features (NPCI, 2017).

➤ Phase 2: Rapid Growth and App Integration (2017–2019)

Major apps like PhonePe, Google Pay, Paytm, and Amazon Pay integrated UPI into their platforms.

Post-demonetization (2016), digital transactions surged, and UPI gained popularity.

Merchant payments via UPI QR codes became widespread.

UPI transactions grew from 0.2 million in October 2016 to over 700 million by March 2019 (RBI, 2020).

➤ Phase 3: Maturity and Diversification (2020–Present)

Introduction of advanced features like UPI AutoPay (for subscriptions), UPI 123PAY (for feature phones), and e-RUPI vouchers.

Support for overdraft accounts and linking with RuPay credit cards.

Launch of UPI Lite for small-value offline transactions.

Global expansion began with acceptance in countries like UAE, Singapore, and France.

In FY 2022–23, UPI crossed 90 billion transactions, showing its mass-scale acceptance (NPCI, 2023).

Key Milestones

- 2016: UPI launched with 21 participating banks

- 2017: BHIM app launched by the Government of India
- 2019: UPI 2.0 launched with features like invoice sharing and overdraft accounts
- 2021: UPI AutoPay and UPI 123PAY introduced
- 2022–23: UPI goes global with international partnerships (e.g., with Singapore's PayNow)

UPI's evolution reflects its adaptability, scalability, and user-focused innovation. It is not just a payment tool but a symbol of India's digital transformation and financial inclusion goals.

1.2 KEY FACTORS INFLUENCING UPI ADOPTION (CONVIENIENCE, SECURITY, SPEED, AWARENESS)

The adoption of UPI among undergraduate students is shaped by several interrelated factors that influence their decision to use or avoid the platform. Understanding these factors is essential for designing effective strategies to promote wider and more responsible use of digital payment systems in student populations. The most commonly observed influencing factors include convenience, perceived security, transaction speed, awareness, ease of use, trust, and demographic variables.

➤ Convenience and Accessibility

Convenience is one of the most critical motivators for UPI adoption. UPI eliminates the need to carry physical cash, visit ATMs, or input lengthy account details for every transaction. For students managing daily expenses, such as buying food, booking tickets, or

paying tuition fees, UPI offers an instant, cashless, and mobile-based solution. The ability to link multiple bank accounts in one app further enhances its practical utility (Deloitte, 2021).

Perceived Security and Trust

Although UPI incorporates strong security features such as multi-factor authentication and PIN verification, students' perception of digital safety significantly impacts adoption. Concerns about fraud, phishing, or failed transactions can deter students from using the platform frequently. On the other hand, those who feel confident in the app's encryption, transparency, and transaction tracking features are more likely to adopt it regularly (KPMG, 2020).

> Transaction Speed

The ability to transfer money instantly, anytime and anywhere, is another strong motivating factor. Unlike traditional banking methods that involve waiting periods or business-hour limitations, UPI transactions are processed in real time, which is especially helpful in emergency or time-sensitive situations. This speed enhances both utility and user satisfaction among students (RBI, 2022).

➤ Awareness and Digital Literacy

Awareness about UPI's features and usage procedures plays a significant role in adoption levels. Students who have been introduced to UPI through peer influence, campus programs, or fintech promotions are more likely to use it actively. Conversely, limited knowledge about how to create a VPA, reset a UPI PIN, or use UPI QR codes can be a barrier for many (NPCI, 2021). Educational interventions and digital literacy campaigns can bridge this gap.

Ease of Use (User Interface Design)

UPI-enabled apps like Google Pay, PhonePe, Paytm, and BHIM offer simple and intuitive interfaces, which is a significant advantage for student users. A well-designed interface reduces cognitive load and minimizes errors, thereby making first-time users more comfortable and increasing long-term adoption. Complex or poorly designed interfaces, on the other hand, may discourage continued use (Davis, 1989).

Social Influence and Peer Usage

Students are highly influenced by the behaviour of peers, roommates, and social circles. If UPI is widely used among friends for splitting bills, organizing events, or group purchases, an individual is more likely to start using it too. This network effect significantly contributes to spreading usage within college campuses (Venkatesh et al., 2003).

Demographic and Socio-Economic Factors

Factors such as age, gender, academic background, rural or urban residence, and financial access can influence UPI adoption. For instance, students from urban areas with access to reliable internet and banking services are more likely to adopt UPI compared to those in rural or economically weaker regions.

In conclusion, while convenience, speed, and digital awareness are primary drivers of UPI adoption among undergraduate students, perceived security, ease of use, and social influence also play crucial roles. Recognizing and addressing these factors can help stakeholders promote more inclusive, secure, and widespread adoption of UPI services in the higher education sector.

1.2.1. IMPORTANCE OF UPI IN THE CONTEXT OF UNDERGRADUATE STUDENTS

The Unified Payments Interface (UPI) has become increasingly significant in the daily lives of undergraduate students in India. As digital natives, today's students are not only familiar with mobile technology but also actively use digital financial services. UPI, with its convenience, speed, and accessibility, aligns well with the lifestyle and needs of this demographic.

UPI empowers undergraduate students to conduct financial transactions independently, without relying on traditional banking methods such as cheques or cash withdrawals. Whether it is paying for food, splitting bills with friends, shopping online, or making fee payments, UPI provides a quick and secure payment mechanism that operates 24/7. This independence in financial handling fosters a greater sense of responsibility and digital financial literacy among students (Deloitte, 2021).

Moreover, UPI eliminates the need for physical cash and ATM visits, which is especially beneficial for students living in hostels, away from home, or in semi-urban areas. Its ease of use, combined with the ability to track transaction history instantly through mobile apps, helps students manage their limited budgets more efficiently (KPMG, 2020). Many UPI apps also offer rewards, cashback, and discounts, which further incentivize adoption among students with constrained financial means.

Importantly, undergraduate students represent a tech-forward segment that can significantly influence the adoption of digital technologies in the larger population. Their positive experience with UPI not only increases their own usage but also encourages their peers and family members to use digital payment platforms. Additionally, the widespread acceptance

of UPI in college canteens, bookstores, public transport, and educational institutions reinforces its relevance in the student ecosystem (NPCI, 2021).

However, while the use of UPI among students is rising, it is also essential to understand the concerns they face—such as fear of fraud, lack of awareness about all features, or occasional network issues. Exploring these areas can provide valuable insights for fintech developers, educators, and policymakers to create more inclusive and student-friendly digital payment solutions.

In summary, UPI plays a crucial role in enhancing the financial autonomy, convenience, and digital inclusion of undergraduate students. Its relevance to their everyday life and educational journey makes it a key focus area for understanding the broader dynamics of digital payment adoption in India.

1.2.2 THE CONTEMPORARY ROLE OF UPI IN UNDERGRADUATE STUDENT'S LIVES

In today's digital-first environment, the Unified Payments Interface (UPI) has emerged as an essential financial tool in the everyday lives of undergraduate students in India. Its simplicity, affordability, and real-time functionality make UPI particularly suited to the lifestyle and financial needs of this generation. As students increasingly rely on mobile-based services, UPI enables them to conduct financial transactions seamlessly, thereby playing a contemporary and transformative role in both their academic and personal spheres.

One of the most prominent roles of UPI is in supporting day-to-day financial independence.

Many students use UPI to pay for food, transportation, mobile recharges, hostel fees, books,

and tuition-related expenses. In college environments where cafeterias, stationery shops, and peer-to-peer payments have shifted to QR code and digital platforms, UPI has become the default mode of transaction. This reliance encourages early habits of digital financial responsibility and self-reliance.

UPI also facilitates peer collaboration and social interaction. Students often use it for splitting bills, collecting contributions for events or group projects, or repaying friends. Its social utility is further enhanced by integrated chat and request-money features available in apps like PhonePe and Google Pay. In this sense, UPI goes beyond a mere transactional platform and becomes a tool for social and academic collaboration.

The platform's utility is especially relevant in a post-pandemic world where contactless payments are preferred for safety. Many colleges and institutions have integrated UPI-based payments for administrative functions like fee collection, admission processes, and event registrations, further embedding it into the academic experience (NPCI, 2022).

Moreover, UPI acts as a gateway to financial literacy. Students learn to manage their bank accounts, monitor expenses through mobile apps, and understand concepts such as OTPs, transaction history, and fraud prevention. This exposure helps build confidence in handling personal finances, which is vital as they transition into adulthood and the professional world (Deloitte, 2021).

However, the contemporary role of UPI also comes with challenges. Some students remain hesitant due to digital security concerns, transaction failures, or lack of adequate digital infrastructure—particularly in rural areas. Addressing these concerns is important to ensure equitable access and sustained use across diverse student populations.

In conclusion, UPI plays a dynamic and influential role in shaping the financial behaviours, social interactions, and digital engagement of undergraduate students today. It is not only a

tool for convenience but also a stepping stone toward financial autonomy and digital inclusion.

1.3 UPI vs. OTHER DIGITAL PAYMENT MODES

The Unified Payments Interface (UPI) has rapidly gained dominance among digital payment methods in India, particularly due to its simplicity, interoperability, and real-time transaction capabilities. While multiple digital payment options exist—including mobile wallets, debit/credit cards, and traditional fund transfer systems like NEFT and IMPS—UPI stands out in terms of adoption, accessibility, and overall user experience, especially for undergraduate students.

Below is a comparison of UPI with other popular digital payment modes:

➤ UPI vs. Mobile Wallets (e.g., Paytm Wallet, Amazon Pay Balance)

Mobile wallets require users to load money into a separate digital account before making payments. UPI, on the other hand, debits the amount directly from the user's bank account in real-time.

Wallets are often limited to specific platforms or merchants, whereas UPI is interoperable across banks and apps.

UPI has broader functionality and supports peer-to-peer as well as peer-to-merchant payments more seamlessly (KPMG, 2020).

➤ UPI vs. Debit/Credit Cards

Cards require POS machines for in-person payments and often involve transaction charges, especially credit cards. UPI transactions are mostly free and do not require any hardware.

UPI does not demand card details or CVV inputs, making it quicker for mobile transactions.

Security in UPI is strengthened with mobile PIN and device binding, whereas cards are more prone to cloning and misuse if lost (NPCI, 2021)

For small transactions and routine payments, students often prefer UPI over cards due to its speed and convenience.

➤ UPI vs. NEFT/IMPS

While NEFT (National Electronic Funds Transfer) processes transactions in hourly batches and IMPS (Immediate Payment Service) enables 24x7 instant transfers, both require entering bank account numbers and IFSC codes.

UPI simplifies this by using a Virtual Payment Address (VPA) or mobile number, reducing errors and enhancing ease of use.

NEFT may take longer and is more formal; IMPS is useful but less user-friendly for students unfamiliar with banking details (RBI, 2022).

UPI also supports more functionalities like bill payments, QR code scanning, and subscriptions, which NEFT/IMPS do not.

Cost and Accessibility

UPI transactions are free or come with negligible charges, making it accessible for students with limited budgets.

Most UPI apps are free to use, with intuitive user interfaces tailored for smartphone users.

Cards and wallets often come with annual fees, top-up limits, or minimum balance requirements, which are not present in UPI systems.

> Suitability for Students

Undergraduate students value speed, convenience, and ease of use. UPI, being mobile-friendly and secure, fits perfectly into their lifestyle.

UPI also enables better expense tracking via transaction history in real-time, which helps students manage their finances better than they can with physical cash or untracked wallet expenses.

