

Fintech Innovation and its Impact on Digital Financial Services among College Students

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Abstract

Financial Technology (FinTech) has emerged as a transformative force in the contemporary financial ecosystem by integrating innovative digital technologies with traditional financial services. The rapid development of mobile banking, digital wallets, blockchain technology, and artificial intelligence has significantly changed the way financial transactions are conducted. The present study examines the awareness, usage behaviour, perceived benefits, and challenges associated with FinTech innovations among college students. The study is based on primary data collected from 200 respondents through a structured questionnaire. Analytical tools such as percentage analysis, weighted arithmetic mean, Garrett ranking technique, and Chi-square test were used for data analysis. The findings reveal that FinTech services are widely adopted among college students due to their convenience, speed, and accessibility. However, issues such as cybersecurity threats, online fraud, and privacy concerns remain major challenges. The study highlights the need for financial literacy and awareness programmes to promote responsible and secure usage of FinTech services.

Keywords: *FinTech Innovation, Digital Payments, Financial Technology, Digital Banking, Students, Financial Inclusion*

1. Introduction

The rapid advancement of information and communication technology has significantly transformed the financial sector worldwide. Financial Technology, commonly referred to as

FinTech, represents the integration of technological innovations with financial services to enhance efficiency, accessibility, and customer experience.

FinTech innovations include a wide range of digital financial services such as mobile banking, digital wallets, online investment platforms, peer-to-peer lending, blockchain technology, and artificial intelligence-driven financial applications. These technologies have simplified financial transactions, reduced operational costs, and improved financial accessibility for individuals and businesses.

In India, the growth of digital infrastructure, the expansion of internet connectivity, and government initiatives such as Digital India and the promotion of Unified Payments Interface (UPI) have accelerated the adoption of FinTech services. The increasing use of smartphones and mobile applications has further encouraged individuals to rely on digital financial platforms for daily transactions.

College students represent one of the most active groups of FinTech users because of their familiarity with digital technologies and their frequent need for online payments and financial services. Students commonly use digital platforms for activities such as online shopping, fund transfers, bill payments, subscription services, and investment management.

Despite the advantages of FinTech innovations, several challenges remain, including cybersecurity risks, financial fraud, lack of digital literacy, and privacy concerns. Therefore, it is essential to understand students' awareness, usage patterns, and perceptions of FinTech services to promote responsible adoption.

2. Review of Literature

Several studies have explored the role of FinTech in transforming financial services and consumer behaviour.

- Arner, Barberis, and Buckley (2015) stated that FinTech innovations have disrupted traditional financial institutions by introducing technology-driven financial solutions that improve service delivery and operational efficiency.

- Lee and Shin (2018) observed that the FinTech ecosystem consists of financial institutions, technology developers, regulators, startups, and consumers who collectively contribute to financial innovation and digital transformation.
- Dorfleitner et al. (2017) highlighted that FinTech services play an important role in promoting financial inclusion by providing affordable and easily accessible financial services to individuals who lack access to traditional banking facilities.
- Thakor (2020) pointed out that FinTech innovations such as digital payments and mobile banking have improved transaction speed and customer convenience, but they also increase concerns related to cybersecurity and data protection.
- Puschmann (2017) emphasized that emerging technologies such as artificial intelligence, blockchain, and big data analytics are major drivers of FinTech innovation.

The review of literature indicates that FinTech innovations offer significant benefits but also require proper regulation and digital literacy to ensure safe usage.

3. Objectives of the Study

The present study has the following objectives:

1. To examine the level of awareness and usage patterns of FinTech services among college students.
2. To analyse the perceived benefits of FinTech innovations in financial transactions.
3. To identify the major challenges faced by students while using FinTech services.

4. Research Methodology

4.1 Research Design: The study adopts a **descriptive research design** based on the survey method.

4.2 Data Sources: The study uses both **primary and secondary data**. Primary data were collected through a structured questionnaire distributed among college students. Secondary data were obtained from academic journals, books, research articles, and online publications related to FinTech innovation.

4.3 Sampling Design: The sample consists of **200 college students** selected from various colleges in the Tenkasi district using convenience sampling.

4.4 Analytical Tools Used: The following statistical tools were used: Percentage Analysis, Weighted Arithmetic Mean

- ✓ Garrett Ranking Technique
- ✓ Chi-Square Test

5. Hypothesis of the Study

To statistically examine the relationship between variables, the following hypothesis is formulated:

- H_0 (Null Hypothesis): There is no statistically significant association between gender and satisfaction level towards FinTech services.
- H_1 (Alternative Hypothesis): There is a significant association between gender and satisfaction level towards FinTech services.

