

Impact of Fin Tech on Commercial Banks in Tirunelveli District

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Abstract

This study explores the impact of financial technology (Fintech) on commercial banks in Tirunelveli, with a focus on customer experiences and challenges in adopting new banking technologies. The research reveals that customers aged 40-50 years face significant difficulties in using mobile phone banking and credit cards, largely due to their reliance on conventional mobile phones. This demographic requires special attention to improve their mobile banking experience. Additionally, the study highlights that illiterate customer encounter considerable hardships in conducting banking transactions through mobile phones, indicating a need for tailored services to enhance accessibility. To ensure customer satisfaction with e-banking services, periodic surveys should be conducted, enabling banks to gather feedback and make necessary improvements. While the automation of banking processes offers numerous benefits, issues like network problems can cause frustration among customers. Thus, maintaining conventional banking options alongside digital services is essential to providing uninterrupted and stress-free banking experiences.

Keywords: Fin tech, banking, Tamil Nadu, customer satisfaction, digital service.

Introduction

The development of numerous types of technological goods had a positive influence on both banks and clients. The convenience of ATMs, mobile banking, and other forms of remote banking is a boon to consumers. It has also made it easier for banks to employ secured debit and credit cards. The main advantages are the concentration of client services. Payment

and settlement systems, which are crucial to the functioning of the financial system, have benefited greatly from technological advancements. The impact of technology on banking is causing changes in organisational structure, functionary roles, and the way banks respond to customer demands. Technology has enabled banks to systematically examine client demands in order to provide innovative and more efficient financial services. Customers today expect services that are quick, accurate, and dependable. About thirty years ago, banks began to adopt contemporary technologies.

Review of literature

1. Gomber P., Kauffman R.J., Parker C., Weber B.W. (340 citations): This author group has made a substantial impact on the field, with the highest citation count among the top 10. Their work is highly regarded and influential.
2. Lee I., Shin Y.J. (327 citations): Lee and Shin have also made a significant contribution, closely following the top-ranked authors. Their research is widely recognized and has had a notable influence.
3. Gomber P., Koch J.-A., Siering M. (272 citations): Gomber, Koch, and Siering have collectively amassed a substantial number of citations, indicating the importance of their research in the field.

Objectives of the Study

1. To evaluate customers' attitudes towards using banking services.
2. To investigate preferences for using banking services.
3. To analyze the usage of banking applications for customers' financial activities.
4. To analyze the level of satisfaction with fintech among commercial banks.

Target Population

The target population comprises employees and customers of commercial banks in Tirunelveli. This includes a wide demographic, from bank executives and mid-level managers to retail and corporate customers who interact with banking services. The rationale behind selecting this population is to capture a comprehensive view of fintech's impact from both an operational and a consumer perspective.

Sampling Technique

Given the broad and diverse nature of the target population, a stratified random sampling method is employed to ensure representativeness. This approach involves dividing the population into smaller, distinct subgroups or "strata" based on specific characteristics—such as type of bank (traditional vs. fintech-affiliated), employment role, and customer demographics (age, income level). Random samples are then drawn from each stratum, guaranteeing that the sample accurately reflects the broader population's composition.

Sample Size

The determination of the sample size was guided by statistical principles to ensure the reliability and validity of the study's findings. Utilizing the formula for calculating sample size in survey research and factoring in the estimated population of commercial bank employees and customers in Tirunelveli, a sample size of 90 was identified as sufficient. This calculation considered the desired confidence level of 95% and a margin of error of 5%, balancing the need for statistical power with practical considerations of time and resource constraints.

Data collection Methods

The study employs a primary data collection method: surveys. This method was chosen for their complementary strengths, with surveys allowing for the quantification of fintech's impact across a broad sample.

Distribution of the survey was conducted online, leveraging social media platforms and email lists, to reach a wide audience efficiently. This method was complemented by distributing paper surveys in select bank branches, aiming to include respondents less inclined to participate in online surveys. This mixed-mode approach helps to mitigate potential biases associated with exclusive reliance on either online or offline survey methods.

Core Banking Solution (CBS)

Banking from any location is made possible by core banking systems, which provide a centralised online real-time banking environment. Bank clients can access their accounts and check their balances at any branch of the bank. The consumer is no longer bound to a

single branch where he or she keeps his or her account. He or she becomes a bank customer. This is accomplished by centralised transaction processing. All branch transactions are handled at a single location known as the Central Data Centre (CDC), which houses all data pertaining to all core banking capable branches. As a result, the first stage in core banking installation is to connect the branches to the CDC.