In summary, while all digital payment methods have their own merits, UPI has emerged as the most preferred mode of transaction for undergraduate students due to its affordability, speed, minimal infrastructure requirements, and wide acceptance. Its real-time functionality and user-friendly experience set it apart from traditional banking tools and digital wallets.

1.4 SCOPE OF THE STUDY

The present study focuses on examining the adoption of Unified Payments Interface (UPI) services among undergraduate students residing and studying in Tezpur Town of Assam. The scope is limited to exploring students' awareness, frequency of use, preferred UPI platforms, and their perceptions regarding the convenience, security, and speed of digital transactions. It aims to identify the key factors influencing the adoption of UPI and the challenges faced during its usage (Rathore, 2020; Deshpande & Dhoka, 2025).

The study is geographically confined to Tezpur Town and targets only undergraduate students enrolled in various colleges within the town. It does not extend to postgraduate students, working professionals, or residents outside the defined area. The research is primarily quantitative in nature, using a structured survey-based approach to collect responses directly from students, in line with similar studies that have examined digital payment behaviour among youth (Kumar & Mohanty, 2021).

By narrowing its focus to a specific demographic and region, the study intends to generate localized insights that can help financial service providers, educational institutions, and policymakers better understand the digital financial behaviour of youth in semi-urban areas (NPCI, 2023). These insights may also serve as a reference for further research in other towns or among different population groups, especially in the context of increasing digital inclusion and government-led initiatives like Digital India (Mehta & Agarwal, 2022).

1.4.1 Relevance to the Present Study

The application of the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) provides a strong theoretical foundation for analyzing the adoption of UPI services among undergraduate students. These models are particularly suitable because they emphasize users' perceptions, behavioural intentions, and actual usage—key components that align with the objectives of this research.

In the context of undergraduate students, perceived usefulness and ease of use (as outlined in TAM) are directly linked to how students evaluate UPI's convenience, security, and practicality in managing daily transactions. Similarly, the UTAUT model's variables—such as performance expectancy, effort expectancy, social influence, and facilitating conditions—capture important behavioural and contextual factors like peer influence, smartphone access, and digital literacy, all of which are highly relevant to student populations.

By integrating both models, this study aims to gain a deeper understanding of what drives or hinders the adoption of UPI services among college students. This theoretical lens not only helps in formulating research questions and objectives but also guides the selection of variables, questionnaire design, and interpretation of results. Ultimately, the framework aids in offering practical suggestions to policymakers, fintech developers, and educational institutions on how to enhance digital payment adoption among youth.

1.5. STUDENT'S PERCEPTION AND USAGE BEHAVIOUR TOWARDS UPI

The perception and behaviour of undergraduate students toward Unified Payments Interface (UPI) play a significant role in determining the extent and manner of its adoption. As digital natives, students are generally open to using technology for academic, financial, and social activities. However, their perception of UPI—shaped by convenience, trust, peer influence, and prior experiences—directly affects how frequently and confidently they use the platform.

Many students view UPI as a fast, easy, and cashless way of managing everyday expenses. Its widespread acceptance at canteens, bookstores, hostels, public transport, and online merchants has made it highly relevant to student life. Students often use UPI for paying fees, transferring money to peers, ordering food, shopping online, and settling shared expenses during group activities.

Their behaviour is influenced by factors such as:

- Perceived convenience and ease of use (e.g., no need to carry cash or cards)
- Security and trust in the platform and app interfaces
- Availability of smartphones, internet connectivity, and access to bank accounts
- Social influence (peer recommendations, family use)
- Prior positive or negative experiences with UPI apps

Studies have shown that a favourable perception of usefulness and simplicity increases the likelihood of repeated use (Davis, 1989; Venkatesh et al., 2003). On the other hand, concerns

such as fear of transaction failure, data privacy, or lack of digital literacy can reduce confidence and limit usage. Some students may restrict their use of UPI to specific purposes, such as bill payments or online purchases, while others may use it for nearly all financial transactions.

In addition, gender, socioeconomic background, urban or rural origin, and prior exposure to banking services also influence how students perceive and use UPI. For example, students from urban areas may be more frequent users due to better access to technology and awareness campaigns.

In conclusion, understanding students' perception and usage behaviour is crucial in identifying both the drivers and barriers to UPI adoption. Such insights can inform the development of targeted interventions, awareness programs, and user-friendly app designs that enhance student engagement with digital financial tools.

1.6. RATIONALE OF THE STUDY

In today's fast-moving digital world, technology has significantly transformed the way financial transactions are conducted. Among the many digital innovations in India, the Unified Payments Interface (UPI), developed by the National Payments Corporation of India (NPCI), has emerged as a revolutionary platform. UPI allows instant money transfers through mobile devices, and it has become one of the most widely used digital payment methods, especially among the younger population.

Undergraduate students, being active users of smartphones and mobile applications, are often seen as early adopters of digital technology. From paying college fees and purchasing books to ordering food and splitting bills with friends, students increasingly rely on digital payment

tools like UPI. With just a mobile number or virtual payment address (VPA), they are able to conduct transactions quickly, securely, and without the need to carry cash or cards.

Despite the rising popularity of UPI, it is still important to understand what truly influences its adoption among undergraduate students. Do all students use UPI with the same ease and frequency? What are the factors that encourage or discourage its use? Are students aware of the safety features? How do factors like convenience, security, speed, trust, and awareness shape their behaviour?

Many studies have looked at digital payments in general or at urban adults as users. However, there is limited research focused specifically on the perception and usage patterns of UPI among undergraduate students, especially in the context of financial inclusion, digital literacy, and economic background. It is important to explore the behaviour of this age group because their preferences today can shape the future of India's digital economy.

The present study, therefore, aims to examine the adoption of UPI services among undergraduate students using a quantitative research design. A structured Likert-scale questionnaire will be used to collect data on students' awareness, frequency of use, and perceptions related to key factors such as convenience, security, transaction speed, and ease of use. The study will also look into whether demographic factors such as age, gender, and location affect UPI usage

Understanding these patterns is essential for policymakers, educational institutions, fintech companies, and banks. The findings can help in designing better awareness programs, improving mobile app features, and making digital financial services more inclusive and student-friendly. As India moves toward a cashless economy, it becomes all the more important to ensure that young people are equipped, confident, and secure in using digital platforms like UPI.

In light of the above, the present study is relevant as it attempts to provide data-driven insights into the contemporary financial behaviour of undergraduate students, with a focus on the growing use of UPI. By using a quantitative method, this study aims to identify trends, correlations, and areas of concern that can support future planning and policy-making.

1.7. STATEMENT OF THE PROBLEM

The present study is an effort to examine the adoption of UPI services among undergraduate students in Tezpur Town in Assam. The study has been formulated under the following title –

"Adoption of UPI Services Among Undergraduate Students in Tezpur Town in Assam.

1.8. OBJECTIVES OF THE STUDY

- 1. To measure the level of awareness and usage frequency of UPI services among undergraduate students in Tezpur town.
- 2. To examine the relationship between geographic factors (age, gender, academic stream) and the adoption of UPI services.
- 3. To assess the impact of perceived convenience and security of UPI usage among students

1.9. RESEARCH QUESTIONS

- 1. What is the level of awareness and frequency of usage of UPI services among undergraduate students in Tezpur town?
- 2. Is there any relationship between geographic and demographic factors (such as age, gender, and academic stream) and the adoption of UPI services among undergraduate students?

3. How do undergraduate students perceive the convenience and security of UPI services, and what impact do these perceptions have on their adoption and usage behaviour?

1.10. OPERATIONAL DEFINITION OF KEY TERMS

Adoption of UPI Services: Adoption refers to the extent to which undergraduate students actively use Unified Payments Interface (UPI) platforms such as Google Pay, PhonePe, Paytm, or BHIM for financial transactions including bill payments, peer transfers, and online purchases.

UPI Services: UPI services refer to the real-time payment system developed by the National Payments Corporation of India (NPCI) that allows instant transfer of funds between bank accounts using mobile applications through Virtual Payment Address (VPA), QR codes, or mobile numbers.

Undergraduate Students: Undergraduate students are individuals enrolled in bachelor's degree programs (such as B.A., B.Sc., B. Com, BBA, etc.) in colleges located within Tezpur Town, Assam, during the academic year of the study.

Tezpur Town, Assam: In this study, Tezpur Town refers to the urban area within the Sonitpur district of Assam where the sample of undergraduate students has been selected for examining the adoption of UPI services.

1.11. DELIMITATION OF THE STUDY

The Present Study is delimited to the following

- The study is limited to three colleges of Tezpur Town only, namely Tezpur College,
 Darrang College, and LGB Girls' College.
- The study is limited to undergraduate students studying in the above-mentioned colleges only.

CHAPTER 2 REVIEW OF RELATED LITERATURE

2.0 INTRODUCTION

Review of related literature is an important and essential part of a research study. Before conducting any study of research, it is most crucial for a researcher to m vcake a survey and analysis of the studies made earlier, which is relevant to the present topic. This would enable the researcher to have a great understanding of the topic and to identify the various factors connected with the research problems. A careful review of research journal, books, dissertations, these and other source of information on the problem to be investigated is one of the important steps in the planning of any research study. (Kaul, 2017 p.177)

Literature means a set of collection of published materials, information on a particular area of research or topic, such as books, article, journal which have the academic value. In simple word, a review of literature means the study of previous literature, research work, report, documentaries etc. A literature review discusses common and emerging approaches, notable patterns and trends, areas of conflict and controversies, and gaps within the relevant literature which enables the researcher help to see the research problem can be viewed to different perspectives. It would also enable the investigator to choose the right type of techniques to be adopted in the research.

The review of the related literature is an essential aspect of the research report. It equips the researcher with adequate information regarding the field in general and the problem in particular. Such a review is a step of the scientific method and the serious student of research will find an exhaustive survey of what has already been done on his problem – an indispensable step in its solution. The relevant literature when thoroughly reviewed should be made an integral part of the total report. It helps the researcher in the classification of the problem and the avoidance of duplication, the formulation of insightful hypothesis, the planning of an adequate research design and the rigorous and insightful interpretation of the

findings. It provides comparative data on the basis of which to evaluate and interpret the significances of one's findings and in addition to contribute to the scholarship of the investigator capitalizing on the success and errors of others is certainly a more intelligent approach to a problem.

2.1 PURPOSE OF REVIEW

According to Lokesh Kaul, (2019, p. 166) there are some specific purposes of review of related literature-

- The review of related literature enables the researcher to define the limits of his field.

 It helps the researcher to delimit and define his problems.
- By reviewing the related literature, the researcher can avoid unfruitful and useless problem areas he can select those areas which positive findings are very likely to add to result and his endeavours would be likely to add knowledge in a meaningful way.
- Through the review of related literature, the researcher can avoid unintentional duplication of well unestablished findings.
- It gives the researcher an understanding of the research methodology which refers to the way the study is to be conducted.
- The final and important specific reasons for reviewing the literature is known about the recommendations of previous researchers listed in their studies for further research.

2.2 REVIEW OF RELATED LITERATURE

Deshpande et al. (2025) conducted an analytical study on the usage of UPI payment gateways among postgraduate students in the Pimpri-Chinchwad Municipal Corporation (PCMC) area. Using a mixed-methods approach, incorporating both quantitative surveys and qualitative interviews, the study revealed a high level of awareness and adoption of UPI among students. Convenience, security, and accessibility were identified as the primary drivers of adoption. However, the study also highlighted security concerns and technical difficulties as significant barriers, emphasizing the need for improved user education and system enhancements.