6. Results and Discussion

Objective 1: Awareness and Usage of Fintech Services

Table 1: Gender-wise Distribution of Respondents

<i>Gender</i>	<i>Number of Respondents</i>	<i>Percentage</i>
<i>Male</i>	<i>120</i>	<i>60</i>
<i>Female</i>	<i>80</i>	<i>40</i>
<i>Total</i>	<i>200</i>	<i>100</i>

Source: Computed from Primary Data

The table shows that male students constitute a higher proportion of FinTech users compared to female students.

Figure 1: Gender-wise Distribution of Respondents

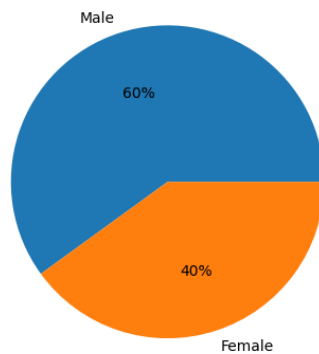


Table 2: Age-wise Distribution of Respondents

<i>Age Group</i>	<i>Respondents</i>	<i>Percentage</i>
18–20	110	55
21–23	70	35
24–26	20	10
Total	200	100

Source: Computed from Primary Data

The majority of FinTech users belong to the **18–20 age group**, indicating early adoption of digital financial services.

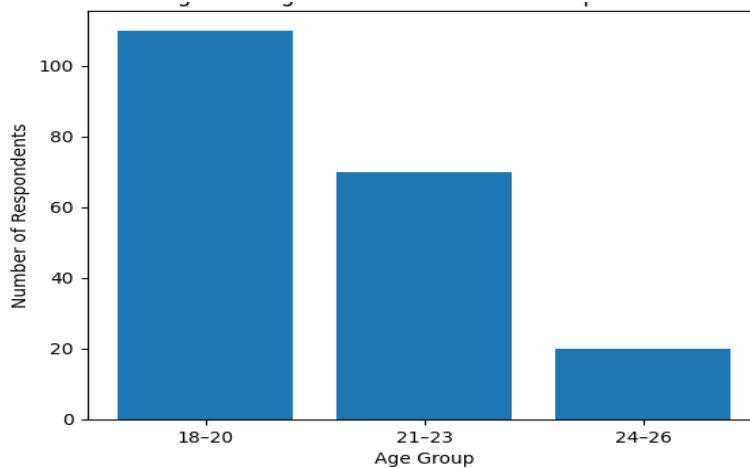
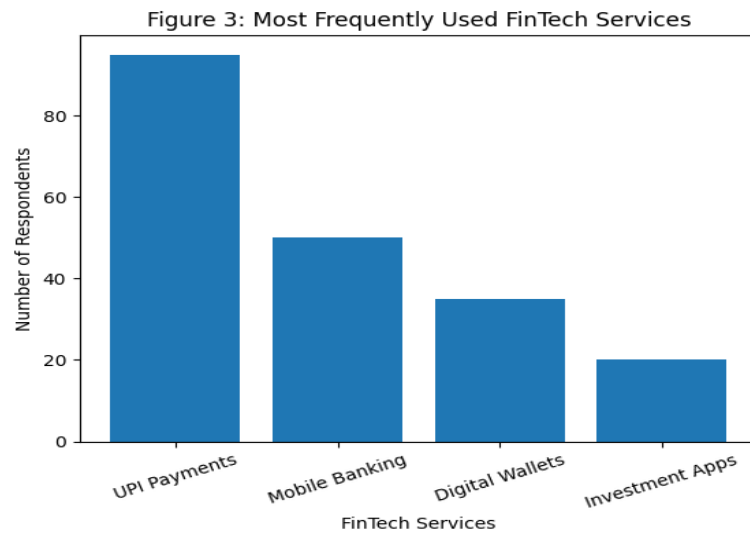


Table 3: Most Frequently Used FinTech Services

<i>Service</i>	<i>Number of Respondents</i>	<i>Percentage</i>
UPI Payments	95	47.5
Mobile Banking	50	25.0
Digital Wallets	35	17.5
Investment Apps	20	10
Total	200	100.00

Source: Computed from Primary Data

The table shows that UPI payments are the most frequently used FinTech service among students.