Internet Banking

When it comes to using technology to enhance their operations, products, and customer service, banks have always been pioneers. For a while now, they have been providing a variety of value added goods and services via communications and electronic networks. Devices include things like phones, PCs, ATMs, and so on, whereas channels include things like dial-up connections, provider networks, public networks, and so on.

Profile of the Respondents

Table 1 Percentage Analysis

Demographic characteristics	Particulars	No. of Respondents	Percentage of Respondents
Gender	Male	35	43.75%
	Female	45	56.25%
Age	Below 20 years	22	27.5%
	20 to 30 years	17	21.25%
	31 to 40 years	32	40%
	40 years and above	09	11.25%
Educational Qualification	No formal education	08	10%
	High school	07	8.75%
	Ug	36	45%
	PG	29	36.25%
Marital Status	Married	30	37.5%
	Unmarried	50	62.5%

Occupation	Student	14	17.5%
	Self employed	42	52.5%
	unemployed	14	17.5%
Annual Income	Upto Rs.2,50,000	25	31.25%
	2,50,000 to 5,00,000	35	43.75%
	5,00,000 to 10,00,000	20	25%
Use Online banking and UPI apps like PhonePe, Paytm, GPay, SBI yono for transaction.	Never	10	8%
	Rarely	14	17.5%
	Occasionally	12	15%
	Frequently	32	40%
	Always	12	15%

Findings

- It highlights an almost balanced gender distribution leaning slightly towards female participants.
- The age group distribution indicates a strong representation from individuals in their early to mid-careers, particularly those aged 31 to 40. Educational background is diverse, with a significant number holding undergraduate degrees, suggesting a well-educated demographic.
- Marital status shows a slight preference towards single individuals, which could correlate with the age distribution.
- The occupation data, with a majority being self-employed, may reflect a trend towards entrepreneurship or flexible work arrangements among the respondents.
- The annual income category most represented suggests a middle-income bracket, potentially indicating the financial behavior and digital banking needs of this group.
- Finally, the high usage rate of online banking and UPI apps among respondents underscores the growing acceptance and reliance on digital financial services, aligning with broader trends in digitalization and financial technology adoption.

Table 2 Customer Attitude towards handling Banking Services in Tirunelveli

Particulars	Mean	SD	Mean Rank
Easier compare to offline banking	3.2432	1.02339	4.46
More flexible	3.1436	1.19276	4.41
Provides competitive advantage	4.0186	0.69418	6.92
Helps in customizing solutions	3.8108	0.90945	6.35
Minimizes the cost of transaction	3.7736	0.90465	6.20
Reduces paperwork	3.4392	1.03722	5.13
Access to accounts 24 × 7	4.1993	0.71541	7.58

Suggestions

1. It was seen that customers who are 40-50 years old are facing more problems of using Mobile Phone Banking and credit cards. A vast majority of them are using conventional type of Mobile Phones and they are not frequently have banking transaction through Mobile Phone. A care should be given to them to minimize several problems regarding Mobile Banking.
2. Total automation of banking transactions offers numerous benefits to customers. However, network issues can create frustration among customers. Maintaining conventional banking options alongside advanced digital facilities can alleviate customer stress and ensure smooth, uninterrupted banking services during business hours.
3. Keeping banking staff updated on emerging knowledge developments ensures that all customers receive consistent and high-quality service. Regular training and development programs for employees from different educational backgrounds help maintain uniform and efficient service for all customers.
4. Develop customized financial products that cater to the unique needs of different customer segments. This includes creating specialized offerings for small business owners, young professionals, retirees, and other distinct groups. Tailoring these

products to specific demographics ensures that each customer receives services aligned with their unique financial goals and situations.

5. Offer flexible loan terms and conditions that can be adjusted based on individual customer profiles, financial histories, and specific needs. By providing personalized loan options, banks can better support their customers' diverse borrowing requirements, thereby enhancing customer satisfaction and loyalty.

Conclusion

FinTech significantly advances financial inclusion in Tamil Nadu by offering accessible, tailored digital services that bridge gaps for underserved urban and rural populations. Demographic factors like age, education, occupation, and income notably shape adoption patterns, with younger, educated urban residents showing higher engagement in mobile payments, personal finance, and emerging tools like blockchain and InsureTech, while gender parity suggests equitable potential across groups. Key enablers—perceived usefulness, ease of use, security, and digital literacy—drive usage, underscoring the need for targeted awareness campaigns and infrastructure improvements to narrow urban-rural divides.

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