Karkera et al. (2024) examined the awareness and usage of UPI digital payment systems among college students in Bengaluru North. Surveying 109 students from undergraduate and postgraduate programs, the research found that UPI had a high penetration rate, with students frequently using it for peer-to-peer transactions and online purchases. The findings also suggested that ease of use and quick processing time were key factors driving satisfaction. However, concerns regarding data privacy and occasional transaction failures were noted as challenges.

Kumar Sahoo et al. (2024)"Adoption of Unified Payment Interface (UPI): conducted a comprehensive analysis of UPI's adoption in India. The objective was to examine the factors contributing to UPI's rapid uptake and its impact on promoting a cashless economy. Utilizing secondary data from various published sources, the researchers

highlighted UPI's ease of use, interoperability, and robust security features as pivotal elements driving its widespread acceptance. They also explored UPI's role in enhancing financial inclusion, digital literacy, and reducing cash transactions. Despite these advantages, the study acknowledged challenges such as fraud risks and system downtimes faced by certain user segments, emphasizing the need for continuous improvements in UPI infrastructure. The authors also discussed future prospects, including potential integration with international payment systems and emerging technologies.

Verma et al..(2024) explored the future prospects of UPI in rural India. Their study, based on data collected from semi-urban and rural regions of Uttar Pradesh, found that while awareness was still developing, adoption was rising due to increasing smartphone penetration, bank-led awareness programs, and simplified onboarding processes.

Kaur et al..(2023) explored the "Behavioural Intention to Use UPI Among University Students". Based on the Technology Acceptance Model (TAM), they identified that perceived usefulness, perceived ease of use, and trust significantly influenced the intention to use UPI apps among students. The study also found that regular campusbased digital payment needs (like food stalls and tuition fee payments) acted as reinforcing factors for continuous UPI usage.

Nair (2023) investigated the role of perceived security and government endorsement in UPI adoption during the COVID-19 pandemic. They observed that fear of physical contact and hygiene concerns significantly accelerated UPI usage for both essential and non-essential services. The study concluded that UPI became a critical tool for financial inclusion during the pandemic period.

Prakasha (2023) "A Study on Unified Payment Interface (UPI) Among University Students in Madikeri City" investigates university students' awareness, preference, and

satisfaction level towards UPI-based digital payments. The study is based on a quantitative research methodology, conducting primary data collection from 120 university students of Madikeri City through Google Forms. The percentage analysis technique was applied for interpreting the responses. Secondary data were collected from journals, articles, and government reports. Results indicate that Google Pay (50.83%) and PhonePe (34.17%) are the most used UPI apps, with ease of use (39.17%) and cashback offers (29.16%) being key drivers of adoption. Although 93.33% of the respondents prefer digital payments, 82.5% find UPI transactions secure, and 91.67% are satisfied with the system. The research concludes that UPI adoption is high among students but more awareness campaigns and security improvements can boost its usage.

Mrunalini, et al. (2023) conducted a study titled "A Study on Awareness of UPI Payment – Students' Perspective", published in the Journal of Emerging Technologies and Innovative Research (JETIR), Volume 10, Issue 11 (November 2023). The primary objective of the study was to analyse students' awareness, usage patterns, and perceptions of UPI (Unified Payments Interface) as a digital payment mode. The research aimed to assess how well students understand UPI transactions, their trust in the system, and the factors influencing their adoption of this technology. The study employed a quantitative research method, using a structured survey questionnaire to collect responses from students at PES University, Bangalore. The data were analysed statistically to derive insights into students' familiarity with UPI, their frequency of usage, and the barriers they face while using digital payments. The findings revealed that a significant percentage of students are aware of UPI and actively use it for various transactions, including bill payments, online shopping, and peer-to-peer transfers. Factors such as ease of use, security, and government promotion of digital payments played a crucial role in UPI adoption. However, the study also highlighted concerns related to cybersecurity threats

and occasional transaction failures, which affect users' trust in the system. The authors concluded that while UPI has gained widespread acceptance among students, continuous improvements in security measures and awareness campaigns are essential to enhance trust and encourage further adoption.

More (2023) "Understanding Factors Influencing UPI (Unified Payments Interface) User Adoption Levels and Sentiments in India" investigates the major drivers of UPI adoption, including transaction speed, ease of use, safety, and government policies for cashless payments. The work identifies existing studies on digital payment adoption. The role of demonetization (2016) is covered as a turning point for digital payments based on NPCI statistics indicating exponential growth in UPI. Parameters like trust, app usability, and perceived security are deemed critical in shaping user sentiment. Although UPI has made digital payments seamless, research also speaks of concerns like transaction failure and high-value payment limits. The research employs a quantitative research design, incorporating primary data collection via Google Forms survey with 155 responses. A convenience sampling method was applied to collect user feedback regarding the level of adoption and sentiment. Statistical analysis, such as Chi-square tests of independence and decision tree classifiers, was carried out using Python to determine relationships between demographic attributes, transaction speed, trust, and perceived security. The research revealed that attributes such as ease of use and transaction speed strongly influence adoption, whereas high-value transactions and application choice had no significant correlation with user opinion. Findings indicate that even with some technical problems, trust in UPI is high, and users tend to recommend it in general.

Ezabert et al.(2023) "Antecedents for the Adoption of UPI and the Problems Faced by Its Users" discusses the drivers of UPI adoption and the issues users are facing. The review also cites world acceptance of UPI, with attempts to include it in international

payment systems. Despite being a fast-growing region, the research finds there exists a knowledge gap in determining the specific user problems pertaining to transaction security, excessive spending, and service dependability. The research is based on a quantitative research methodology, making use of both primary and secondary data. Primary data was obtained by conducting a structured questionnaire among 60 participants in Ernakulam District with the help of convenience sampling. Secondary data was obtained from academic journals, websites, and reports. Data analysis was based on descriptive statistics, such as pie charts and tables to provide insights into the trends, preference, and difficulties in UPI usage. Research findings show Google Pay is the most used UPI app (90% use), instant settlement and low-value payments are what drive adoption but security issues, network lag, and refund taking time are serious challenges. The research concludes that although UPI is extensively used, additional advancements in network stability, security functionality, and transparency of transactions must be made to improve user satisfaction.

Thirupathi et al... (2022) explored postgraduate students' perceptions of UPI transactions at Satavahana University in Karimnagar, Telangana. Through survey-based research, they found that students primarily used UPI for mobile recharges and fund transfers, suggesting a reliance on digital payment systems for everyday transactions. The study also pointed out that while UPI adoption was high, issues related to security and transaction failures led to occasional hesitation in using the platform for high-value transactions.

Jaiswal et al.. (2022) extended the study by comparing UPI usage across different age groups and educational backgrounds. Their results showed that while college students and young professionals were the most active users, adoption among older adults was

growing, especially with increased awareness and improved user interfaces of payment apps like Google Pay and PhonePe.

Hazarika et al..(2022), in their study "UPI and Financial Inclusion in Northeast India", analysed how UPI has impacted banking access among semi-urban populations in Assam and Meghalaya. Using mixed methods, they found that digital payment platforms, especially UPI, have begun to bridge the gap in areas with limited physical banking infrastructure. However, their findings also pointed to challenges such as poor internet connectivity, language barriers, and lack of smartphone literacy, which slowed adoption among older or less-educated users.

Gupta (2021) study assessed user perceptions and satisfaction levels toward UPI. Employing both quantitative surveys and qualitative interviews in the Delhi-NCR region, the study found that most users were highly satisfied with UPI services. However, issues such as server downtime, app freezing, and failed transactions were commonly reported. Despite these technical glitches, the convenience and speed of UPI retained user loyalty.

Pappeswari et al... (2021), "A Study on Awareness and Customer Satisfaction of Unified Payment Interface (UPI) for Digital Payments with Reference to Ambasamudram Area" examines the growing usage of UPI and the determinants of customer satisfaction. The research adopts a quantitative research methodology, gathering primary data through a structured questionnaire from 154 respondents in the Ambasamudram area. Convenience sampling was employed to collect responses, with aspects like awareness of UPI, satisfaction levels, and usage habits being the focus. The questionnaire comprised close-ended questions, and an online distribution was done through Google Forms. Data analysis was carried out using SPSS and Excel, with descriptive statistics and percentage analysis being used to interpret findings. Findings suggest that usability, cashback

rewards, and security are key factors driving adoption of UPI, whereas failures in transactions, connectivity problems with the internet, and distrust continue to be core issues. Research concludes that promotional awareness campaigns and enhanced security will be crucial for further boosting adoption and customer satisfaction in semi-urban regions.

Rani et al..(2020) examined the various factors influencing the adoption of UPI services in urban India. Using a structured questionnaire and regression analysis, they found that perceived ease of use, transaction speed, security, and trust were major determinants of UPI adoption. Their research emphasized the importance of user experience and confidence in digital payment security.

Sinha et al.. (2020), in a post-demonetization context, analysed the digital payment shift with a particular focus on UPI. Their study observed a significant increase in UPI adoption immediately after demonetization, as people searched for cashless transaction options. The findings showed that UPI gained popularity because of its minimal transaction charges and government promotion of digital platforms.

Shivane et al..(2020) "Analytical Study on Usage of UPI" analyses the swift growth and usage of UPI in India. The study cites, who points out that UPI has transformed digital payments by considerably shortening transaction time when compared to conventional banking practices. The study also discusses how the adoption of digital payments is driven by convenience, cash back rewards, and technological progress. Yet, network outages, bank server shutdowns, and security issues continue to impede the full utilization of UPI. Theoretical support indicates that despite growing UPI adoption, it is important to overcome technical hindrances in order to experience steady growth. The research is based on a quantitative methodology with primary and secondary data. Primary data has

been gathered by means of a systematic questionnaire completed by 65 students of management belonging to the age group of 20-30 years. UPI frequency of transaction was measured by survey, and the preference, why they are used, and their problems were assessed. Analysis included tabulation, graphical representation, and measures of central tendency like mean, mode, and median. Secondary data was taken from RBI, NPCI reports, and academic papers to compare the UPI with other modes of digital payment such as NEFT, RTGS, IMPS, debit card, and credit card. Findings indicate that Google Pay (52%) and Phone-Pay (31%) are the most popular UPI apps, with 93.8% of students opting for UPI due to its convenience. The study concludes that though UPI adoption is high among young users, solving network problems and bank server downtimes is important to further improve the digital payment experience.

Thomas et al..(2021) conducted a study titled "Consumer Preferences Towards UPI in Tier-II Cities", focusing on the adoption patterns in smaller urban centres like Kochi and Bhopal. Their survey of 300 respondents revealed that promotional offers, cashback rewards, and peer influence played a significant role in encouraging UPI usage. The study emphasized that in Tier-II cities, social influence and app-based incentives were stronger motivators than in metro areas.

Balasubramanian et al.. (2019) "Evolution of UPI in Mobile Banking". Its Objectives: was to map the evolution of UPI and examine its market positioning in the mobile banking sector. Methodology A market analysis of major UPI service providers was conducted. Findings of the study noted the dominance of private sector apps like Google Pay, Paytm, and PhonePe in the UPI market. Despite government initiatives, the BHIM app struggled to gain a significant market share, indicating a preference for private platforms over government-backed solutions.

Chaudhari et al.. (2019) "A consumer satisfaction study in Hyderabad, noting positive' attitude towards UPI and correlation with educational level in UPI usage". Objectives of the study. To assess consumer satisfaction with UPI services and investigate the correlation between educational levels and UPI adoption in Hyderabad. Methodology A survey was conducted among UPI users in Hyderabad to analyse satisfaction levels and demographic influences. Findings of the study found a generally positive attitude towards UPI, with higher adoption rates among individuals with higher educational qualifications. The results suggest that digital literacy plays a crucial role in UPI adoption, as educated users find it easier to navigate digital financial platforms.