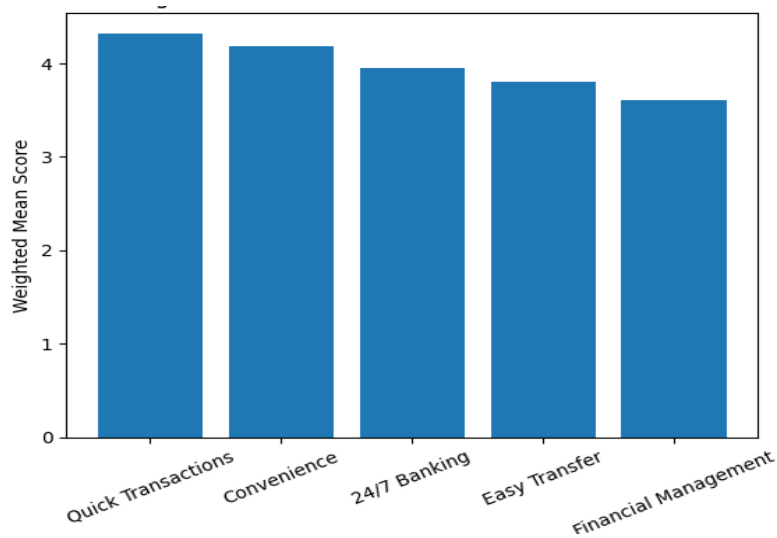


Objective 2: Perceived Benefits of Fintech

Table 4 Benefits of FinTech Services (Weighted Mean)

<i>Benefit</i>	<i>Weighted Score</i>	<i>Rank</i>
<i>Quick transactions</i>	<i>4.32</i>	<i>I</i>
<i>Convenience</i>	<i>4.18</i>	<i>II</i>
<i>24/7 banking</i>	<i>3.95</i>	<i>III</i>
<i>Easy fund transfer</i>	<i>3.80</i>	<i>IV</i>
<i>Financial management</i>	<i>3.60</i>	<i>V</i>

Source: Computed from Primary Data



The weighted mean analysis indicates that quick transactions and convenience are the most important benefits perceived by students.

Objective 3: Challenges in Using Fintech

Table 5 Problems Faced by Students (Garrett Ranking)

<i>Problem</i>	<i>Garrett Score</i>	<i>Rank</i>
<i>Cybersecurity risk</i>	68	<i>I</i>
<i>Online fraud</i>	63	<i>II</i>
<i>Privacy concerns</i>	58	<i>III</i>
<i>Lack of financial literacy</i>	52	<i>IV</i>
<i>Technical issues</i>	49	<i>V</i>

Source: Computed from Primary Data

Cybersecurity risk is identified as the most serious challenge associated with FinTech services.

Chi-Square Analysis

Association between Gender and Satisfaction Level

Table 6 Observed Frequency

<i>Gender</i>	<i>High Satisfaction</i>	<i>Medium Satisfaction</i>	<i>Low Satisfaction</i>	<i>Total</i>
<i>Male</i>	50	45	25	120
<i>Female</i>	30	35	15	80
<i>Total</i>	80	80	40	200

Source: Computed from Primary Data

The Chi-square test was applied to examine the association between gender and satisfaction level.

- Calculated value = 1.26
- Table value = 5.99
- Degrees of freedom = 2

Since the calculated value is less than the table value, the null hypothesis (H_0) is accepted.

Inference

There is no statistically significant relationship between gender and satisfaction level. This indicates that satisfaction with FinTech services is independent of gender.

Correlation Analysis

To examine the relationship between the use of FinTech services and satisfaction levels, a correlation analysis was conducted.

Table 7 Correlation Analysis

Variables	Correlation (r)
Usage & Satisfaction	0.62

Source: Computed from Primary Data

The result shows a moderate positive relationship, indicating that higher usage of FinTech services is associated with increased satisfaction levels

6. Findings

The major findings of the study are:

1. FinTech services are widely used among college students.
2. Male students show marginally higher adoption of FinTech services.
3. Students aged 18–20 represent the largest group of FinTech users.
4. UPI payments are the most commonly used digital financial service.
5. Speed and convenience are the main benefits of FinTech innovations.
6. Cybersecurity risk and online fraud are the most significant challenges.
7. The Chi-square test indicates no significant association between gender and satisfaction level.

7. Suggestions

Based on the findings, the following suggestions are made:

1. Educational institutions should actively organize FinTech awareness programmes and financial literacy workshops.

2. Students must be educated about cybersecurity practices and safe digital transactions.
3. Banks and FinTech companies should strengthen data security systems.
4. Government authorities should implement stronger regulatory frameworks for digital financial platforms.
5. Awareness campaigns should be conducted to promote responsible and secure usage of FinTech services.

8. Conclusion

The study concludes that FinTech innovations have significantly transformed the financial behaviour of college students. The widespread adoption of services such as UPI payments and mobile banking reflects an increasing reliance on technology-driven financial systems.

The findings indicate that efficiency, convenience, and accessibility are the primary drivers of adoption, while cybersecurity risks and fraud concerns act as major barriers. The statistical analysis confirms that satisfaction levels are not influenced by gender, suggesting a uniform perception across users.

For sustainable growth of FinTech, it is essential to enhance digital financial literacy, strengthen data security mechanisms, and implement effective regulatory frameworks. Future research may further expand the scope by incorporating larger samples and advanced econometric models.

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