Humbe et al... (2019) "Study of UPI/BHIM Payment System in India" examines the fast growth of digital payment systems after demonetization, with emphasis on UPI and BHIM app highlight the contribution of digital payments to increase banking efficiency and foster a cashless economy. The research uses a quantitative method of research, employing primary data collection from 200 students at Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. A standardized questionnaire was employed to determine students' familiarity, usage, and preference of UPI/BHIM applications. Descriptive statistics, in the form of charts and graphs, are also used in this study to compare transaction values, app usage, and transaction attributes. Results show that students are inclined towards third-party UPI apps because of promotional schemes, with PhonePe being the most popular. Transactions are mostly within the range of ₹1-₹10,000, and the scan-and-pay facility is the most used. The research finds that UPI is universally accepted by students, but efforts from the government need to emphasize raising BHIM app adoption in order to counter third-party apps.

Patil (2019) conducted a study focusing on awareness and usage of UPI among college students in Pune. Their findings revealed a high level of awareness (over 80%) among the

youth. Students primarily used UPI for mobile recharges, utility payments, and small purchases. The researchers concluded that UPI's ease of use and fast transactions made it more attractive than traditional online banking methods.

et al.. (2019) "Unified Payment Interface - Impact of UPI in Customer **Philip** Satisfaction" examines the position of UPI in revolutionizing digital payments in India. Its emphasizes that UPI increases interoperability and customer experience, providing seamless and efficient transactions. The research uses a quantitative research paradigm, applying primary data collection via a structured questionnaire. Information was collected from the respondents in order to determine customer preferences, satisfaction, and the effect of UPI on everyday transactions. Statistical measures like Regression Analysis, ANOVA, and F-Test were employed for interpretation of data. The findings reflect that convenience, speed, security, and cashback offers are the driving factors for UPI adoption. Regression analysis revealed 36.24% positive influence of UPI on customer satisfaction, and ANOVA findings supported the fact that education level has an influencing effect on UPI usage, as educated people are more likely to use it. The research concludes that the influence of UPI is strong on customer satisfaction, but increased efforts in awareness and security measures must be made in order to drive adoption in all segments.

Neema et al.. (2018) "UPI (Unified Payment Interface) – A New Technique of Digital Payment: An Explorative Study" analyses the huge growth in digital payments in India, particularly post-demonetization in 2016. The research points out that digital payment expansion has been driven by rising smartphone penetration, initiatives by the government such as Digital India, and development in fintech. The research is based on an exploratory research design with secondary data sources from journals, reports, and governmental publications. The study explores UPI's technical architecture, benefits,

challenges, and its comparison with other digital payment methods. Data from RBI, NPCI, and industry reports were analysed to assess the growth and adoption trends of UPI transactions. Additionally, the study uses a trend analysis approach, examining the increase in transaction volumes and values over time. Observations indicate UPI transactions increasing manifold, influenced by convenience of use and mobility integration, while problems like grievance redressal mechanisms, compatibility of software, and impediments to adoption in rural areas still exist. It is deduced in this research that UPI is revolutionary in India's financial landscape but will require even better security, infrastructure, and customer confidence if it is to grow further.

Sharma et al..(2018) explored the initial response to UPI services. Their study highlighted that UPI's interoperability, real-time fund transfer, and smartphone compatibility made it more accessible to a broader section of the population. They observed that young urban users were early adopters due to their technological adaptability and familiarity with mobile banking.

Tungare et al.. (2018) in his research paper "A Study on Customer Insight Towards UPI (Unified Payment Interface) - An Advancement of Mobile Payment System" explained that as compared to all of payment systems it can be asserted that UPI is the most advanced payment system in the world. UPI payment system enables money transfer between any two bank accounts using a smartphone. It enables a customer to directly pay from a bank account to various merchants, online and offline without going through the ordeal of entering credit card number, IFSC code or net banking/wallet passwords. It makes money transfers simple quick and hassle free. All such features of UPI encourages the respondents of service industries to embrace the tool and the aforementioned study unveiled that even there is significant difference is found between gender towards the adoption of UPI.

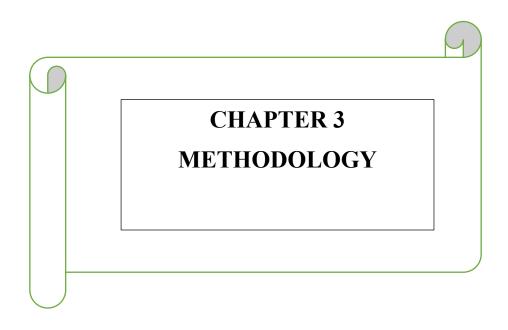
NPCI (2016) The Unified Payments Interface (UPI), developed by the National Payments Corporation of India (NPCI) in 2016, has significantly transformed the digital payment landscape in the country. Since its introduction, numerous studies have explored various aspects of UPI adoption, usage patterns, and influencing factors. The following section presents a year-wise review of literature relevant to the present study.

Sailo et al..(2016) "AN ANALYSIS ON ADOPTION TRENDS AND ISSUES IN PAYMENT CHANNELS (UPI) AMONG THE COLLEGE STUDENTS IN BENGALURU" examines various studies on the adoption and impact of UPI in India. Kate (2016) highlights UPI's rapid adoption due to its convenience in linking multiple accounts, leading to a decline in digital wallet usage. Aarti Sharma (2016) highlights the dual advantage of UPI to both customers and providers of the services, pointing to its prospects in overtaking e-wallets because of the convenience that customers desire. Navroze Dastur (2016) writes of the necessity for more digital payments aimed at enhancing India's tax collections, raising the concern whether professionals and small business owners will make the switch to electronic payments. Sruthy S. Pillai, G. Sandhya, and G. Rejikumar (2017) report that cashless payments are gaining popularity in India, albeit with security and privacy concerns still being a concern. These reports cumulatively point to UPI's increasing presence in India's digital payments landscape, spurred by its convenience, government push, and expanding smartphone penetration, as well as addressing consumer fears over security and financial transparency. The research adopts a descriptive research design to examine the adoption patterns and challenges of UPI among university students in Bengaluru.

2.3. RESEARCH GAP

Research gap refers to an area of research or topic, question that has not been answered or addressed sufficiently in previous study and it also represent an opportunities for further study on specific topic, area of research. It is important to identify research gap in order to address the areas that has not been addressed before or pointed out before.

The topic of this present study is "Adoption of UPI Services Among Undergraduate Students in Tezpur Town". To support this study, the researcher has reviewed several related studies and literature. Through the review of relevant resources, it was observed that while various studies have explored UPI adoption in general, certain specific areas remain under-researched. From the review of this present study, the following research gaps have been identified: Limited research focused specifically on undergraduate students as a target group for studying UPI adoption. Few studies examine how demographic factors such as age, gender, and socio-economic background affect UPI usage among students. Lack of detailed analysis on how students perceive factors like convenience, security, and in adopting UPI services. Not enough studies assessing how frequently and for what purposes (e.g., daily transactions, fee payments, e-commerce) students use UPI. Very limited data on students' awareness levels about UPI features, benefits, and risks in academic institutions, especially in semi-urban or rural areas. These research gaps highlight the need for a focused investigation on how undergraduate students adopt and interact with UPI services. The present study attempts to fill these gaps by examining the awareness, usage patterns, influencing factors, and perceptions of undergraduate students regarding UPI adoption



3.0. INTRODUCTION

Research is considered as more structured and systematic process of carrying on scientific method of analysis that is directed towards discovery and development of an organize body of knowledge. (Kaul, L. 2019 p.8).

It is the pursuit of truth with the help of study, observations, comparison, and experiment. In short, the search for knowledge through objective and systematic method of finding solution to a problem is research. The systematic approach concerning generalizations and formulation of a theory is also research. (Kothari, C.R.2004 p.1)

Methodology is a way to systematic and logical study of a problem. The methodology is an essential part of any kinds research, which provides the details regarding what, where, when, how much and by what means studying a research problem along with the logic behind them. Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them. (Kothari and Garg, 2014 p.7).

The research methodology means a kind of guideline for solving a problem with special components such as task, methods, rules and postulates employed by discipline. It can be considered to include multiple methods i.e. which is applied to various facts of the whole scope of it.

RESEARCH METHODOLOGY is the systematic and theoretical analysis of the principles, procedures, and strategies that guide a research study. It provides the underlying rationale for selecting specific research methods and techniques, ensuring they align with the research objectives and philosophical assumptions about knowledge and

reality. Unlike research methods, which are the practical tools for data collection and analysis, research methodology encompasses the broader framework that defines the approach—whether qualitative, quantitative, or mixed—and the design of the study, such as experimental, descriptive, or exploratory. It addresses how data will be gathered, analysed, and interpreted while maintaining the study's validity, reliability, and ethical integrity. By outlining the logical sequence of research activities, research methodology ensures that the investigation is systematic, coherent, and replicable, enabling researchers to justify their choices and produce credible, trustworthy findings that contribute meaningfully to the body of knowledge in their field.

3.1. RESEARCH DESIGN

According to Kothari & Garg (2019, p. 29), "A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure."

A researcher's general framework or approach to conducting a study is referred to as research design. It describes the steps involved in gathering, evaluating, and interpreting data in a methodical manner. Effectively addressing the research topic and producing valid and dependable results are guaranteed by a strong research design. In this study, the researcher will use a Descriptive Survey Research Design.

Descriptive survey research design is a method used to systematically collect information from a group of people to describe the characteristics, behaviours, opinions, or perceptions of that group. It is particularly useful for obtaining factual data and measuring the current status of a phenomenon.

This study seeks to assess the awareness, usage patterns, influencing factors (such as convenience, security, and speed), and demographic relationships (like gender, age, or

stream of study) related to the adoption of UPI services among undergraduate students. Therefore, a descriptive survey design is most suitable, as it allows the researcher to collect quantitative data using structured questionnaires and analyse the patterns that emerge.

The findings from this design will help in understanding students' digital payment behaviours and identifying key areas for awareness, security improvements, and service accessibility related to UPI.



Fig. 3.1

3.2. QUANTITATIVE APPROACH

Quantitative approach refers to the systematic empirical investigation of observable phenomena through statistical, mathematical, or computational techniques. This approach emphasizes objective measurements and the numerical analysis of data collected through polls, questionnaires, or surveys. It is best suited for research that seeks to quantify the extent, frequency, or relationship among variables.

Quantitative research is primarily deductive in nature, aiming to test existing theories or hypotheses. It provides a structured and standardized method to collect and analyse data, which helps in generalizing findings to a larger population (Kothari & Garg, 2019). According to Creswell (2014), "Quantitative research is an approach for testing objective theories by examining the relationships among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analysed using statistical procedures" (p. 32).

This approach focuses on measurable outcomes and often uses structured tools like questionnaires to collect data from a defined sample. According to Best and Kahn (2006), quantitative research allows the researcher to gather information that is statistically analysable and replicable, which is essential for making general conclusions about a target population.

In this study, the quantitative approach has been adopted to assess the adoption of UPI (Unified Payments Interface) services among undergraduate students. The researcher used structured questionnaires to gather data on students' awareness levels, frequency of usage, purposes of use (e.g., bill payments, shopping, peer transfers), and perceptions regarding convenience, security, and speed.

The approach is suitable as it enables the researcher to measure relationships between variables such as age, gender, academic stream, and UPI usage using statistical techniques like frequency distribution, percentage analysis, and correlation. This method ensures objectivity, comparability, and reliability in the findings (Creswell, 2014; Kothari & Garg, 2019).

3.3. POPULATION

Population refers to any collection of specified groups of human beings or non-human entities such as objects, institutions, geographic areas, or other units of analysis. Some statisticians also refer to it as a universe (Wani, 2011). It is the larger group from which a sample is drawn and to which the results of the study are intended to be generalized.

For the present study, the population consists of undergraduate students studying in selected colleges of Tezpur town, namely Tezpur College, Darrang College, LGB Girls College, other affiliated institutions under Guwahati University. These colleges represent a diverse cross-section of undergraduate learners and provide an appropriate context to investigate the adoption and usage of UPI (Unified Payments Interface) services among the student population.

By focusing on this population, the study aims to explore the level of awareness, usage, and factors influencing the adoption of UPI services among students — a demographic that is increasingly dependent on digital platforms for financial transactions in day-to-day life.

3.4. SAMPLE AND SAMPLING TECHNIQUE

The sample is a representative subset of the population selected to provide detailed insights about the research problem. Since the present study is quantitative in nature, convenience sampling technique was employed to select participants. Convenience sampling is a type of non-probability sampling that involves selecting participants who are easily accessible and willing to take part in the study (Kumar, 1999).

In this study, convenience sampling was used to select undergraduate students from Tezpur College, Darrang College, LGB Girls' College, affiliated institutions under Guwahati University. These colleges are among the prominent institutions in Tezpur town and represent a diverse student population suitable for studying the adoption of UPI services. This sampling technique enabled the researcher to access a broad range of students across different academic streams and collect relevant data regarding their awareness, usage patterns, and influencing factors related to UPI services (Kothari & Garg, 2019).

Convenience sampling was appropriate for this quantitative study because it allowed efficient data collection from a large number of participants within a limited timeframe. The technique supported the objective of examining measurable trends and relationships in UPI usage among undergraduate students (Creswell, 2014).

3.5. SAMPLE SIZE

The total sample for this study comprised 150 undergraduate students from selected colleges in Tezpur town, Assam. Specifically, the sample included students from Tezpur College, Darrang College, LGB Girls' College, affiliated institutions under Guwahati University.

A sample size of 150 was considered appropriate for a quantitative survey-based study, as it allows for sufficient variability in responses and supports meaningful statistical analysis

3.6. TOOLS USED IN THIS STUDY

Every research study requires appropriate tools to gather relevant data and explore the phenomenon under investigation. According to Good (1996), research tools are instruments that facilitate the collection of data upon which hypotheses may be tested and conclusions drawn. The choice of tools must be aligned with the objectives of the study, and they should be valid, reliable, and suitable for the context in which they are applied.

In educational research, the selection of tools is a critical process as it influences both the quality and quantity of data collected. The effectiveness of any investigation depends significantly on the correct selection and intelligent application of tools (Kothari & Garg, 2019).

Keeping in mind the quantitative nature and objectives of the present study, the researcher employed a structured questionnaire as the primary tool for data collection. The questionnaire was designed using a 5-point Likert scale format, which allowed the participants to express their degree of agreement or disagreement on various statements related to the adoption of UPI services. The scale ranged from Strongly Disagree (1) to Strongly Agree (5).

The questionnaire was developed to address all the research objectives, including assessing students' awareness of UPI, frequency and purpose of usage, and their perceptions of factors such as convenience, security, and speed of transaction. The structured nature of the tool ensured consistency in responses and enabled easy coding and analysis for statistical interpretation.

The Likert scale was selected because of its proven effectiveness in measuring attitudes, perceptions, and behavioural tendencies in a reliable and standardized manner (Best & Kahn, 2006). It helped the researcher gather quantifiable data from a large sample, making it well-suited for statistical analysis in a survey-based research design.

3.7. DESCRIPTION OF THE TOOL

The self-structured questionnaire was designed to collect quantitative data in alignment with the key objectives of the study. A Likert-scale format was adopted to enable the measurement of student perceptions, attitudes, and usage behaviours related to UPI (Unified Payments Interface) services. The tool consisted of close-ended statements grouped under major thematic dimensions relevant to the research. The major dimensions included in the tool were:

- ➤ Awareness and Usage Frequency: This section included items to assess students' basic knowledge of UPI services and the frequency with which they use various UPI-based platforms for transactions.
- ➤ Perceived Convenience: Questions were designed to evaluate how easy and efficient students find UPI transactions in comparison to traditional payment methods.
- > Security and Trust: This dimension examined the level of confidence students have in the safety and privacy of UPI services, and whether security concerns affect their usage.
- ➤ Transaction Speed and Reliability: Items in this section assessed how students perceive the speed and consistency of UPI services during their everyday use.

➤ Influence of Demographic Factors: Some questions were included to explore potential correlations between students' demographic backgrounds (such as age, gender, and academic stream) and their adoption or rejection of UPI services.

The tool employed a 5-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree" for each item. Statements were a mix of positively and negatively worded items to reduce response bias and enhance the reliability of responses.

The questionnaire was structured to ensure clarity and ease of response while covering all aspects critical to the study. As a standardized instrument, it allowed for statistical analysis and interpretation of trends across the undergraduate student population in Tezpur Town.

3.8. PROCEDURE AND ADMINISTRATION OF THE TOOL

To collect data for the study, the researcher employed a quantitative survey method using a self-structured Likert scale questionnaire. The target participants were undergraduate students from various colleges located in Tezpur Town, selected through purposive sampling to ensure relevance to the study's objectives.

Before the administration of the tool, formal permission was obtained from the respective college authorities. The researcher also sought informed consent from the participants after clearly explaining the purpose of the study, the voluntary nature of participation, and the confidentiality of their responses.

The questionnaire was administered in a face-to-face format, as well as through Google Forms (where applicable), to maximize participation and ensure ease of response. The administration was carried out during regular class hours or scheduled sessions, based on the convenience of the students and with the cooperation of faculty members.

Students were briefed about the structure of the questionnaire and the rating scale (ranging from "Strongly Agree" to "Strongly Disagree") to ensure accurate interpretation of the items. They were encouraged to answer all questions honestly and independently, with the assurance that there were no right or wrong answers.

The entire process of completing the questionnaire took approximately 15 to 20 minutes per participant. The researcher was present during the in-person administration to clarify any doubts and ensure smooth data collection.

To uphold ethical standards, participants' identities were not recorded, and all responses were kept strictly confidential. The data collected was used solely for academic purposes in alignment with the research objectives. Where necessary, the researcher also used snowball sampling, with initial participants referring peers who were actively using UPI services and could contribute meaningful data to the study.

3.9. CONCLUSION

This chapter presented a comprehensive outline of the methodology adopted in the present study. It elaborated on the research design, sampling technique, tools used, and the procedure followed for data collection. Each step was taken with careful consideration of the nature and objectives of the study. The methodology served as a guiding framework for the entire research process, ensuring both validity and reliability in the collection and analysis of data.

CHAPTER 4 DATA ANALYSIS AND INTERPRETATION

4.0. INTRODUCTION

Data analysis refers to the systematic process of examining collected data to uncover meaningful patterns, facts, or insights. It involves breaking down complex information into simpler components and reorganizing them to enable proper interpretation. Without thorough analysis, research data remain unprocessed and lack significance.

According to Singh K.Y. (2006) in Fundamentals of Research Methodology and Statistics, in educational research, data analysis means studying tabulated material to identify inherent meanings or facts. This process involves dissecting complex factors into smaller parts and reassembling them for interpretation. Analysis and interpretation follow the data collection phase and form the core of any research study, providing a clear understanding of the findings.

The present study was conducted to investigate the adoption of UPI services among undergraduate students in Tezpur Town. The data for this study were collected using a self-structured Likert scale questionnaire. To extract meaningful insights, the responses were systematically analysed using quantitative techniques. This chapter attempts to connect the analysed data with the research objectives and questions to draw conclusions regarding students' awareness, usage patterns, and the perceived convenience, security, and efficiency of UPI services.

4.1. TECHNIQUES USED FOR ANALYSIS

The present study utilized quantitative methods to analyse the data collected through a self-structured Likert scale questionnaire. The following analytical techniques were applied:

1. Descriptive Statistical Analysis:

The primary method used for data analysis was descriptive statistics. The responses were analysed using frequency counts and percentage distributions to summarize and describe the demographic profile of respondents (such as age, gender, and institution) and their responses to various questions related to UPI awareness, usage frequency, and preferences

2. Tabulation and Graphical Representation:

The collected data were tabulated and represented through various visual formats including bar graphs, pie charts, and tables. These visual tools were used to present trends, distribution patterns, and respondent proportions clearly and effectively

3. Google Forms Summary Charts:

Data visualization charts generated automatically by Google Forms (such as pie charts and bar graphs) were utilized to interpret the percentage distribution of responses. These were useful for quick and accurate representation of categorical variables

4. Age-wise, Gender-wise, and Institution-wise Categorization:

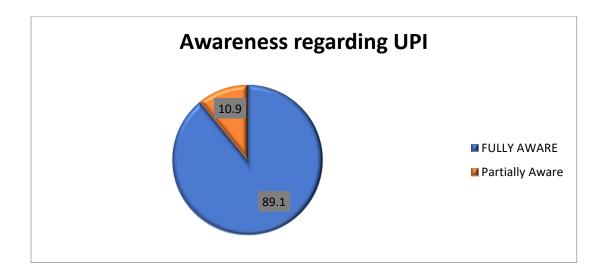
To better understand patterns in UPI adoption, the responses were further analyzed across demographic groups. This included comparing awareness and usage patterns based on age, gender, and institution, helping to identify any subgroup-specific trends.

5. Likert Scale Item Analysis:

Responses to Likert scale items were analysed individually to observe trends in attitudes and behaviours toward UPI usage. The results were interpreted based on the percentage of respondents agreeing, disagreeing, or staying neutral on each statement

4.2. ANALYSIS OF OBJECTIVE NO 1. TO MEASURE THE LEVEL OF AWARENESS AND USAGE FREQUENCY OF UPI SERVICES AMONG UNDERGRADUATE STUDENTS IN TEZPUR TOWN

> Level of awareness



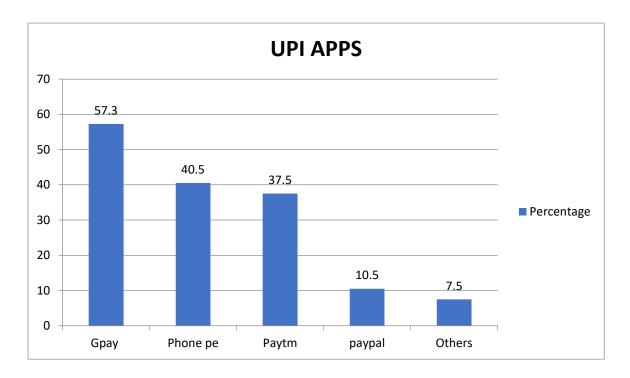
Pie Chart 4.2.1

INTERPRETATION

The objective was to assess the level of awareness among under graduate student

Awareness Regarding UPI-From the pie chart titled "Awareness regarding UPI", it is evident that a significant majority of the respondents are fully aware of UPI. Specifically: 89.1% of respondents reported being fully aware of UPI. Only 10.9% indicated that they are partially aware. This suggests that UPI as a digital payment platform has achieved a high level of public recognition and understanding, likely due to its ease of use, strong government promotion, and integration with daily financial transactions.

> Usage of UPI Applications



Bar Graph No 4.2.2

INTERPRETATION

The bar graph labelled "Response" provides insights into the usage preferences of various UPI-based applications. The most popular platforms among users are: Google Pay (GPay) – used by 57.3% of respondents, making it the most preferred UPI app. PhonePe – chosen by

40.5%, reflecting its strong market presence. Paytm – used by 37.5%, showing continued relevance despite increased competition. PayPal and Other apps are used much less frequently, at 10.5% and 7.5% respectively. This indicates that while awareness is high across the board, actual usage tends to concentrate on a few dominant platforms, with G-Pay leading significantly. Factors such as user interface, cashback offers, ease of transaction, and brand trust likely contribute to this usage pattern.

4.3. ANALYSIS OF OBJECTIVE NO 2. TO EXAMINE THE RELATIONSHIP BETWEEN GEOGRAPHIC FACTORS(AGE, GENDER, ACADEMIC STREAM) AND THE ADOPTION OF UPI SERVICES

> Demographic factor (Gender, Age, Stream, institution)

GENDER									
Valid	SEX	FREQUENCY	PERCENTAGES(%)	COMULATIVE PERCENTAGE(%)					
	MALE	74	49.3	49.3					
	FEMALE	76	50.7	100					
	TOTAL	150	100						

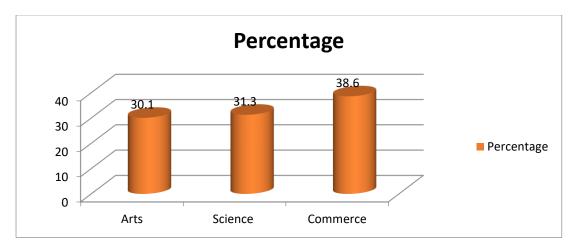
Table no. 4.3.1

INTERPRETATION

The gender-wise distribution shows that the study includes a relatively equal proportion of male and female undergraduate students, with a slightly higher number of female respondents I.E 50.7%(76) whereas the percentage of male is 49.3(74). This balanced representation ensures that the findings related to awareness and usage of UPI services can be interpreted across genders without significant bias.

The near-equal gender participation also allows for further gender-based comparisons if needed — for example, to explore whether there are any notable differences in UPI usage

patterns, awareness levels, or adoption behaviour between male and female students



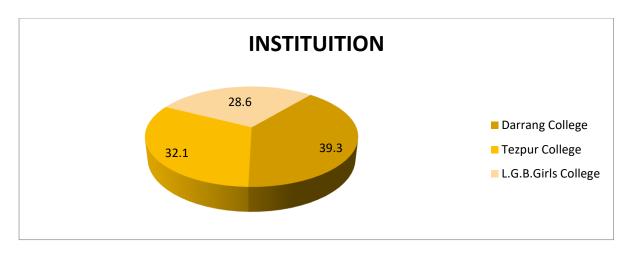
Bar Graph .4.3.1

INTERPRETATION

> Stream-wise Distribution of Respondent.

The bar chart represents the percentage distribution of respondents based on their academic background—Arts, Science, and Commerce. This classification helps in understanding how the awareness and usage of UPI might vary among students from different educational disciplines

The Commerce stream accounts for the highest percentage of respondents, at 38.6%. This is expected, as students from a commerce background are generally more familiar with financial systems, digital transactions, and payment technologies like UPI. Science Stream Respondents from the Science stream make up 31.3% of the total. Their involvement indicates that UPI awareness and usage is not limited commerce-related disciplines but also penetrates technical and scientific fields. Arts Stream. Arts students represent 30.1% of the respondents. While slightly lower than the other two streams, this still reflects a broad adoption and awareness of UPI across all academic disciplines. The data indicates a balanced participation from students of all three academic streams, with a slight dominance from the Commerce background.



Pie chart 4.3.2

INTERPRETATION

Interpretation: Geographic Distribution of Respondents

The pie chart titled "Percentages" represents the geographical spread of respondents based on the educational institutions they belong to—Darrang College, Tezpur College, and L.G.B. Girls' College. This distribution helps in understanding how awareness and usage of UPI varies by location and institutional reach.

- 1. Darrang College 39.3% of respondents are from Darrang College, making it the largest contributing group in the sample. This suggests that Darrang College has a significant role in shaping the data trends related to UPI usage and awareness. The higher participation from this college may be due to its larger student population, greater digital exposure, or stronger response rate to the survey.
- 2. Tezpur College-32.1% of the total responses come from Tezpur College. This indicates substantial participation and shows that UPI awareness and use are also strongly prevalent in this academic institution. The distribution implies that Tezpur College plays an important role in the study's geographic data set.
- 3. L.G.B. Girls' College-28.6% of respondents are from L.G.B. Girls' College. Although slightly lower than the other two, this still represents a considerable portion of the sample, contributing valuable insights, particularly from a women-centric academic environment.

4.4. ANALYSIS OF OBJECTIVE NO 3. TO ASSESS THE IMPACT OF PERCEIVED CONVENIENCE AND SECURITY OF UPI USAGE AMONG STUDENTS

> Impact of perceive convenience and security

Obstacles	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	WEIGHTED TOTAL	RII	MEAN	RANK
Security	11	25	51	27	36	150	398	0.075377	2.65333333	3
Problem with Interface	8	25	53	25	39	150	388	0.07732	2.58666667	6
lack of trust	11	22	39	60	18	150	398	0.075377	2.65333333	4
Non acceptance of service	18	19	33	43	36	149	387	0.077003	2.59731544	5
Inconvience in completing pay	49	36	20	23	22	150	517	0.058027	3.44666667	1
Lack of digital Literacy	11	16	33	49	41	150	357	0.084034	2.38	7
No obstacles	26	33	22	36	33	150	433	0.069284	2.88666667	2

Table no.4.4.1

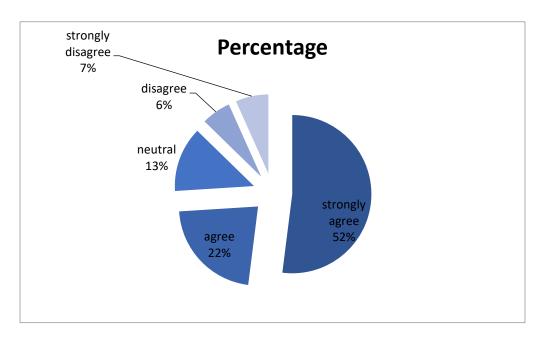
INTERPRETATION

This objective aims to analyse how various perceived obstacles—mainly concerning convenience and security—affect the adoption and usage of UPI (Unified Payments Interface) among respondents. The ranking is based on Weighted Total, Relative Importance Index (RII), and Mean Score across different challenges experienced by users.

1. Top Barrier: Inconvenience in Completing Payment .Rank 1 with the highest mean score (3.45) and significant weighted total (517). This indicates that the biggest perceived challenge in UPI usage is operational inconvenience during transactions, such as failed payments, transaction delays, or complex steps.

- 2. No Obstacle Surprisingly, this category is ranked 2nd, with a mean score of 2.89. It reflects that a considerable portion of users do not face major obstacles, indicating a generally positive perception of UPI usability and convenience among a segment of users.
- 3. Security and Lack of Trust Both "Security" and "Lack of Trust" issues share the same RII (0.075377) and mean score (2.65), placing them at rank 3. This highlights that concerns over transaction safety and trustworthiness still exist and are significant barriers for adoption.
- 4. Non-Acceptance of Service Ranked 5th, this obstacle (Mean: 2.59) reflects users' experiences with merchants or platforms not accepting UPI payments, which limits widespread usage.
- 5. Problem with Interface This includes issues like app complexity, language barriers, or poor design .With a mean score of 2.59, it is ranked 6th, suggesting that ease of navigation and UI/UX still needs improvement for broader adoption, especially among less tech-savvy users.
- 6. Lack of Digital Literacy-Ranked lowest (7th) despite a relatively higher RII (0.084034), this obstacle has the lowest mean score (2.38). This suggests that although digital illiteracy affects a segment of users, it is not the most prominent concern among the majority, possibly due to growing smartphone penetration and tech familiarity. The analysis reveals that operational convenience—especially related to completing transactions—is the most critical factor influencing UPI usage. While security and trust issues are also major concerns, they are slightly less significant compared to usability problems. A positive note is that many users report no major obstacles, indicating growing acceptance and ease with digital payments.

> UPI apps provide enough safety features for transactions



Pie Chart 4.4.1

INTERPRETATION

The pie chart illustrates users' perceptions regarding the safety features of UPI apps during transactions. A majority of respondents—52% strongly agree and 22% agree—that UPI apps offer sufficient safety features. A smaller portion of users remains undecided, indicating either a lack of awareness of the safety features or limited personal experience with security issues. Only 6% disagree and 7% strongly disagree, suggesting a low level of dissatisfaction or concern about UPI security.

> The expectation attributes of UPI do you consider that can increase satisfaction level of using UPI

Attributes	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	WEIGHTED TOTAL	RII	MEAN
trust on upi service	56	23	33	18	20	150	527	0.056926	3.51333333
risk management	27	22	56	23	22	150	459	0.065359	3.06
ease to use	66	45	20	10	9	150	599	0.050083	3.99333333
time saving	56	45	33	10	6	150	585	0.051282	3.9
personal priority	13	15	34	40	48	150	355	0.084507	2.36666667
discount and cashback	37	55	26	18	14	150	533	0.056285	3.55333333
easy use interface	69	34	22	14	11	150	586	0.051195	3.90666667
Facility of withdrawal of cash	79	47	16	5	3	150	644	0.046584	4.29333333
No need relying on cash	22	43	55	17	13	150	494	0.060729	3.29333333

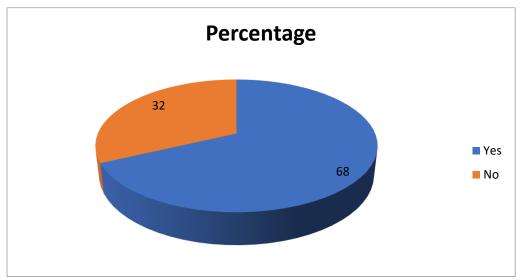
TABLE NO. 4.4.2

INTERPRETATION

Impact of Perceived Convenience and Security on UPI Satisfaction. This objective focuses on understanding which expectation attributes of UPI—particularly those related to convenience and security—are most influential in increasing users' satisfaction levels. The analysis is based on user responses to various attributes like trust, ease of use, safety, and functional benefits. Each attribute is ranked by mean score, Weighted Total, and Relative Importance Index (RII).

- 1. Facility of Withdrawal of Cash (Mean: 4.29) Rank 1 This is the most valued feature. Users highly appreciate being able to access cash via UPI, showing that functional flexibility enhances satisfaction.
- 2. Ease to Use (Mean: 3.99) and Easy User Interface (Mean: 3.91) Rank 2 & 3. These are strong indicators that user-friendly design and simplicity in app navigation are key drivers of user satisfaction. A well-structured, intuitive interface makes users more confident and reduces hesitation in using UPI regularly.
- 3. Time Saving (Mean: 3.9) Rank 4 One of the core perceived convenience users value how UPI transactions save time over traditional banking methods or cash dealings.
- 4. Discount and Cashback Offers (Mean: 3.55) Rank 5 Though promotional, these contribute to convenience and reward-based motivation encouraging users to use UPI more often.
- 5. Trust on UPI Service (Mean: 3.51) Rank 6 High trust levels reflect positively on the security perception, suggesting that secure design and transaction integrity are increasing satisfaction.
- 6. Risk Management (Mean: 3.06) Rank 7 Users moderately agree that UPI offers sufficient risk protection (like fraud prevention, alerts, or authentication). Still, there's room to enhance awareness and visible safeguards.
- 7. No Need Relying on Cash (Mean: 2.93) Rank 8 While a digital benefit, this shows that not all users are ready to abandon cash completely, possibly due to habits, merchant limitations, or trust gaps.
- 8. Personal Priority (Mean: 2.37) Rank 9 This scored the lowest, indicating that for many users, UPI is not a top personal financial priority, though still useful.

Academic background influences for using of UPI



Pie Chart No 4.4.2

INTERPRETATION

The pie chart illustrates respondents' views on whether their academic background influences their use of UPI (Unified Payments Interface). Out of a total of 150 respondents, 68% (102 individuals) answered "Yes", indicating that they believe their academic background plays a role in their adoption and usage of UPI services. In contrast, 32% (48 individuals) responded "No", suggesting that nearly one-third of users feel their educational qualification does not significantly impact their use of UPI. This result suggests a strong correlation between academic exposure and digital payment adoption. It is likely that individuals with a better academic background have higher digital literacy, greater awareness of online financial services, and more confidence in using digital tools. Meanwhile, those who believe their background does not affect usage may rely more on personal experience, peer guidance, or convenience rather than formal education. In conclusion, the data reveals that academic background is perceived as a significant enabling factor for UPI usage among the majority, but not a limiting one, as a notable portion still uses UPI regardless of educational level. This highlights the inclusive reach of UPI, though education still enhances confidence and understanding of its features.

CHAPTER-5 SUMMARY, MAJOR FINDINGS, SUGGESTIONS AND CONCLUSION

SUMMARY, MAJOR FINDINGS, SUGGESTIONS AND CONCLUSION

5.0 INTRODUCTION

In the digital era, financial technologies have transformed the way individuals interact with money, conduct transactions, and manage their financial lives. Among the significant innovations in India is the Unified Payments Interface (UPI), a real-time payment system developed by the National Payments Corporation of India (NPCI), which has gained remarkable popularity due to its convenience, speed, and ease of access.

For undergraduate students—who represent a young, tech-savvy, and increasingly mobile generation—UPI offers a seamless way to manage transactions without the need for physical cash or cards. However, while the overall adoption of UPI has risen nationwide, understanding how undergraduate students in smaller towns like Tezpur are engaging with this technology remains underexplored.

This study investigates the awareness, usage frequency, influencing factors, and perceived benefits of UPI services among undergraduate students in Tezpur Town. The research also explores demographic variations and the perceived convenience, security, and transaction speed that affect adoption. By highlighting students' usage patterns and concerns, this study provides insights into digital payment behaviours at the local level and offers recommendations for improving digital financial literacy and usage among youth.

5.1 STATEMENT OF THE PROBLEM

The present study is an effort to examine the adoption of UPI services among undergraduate students in Tezpur Town in Assam. With the rapid digitalization of financial services, especially in India, UPI (Unified Payments Interface) has emerged as a significant mode of cashless transactions. Despite nationwide promotion, its actual usage and awareness among youth, especially in semi-urban areas like Tezpur, remains an area of inquiry. This study investigates students' awareness, frequency of use, influencing factors such as convenience and security, and the role of demographic variables in adoption patterns.

5.2 OBJECTIVES OF THE STUDY

- 1. To measure the level of awareness and usage frequency of UPI services among undergraduate students in Tezpur town.
- 2. To examine the relationship between demographic factors (such as age, gender, and academic stream) and the adoption of UPI services.
- 3. To assess the impact of perceived convenience and security of UPI usage among students.

5.3 RESEARCH QUESTIONS

1. What is the level of awareness and frequency of usage of UPI services among undergraduate students in Tezpur town?

- 2. Is there any relationship between geographic and demographic factors (such as age, gender, and academic stream) and the adoption of UPI services among undergraduate students?
- 3. How do students perceive the convenience and security of UPI services, and what impact do these perceptions have on their adoption and usage behaviour?

5.4 DELIMITATION OF THE STUDY

The present study is delimited to the following:

The study is limited to three undergraduate colleges located in Tezpur Town: Tezpur College, Darrang College, and LGB Girls' College.

The study is limited to undergraduate students studying in the above-mentioned institutions only.

5.5 RESEARCH DESIGN

The design of the research is the conceptual structure in which research is conducted. It directs research in a positive way. The researcher chooses the quantitative method for the present study. This method helps in collecting numerical data from a large group of respondents to analyse awareness, usage frequency, and influencing factors related to UPI adoption among undergraduate students.

5.6 SAMPLE OF THE STUDY

The sample of the present study is a population-based student sample, selected from undergraduate learners enrolled in prominent colleges of Tezpur Town. The sample consists of undergraduate students from Tezpur College, Darrang College, and LGB Girls' College, which are affiliated institutions under Guwahati University. These colleges represent a diverse cross-section of students from different academic streams and backgrounds. The sample was selected based on accessibility, willingness to participate, and relevance to the research focus on the adoption and usage of UPI services.

5.7 TOOLS USED FOR THIS STUDY

An exact tool is needed to explore new dimensions in every educational research. For this study, the researcher constructed a self-structured questionnaire as the primary tool for data collection. The tool was designed in a Likert-scale format, consisting of both positive and negative statements, to measure levels of awareness, usage frequency, and perceptions related to UPI services, such as convenience, security, and transaction speed. The structured questionnaire enabled the researcher to collect quantifiable data suitable for statistical analysis and aligned with the objectives of the study.

5.8 MAJOR FINDINGS

The present study analyses the level of awareness, frequency of usage, and influencing factors such as demographic variables, perceived convenience, and security in the adoption of UPI services among undergraduate students of Tezpur Town, Assam. The findings are based

on the analysis of the collected quantitative data and are presented below according to the objectives of the study:

Objective 1: To measure the level of awareness and usage frequency of UPI services among undergraduate students in Tezpur Town

- A significant majority (89.1%) of the respondents reported being fully aware of UPI services, indicating widespread recognition of digital payment systems among students.
- The most preferred UPI application was Google Pay (57.3%), followed by PhonePe (40.5%) and Paytm (37.5%). Apps like PayPal and others had much lower usage rates, suggesting market dominance by select platforms.
- The data reflects high levels of awareness and concentrated usage patterns, primarily influenced by factors such as ease of transaction, user interface, and reward incentives like cashback offers.

Objective 2: To examine the relationship between geographic and demographic factors (age, gender, academic stream) and the adoption of UPI services

- Gender Distribution was nearly balanced, with 50.7% female and 49.3% male respondents. This balance allows gender-based findings to be considered representative and unbiased.
- > Academic Stream-wise Analysis showed:
- Commerce students (38.6%) formed the highest group, likely due to their financial literacy and comfort with digital transactions.
- Science (31.3%) and Arts (30.1%) students also showed significant engagement, indicating broad adoption across disciplines.
- > Institution-wise Analysis revealed:
- Darrang College (39.3%) contributed the highest share of respondents.
- Followed by Tezpur College (32.1%) and L.G.B. Girls' College (28.6%), indicating that UPI usage is spread across institutions with varying student profiles.
- Academic background was found to influence UPI usage, with 68% of respondents agreeing that their educational stream affects their comfort and adoption of UPI.

Objective 3: To assess the impact of perceived convenience and security of UPI usage among students

- The top perceived challenge was inconvenience in completing payments (Mean Score: 3.45), such as failed transactions or delays.
- A large portion of students (22% agree, 52% strongly agree) felt that UPI apps offer sufficient safety features, showing general satisfaction with transaction security.
- ➤ Key factors contributing to UPI satisfaction included:
- Facility of Withdrawal of Cash (Mean: 4.29) Most valued feature.
- Ease of Use (Mean: 3.99) and User-Friendly Interface (Mean: 3.91) Indicating the importance of usability.
- Time-Saving (Mean: 3.9) Highlighting operational efficiency.
- Discount/Cashback Offers (Mean: 3.55) Reinforcing reward-based motivation.

- Trust and Security Features (Mean: 3.51) Confirming that safety matters to users, though less than functional ease.
- Risk Management, Cash Independence, and Personal Priority ranked lower, suggesting areas for service improvement.

These findings collectively highlight that UPI adoption is high among undergraduate students in Tezpur Town, driven mainly by awareness, functional convenience, and positive perceptions of security. While minor obstacles like failed payments or non-acceptance exist, overall satisfaction and usage rates remain strong across gender, academic streams, and institutions.

5.9 EDUCATIONAL IMPLICATIONS

The findings of the present study carry important educational implications for institutions of higher education, particularly in the context of promoting financial digital literacy and safe digital payment practices among undergraduate students. The study reveals that while the majority of students are aware and active users of UPI services, factors such as convenience, user interface, security features, and academic exposure significantly influence adoption and satisfaction levels.

Firstly, the results emphasize the need for integrating digital financial literacy within the academic curriculum. By equipping students with practical knowledge of UPI systems and digital safety protocols, institutions can empower them to manage personal finances effectively.

Secondly, the study underlines the importance of awareness programs and workshops focusing on the responsible use of digital payment platforms. These programs can help address concerns related to security, trust, and transaction errors, especially for students with limited prior exposure.

Thirdly, the findings suggest that educational institutions should play a proactive role in promoting the use of secure, user-friendly digital tools within the campus environment. Initiatives such as enabling UPI payments for institutional fees, canteen services, and event registrations can reinforce regular and responsible usage.

Furthermore, the role of academic background in influencing UPI usage suggests that students from non-commerce backgrounds might benefit from additional support or orientation, thereby ensuring inclusive digital participation across disciplines.

Lastly, the study highlights that student feedback on UPI platforms and their challenges can be used by administrators and fintech developers to improve usability and trustworthiness, creating a safer and more efficient digital financial ecosystem for youth.

5.10 SUGGESTIONS

- ➤ Institutions should integrate digital financial literacy modules into general education or commerce curricula to increase understanding of UPI and other digital payment tools.
- ➤ Workshops and orientation programs should be conducted to educate students about the security features of UPI and safe transaction practices.

- ➤ UPI usage should be promoted for campus-related payments such as fees, library charges, and events to encourage habitual and responsible usage.
- > Special digital help desks or peer support groups can be created to guide students who face technical or usability issues in UPI adoption.
- ➤ App developers should work on simplifying user interfaces and improving language accessibility to attract users from diverse academic and socio-economic backgrounds.
- ➤ Promotional strategies such as student-exclusive cashback offers or discounts can increase motivation to adopt UPI more regularly.
- > Students should be made aware of grievance redressal mechanisms related to failed transactions and fraud prevention.
- ➤ Faculty members can encourage the use of UPI through small classroom transactions, creating real-time usage scenarios for learning.
- ➤ Collaborations between educational institutions and fintech firms may be explored to offer customized digital payment solutions for students.

5.11 SUGGESTIONS FOR FURTHER STUDIES

- ➤ The present study is confined to undergraduate students from selected colleges in Tezpur Town. Future studies may include a wider geographic region across Assam or other Indian states to assess regional variations in UPI adoption.
- ➤ Comparative studies can be conducted between undergraduate and postgraduate students to explore differences in digital payment behaviour across academic levels.
- ➤ Further research may focus on the adoption of UPI services among faculty, administrative staff, or other age groups to gain broader insights into institutional usage.
- ➤ A mixed-method or qualitative approach could be used in future studies to understand personal experiences, motivations, and barriers in greater depth.
- ➤ Longitudinal studies may be carried out to observe changes in UPI usage behaviour over time, especially with the evolution of digital payment technologies.
- ➤ Research can also explore the psychological factors influencing UPI adoption, such as trust, perceived risk, or digital anxiety among students.
- ➤ Discipline-wise studies can be undertaken to assess how subject background affects the perception and adoption of UPI services.
- > Studies could also examine the relationship between UPI adoption and students' financial decision-making or budgeting behaviours.

5.12 CONCLUSION

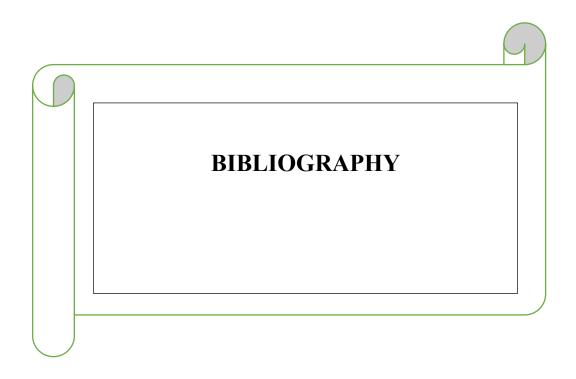
The present study, titled "Adoption of UPI Services Among Undergraduate Students in Tezpur Town in Assam," was undertaken to assess the level of awareness, usage patterns,

influencing factors, and the impact of perceived convenience and security in relation to UPI usage among undergraduate students. The findings indicate that a majority of students are well-aware and active users of UPI platforms, particularly Google Pay, PhonePe, and Paytm.

The study also reveals that demographic factors—especially academic stream—play a role in influencing UPI adoption. While commerce students are more familiar with digital financial systems, students from arts and science backgrounds also show significant levels of adoption, reflecting UPI's widespread reach.

Moreover, the perceived ease of use, user interface, and time-saving features of UPI contribute significantly to user satisfaction, while issues like transaction failures and concerns about security still act as barriers for some users.

Overall, the study concludes that UPI is an integral part of students' digital financial behaviour and that educational institutions can play a transformative role in enhancing its responsible and inclusive use. The findings call for greater awareness, improved digital infrastructure, and educational support to ensure that UPI services are accessible, secure, and effectively used by all students, regardless of background.



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Topic – Adoption of UPI service among the undergraduate students in Tezpur Town of Assam

Respected Respondent,

I am Prasanta Kalita,

pursuing M.Com 4th Semester from the Department of Commerce, Mahapurush Srimanta Sankaradev Vishwavidyalaya, Nagaon, Assam. As a part of my PG course, I am conducting a research on,

"Adoption of UPI Services Among Undergraduate Students." under the guidance of Dr. Bhaskar Saikia, Department of Commerce, Mahapurush Srimanta Sankaradev Vishwavidyalaya, Nagaon, Assam.

For this research, I kindly request you to respond to the statements of the scale, which is prepared for data collection. Your responses will provide valuable insights for my study and will be kept strictly confidential.

This scale contains 15 statements. Mark a ' \checkmark ' on the option that best represents your perception and opinion.

Thank you for your time and cooperation.

* Inc	licates required question	
	Name	
2.	Age	-
3.	Mobile number	_

Stream *
Mark only one oval.
Commerce
Science
Arts
Other:
Institution/College *
Mark only one oval.
Darrang College
Tezpur college
L.G.B. Girls' College
Gender *
Mark only one oval.
Male
Female
Other:
Occupation (if any)
What is your awareness regarding UPI ? *
Mark only one oval.
Fully aware
Partially Aware

9.	Where do you get information about UPI?*
	Tick all that apply.
	Friend / Family
	Social media
	Magazine/ newspaper
	Advertisement
	Television
	Other:
10.	Which UPI app do you prefer * Tick all that apply.
	☐ Gpay Phone Pe
	Paytm
	Paypal
	Other:

11. What are the various factor that influence you to adopt UPI?

(1- Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5- strongly agree)

	1	2	3	4	5
Time saving (performance expectancy)					
Ease to access (performance expectancy)					
Quality service (performance expectancy					
Ease to use (efforts expectancy)					
User friendly interface (effort expectancy)					
Easy to remember (Effort expectancy					
Recommended by friends (Social influence)					
Status symbol (social influence)					
COVID outbreak (social influence)					
Wide availablity of internet service (facilitating					

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Availablity of elveile snobile			
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Fun to use (Huledioniuse (Huledioniuse)			
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Past behaviour (Pasbib)ehaviour (habib)			
experience (Habit)			

maividuai					
experience					
(Habit)					
How often do	vou use l	IPI 2 *			
Mark only one o	-				
Very rarely					
Rarely					
Occasiona	lly				
Frequently	-				
Very freque					
	,				
What are the va	arious purp	oose for w	hich you	are using	UPI ?
What are the va Tick all that apply		oose for w	hich you	are using	UPI ?
	<i>'</i> .	oose for w	hich you	are using	UPI ?
Tick all that apply	r. sfer	oose for w	hich you	are using	UPI ?
Tick all that apply Money Trans Recharge of Recharge of	sfer mobile DTH servic		hich you	are using	UPI ?
Tick all that apply Money Trans Recharge of Recharge of Online shopi	ofer mobile DTH servicing		hich you	are using	UPI ?
Tick all that apply Money Trans Recharge of Recharge of Online shopi Subscription	ofer mobile DTH servic ng of app	e	hich you	are using	UPI ?
Tick all that apply Money Trans Recharge of Recharge of Online shopi Subscription Credit card b	ofer mobile DTH servic ng of app	ee	hich you	are using	UPI ?
Tick all that apply Money Trans Recharge of Recharge of Online shopi Subscription	ofer mobile DTH servic ng of app	ee	hich you	are using	UPI ?

14.	Does UPI brings any changes in your financial habit?*
	Tick all that apply.
	Investment in mutual fund Availing of instant personal loan
	Investment in stock market
	Control over spending
	Timely payment of due
	Timely reciept of due
	Purchasing of insurance policy
	Opening of deposit account
	More reliable on cashless transaction
15.	what may be the reason behind it?* Tick all that apply.
	Easy use of interface Multipurpose use
	No need to rely on cash
	Conveince
	Monitoring of spending
	No transaction fees
	Insistence by merchant / service provider by upi
	Other:

16.	Have you faced any obstacles while using UPI ?(1- Strongly Disagree 2-
	Disagree 3-Neutral 4-Agree 5- strongly agree)

	1	2	3	4	5
Security					
Problem with interface					
Lack of trust					
Non acceptance of service at different places					
Inconvenience in completing online payment/Receipt					
Lack of digital literacy					
No obstacle encounter yet					

Mark only one ov			0	4	_	
Tours on UDI	1	2	3	4	5	_
Trust on UPI service						_
Risk management						_
Easy to use						_
Time saving						_
Personal priority						_
Discount and cashback						
Easy user interface						_
Facility of withdrawal of cash						_
No need of relying on cash						
JPI apps provide Mark only one of Strongly described Disagree	oval.	gh safety f	eatures f	or transac	tions ? *	

19.	I have never faced a security or fraud issue while using UPI?(If no than why) *
	Mark only one oval.
	Yes
	No
	Other:
20.	UPI apps provide enough safety features for transactions? *
	Mark only one oval.
	Strongly disagree
	Disagree
	Neutral
	Agree
	Strongly agree
21.	I use UPI more often than other payment methods like cards or net banking? *
	Mark only one oval.
	Strongly disagree
	Disagree
	Neutral
	Agree
	Strongly agree
22.	I believe that my academic background influences my use of UPI? *
	Mark only one oval.
	Yes
	No

23.	Name	-
24.	Age	
25.	Mobile number	
26.	Stream *	
	Mark only one oval. Commerce Science Arts Other:	
27.	Institution/College *	
	Mark only one oval. Darrang College Tezpur college L.G.B. Girls' College	
28.	Gender * Mark only one oval.	
	Male Female	

	Occupation (if any)	
١	What is your awareness regarding UPI ? *	
l	Mark only one oval.	
	Fully aware	
	Partially Aware	
	Where do you get information about UPI ? *	
	Tick all that apply.	
	Friend / Family	
	Social media	
	Magazine/ newspaper	
	Advertisement Television	
	Other:	
	Which UPI app do you prefer *	
	Tick all that apply.	
	Gpay	
	Phone Pe	
	Paytm	
	Paypal —	
	Other:	

33. What are the various factor that influence you to adopt UPI?

(1- Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5- strongly agree)

	1	2	3	4	5
Time saving (performance expectancy)					
Ease to access (performance expectancy)					
Quality service (performance expectancy					
Ease to use (efforts expectancy)					
User friendly interface (effort expectancy)					
Easy to remember (Effort expectancy					
Recommended by friends (Social influence)					
Status symbol (social influence)					
COVID outbreak (social influence)					
Wide availablity of internet service (facilitating					

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Availablity of elveile snobile			
Availability of Availability o			
Availablity of eventablity of supporterom support from tabli(itating facilitating)			
Fun to use (Fluedioniuse (Histolication)			
Arises Arisesity (Heidositic (Heidosition)			
Find it Frited elisting (Heedesting (Heedesting)			
Greater			
Greater Greate			
Past behaviour (Pashib)ehaviour			
Individual experience (Habit)			

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experience () () () () () ()
How often do you use UPI ? *
Mark only one oval.
Very rarely
Rarely
Occasionally
Frequently
Very frequently
What are the various purpose for which you are using UPI ? *
Tick all that apply.
Money Transfer
Recharge of mobile
Recharge of DTH service
Online shoping Subscription of ann
Subscription of app Credit card bill payment
Broadband bill payment
Other:

	Tick all that apply.
	Investment in mutual fund
	Availing of instant personal loan
	Investment in stock market
	Control over spending
	Timely payment of due
	Timely reciept of due
	Purchasing of insurance policy
	Opening of deposit account
	More reliable on cashless transaction
37.	l1 l 1 l l. il i1 // 🍁
	what may be the reason behind it?* Tick all that apply.
	Tick all that apply.
	Tick all that apply. Easy use of interface
	Tick all that apply. Easy use of interface Multipurpose use
	Tick all that apply. Easy use of interface Multipurpose use No need to rely on cash
	Tick all that apply. Easy use of interface Multipurpose use No need to rely on cash Conveince
	Tick all that apply. Easy use of interface Multipurpose use No need to rely on cash Conveince Monitoring of spending
	Tick all that apply. Easy use of interface Multipurpose use No need to rely on cash Conveince Monitoring of spending No transaction fees

	1	2	3	4	5
Security					
Problem with interface					
Lack of trust					
Non acceptance of service at different places					
Inconvenience in completing online payment/Receipt					
Lack of digital literacy					
No obstacle encounter yet					

Mark only one ov	ai pei iow	•				
	1	2	3	4	5	
Trust on UPI service						_
Risk management						
Easy to use						_
Time saving						-
Personal priority						_
Discount and cashback						
Easy user interface						
Facility of withdrawal of cash						-
No need of relying on cash						
JPI apps provious one of the strongly d	oval.	gh safety f	eatures fo	or transac	tions ? *	

Strongly agree

41.	I have never faced a security or fraud issue while using UPI?(If no than why) *
	Mark only one oval.
	Yes
	No
	Other:
42.	UPI apps provide enough safety features for transactions? *
	Mark only one oval.
	Strongly disagree
	Disagree
	Neutral
	Agree
	Strongly agree
43.	I use UPI more often than other payment methods like cards or net banking? *
	Mark only one oval.
	Strongly disagree
	Disagree
	Neutral
	Agree
	Strongly agree
44.	I believe that my academic background influences my use of UPI? *
	Mark only one oval.
	Yes
	◯ No

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