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# EXPLORING CUSTOMER PERCEPTION TOWARDS FINTECH SERVICES IN KARIMNAGAR DISTRICT CENTRAL COOPERATIVE BANK: A STUDY ON USAGE AND ADOPTION

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**ABSTRACT**

*The study investigates customers' perceptions of the usability of FinTech services in the context of Karimnagar District Central Cooperative Bank and the qualitative and exploratory research approach identified the elements that drive customer adoption and usage of FinTech services. The study collected the primary data through a questionnaire with convenient sampling method and applied the neural network and exploratory factor analysis statistical methods. The findings of the study emphasised the significance of prioritising customer wants and expectations in the development and delivery of FinTech services and concluded that to meet the client needs, financial institutions must prioritise improving the speed and effectiveness of their FinTech offerings. Furthermore, when designing FinTech services, financial institutions must consider clear instructions and ease of learning. The study highlighted the potential benefits of financial institutions engaging in FinTech services as, the FinTech services can be used to save money while earning revenues.*

***KEYWORDS***: *FinTech, Customers' Services, Financial Services, Adoption, Perception.*

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## Introduction

The **FinTech**(**Fin**ancial **Tech**nology)industry has been growing rapidly in recent years and offering innovative financial services to customers around the world. Kumarand Kundu**(2018)**[1]explored that FinTech companies use advanced technologies such as artificial intelligence, blockchain, and cloud computing to offer faster, cheaper, and more convenient financial services than traditional financial institutions.

The adoption and usage of FinTech services depend on customer perception and attitudes towards them, hence, it is essential to understand the factors that influence customer perception towards FinTech services and how these factors impact FinTech adoption and usage.

The study aims to explore customer perception towards FinTech services in the **K**arimnagar **D**istrict **C**entral **C**ooperative **B**ank **(KDCCB)**, a rapidly growing region in Telangana, India. The Karimnagar district has witnessed a significant increase in FinTech services in recent years, with several FinTech companies entering the market and offering a wide range of financial services. The district has a diverse population, including farmers, small business owners, and young professionals, who have different financial needs and preferences.

The study begins by providing an overview of FinTech services and their benefits, followed by a review of the literature on customer perception towards FinTech services. The study presents the customer perception towards FinTech services in the Karimnagar DCCBs and analyzes the factors that influence customer perception towards FinTech services, including trust, convenience, security, and affordability.

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The study examines the relationship between customer perception and FinTech adoption and usage, and the implications for FinTech companies and policymakers in the Karimnagar district, aiming at providing the insights for FinTech companies to enhance FinTech adoption and usage to expand their customer base and policymakers are interested in promoting FinTech adoption and usage as part of their digitalization agenda.

**Review of Literature**

A brief note on the review of the previous research related to the study is presented here to understand the different dynamics and to draw a research gap.

**KPMG (2019)**[2] offered insights into the global FinTech industry's performance and trends and reported that the rise of FinTech investment globally is driven by funding in emerging markets, and the emergence of new technologies and products. **Liébana-Cabanillas, Marinkovic and Kalinic (2019)**[3]have identified the factors that influence customer intention to use FinTech mobile banking apps and revealed that perceived usefulness, perceived ease of use, perceived trust, and social influence are significant factors that positively influence customer intention to use FinTech mobile banking apps. Further, age and gender were found to have a significant effect on perceived usefulness and ease of use respectively. The authors suggested that financial institutions should focus on enhancing the usability and trustworthiness of FinTech mobile banking apps to attract more customers, apart from highlighting the importance of understanding customer behaviour and perception in the adoption of FinTech services.

**Garg and Khurana (2019)**[4] identified the perceived usefulness, perceived ease of use, trust, and awareness of FinTech services as the significant determinants of adoption behaviour in the Indian context and concluded that the adoption of FinTech services in India can be enhanced by increasing customer awareness and trust towards these services and highlighting the usefulness of the services and improving their ease of use. **Jha and Jha (2019)**[5]also identified the same factors influenced the adoption of mobile banking in India and stated that age, gender, education, and income did not have a significant effect on the adoption of mobile banking, while suggesting that banks and policymakers should focus on enhancing the perceived usefulness and ease of use of mobile banking services, improving trust and security, and leveraging social influence to encourage the adoption of mobile banking in India.

**Malaquias, de Lacerda and da Costa (2019)**[6] investigated into the factors that influence the adoption of FinTech services in Brazil and the results suggested that the perceived usefulness, trust, and compatibility of FinTech services as significant factors that positively influence the adoption of FinTech services, while revealing the perceived risk and lack of awareness negatively affect the adoption of FinTech services. **Zahoor, Khan and Iqbal (2019)**[7] employed the **T**echnology **A**cceptance **M**odel **(TAM)** to explore the factors that influence the consumers' intentions to adopt FinTech in Pakistan and revealed that perceived usefulness, perceived ease of use, trust, and social influence positively influence consumers' intentions to adopt FinTech services, while stating that the security concerns have a negative impact on FinTech adoption. **Biswas and Biswas (2019)**[8] have also found that perceived non-financial risks, such as privacy and security concerns, negatively affected the customer adoption of FinTech services. **Chakraborty and Mitra (2019)**[9] identified some key challenges faced by FinTech companies in India, such as low levels of financial literacy and lack of trust in digital financial services. **Sharma and Sharma (2019)**[10] concluded that the use of FinTech services positively affected the customer satisfaction and suggested that the FinTech companies should focus on improving customer trust and security measures to enhance customer satisfaction.

**Akhtar and Jain (2020)**[11] concluded that perceived usefulness and trust were the most important factors influencing customer attitudes towards FinTech adoption. **Singla and Dhir (2020)**[12] investigated into the factors that drive and hinder FinTech adoption in India and stated that perceived usefulness, perceived ease of use, and trust in FinTech services are the main drivers of FinTech adoption, while perceived financial risk and perceived social risk act as the main barriers to adoption. **Sahay & Srivastava (2020)**[13] found that the awareness of FinTech services is high among respondents, but actual usage is relatively low, and identified the trust, convenience, perceived usefulness, and perceived ease of use as the key adoption drivers and regulatory concerns, security issues, and lack of awareness of the FinTech services as the main barriers to adoption. **Yadav and Sharma (2020)**[14] provided a comprehensive review of literature on FinTech adoption in India and identified trust, perceived usefulness, perceived ease of use, perceived risk, compatibility, awareness, government support, and social influence as the major factors affecting FinTech adoption in India.

Based on the above review, there were many studies focused on the customers attitudes and factors affecting the FinTech adoption, but the studies are scanty in the regional or rural banking perspective. Hence, the present study adopted the **objectives** as, **i)** to know the customer perceptions on the usage of FinTech service, and **ii)** to elicit the measures for enhancing FinTech services for customers by the **K**arimnagar **D**istrict **C**entral **C**ooperative **B**ank **K**arimnagar **(KDCCB)** with a view to fill the research gap.

To attain the above stated objectives, the study set the **null hypothesis($H_0$)**as, *there is no significant difference in customer perceptions regarding the usage of FinTech services.* The study adopted the qualitative and exploratory research approach with the following research methodology for examining the objectives of the study.

**Research Methodology**

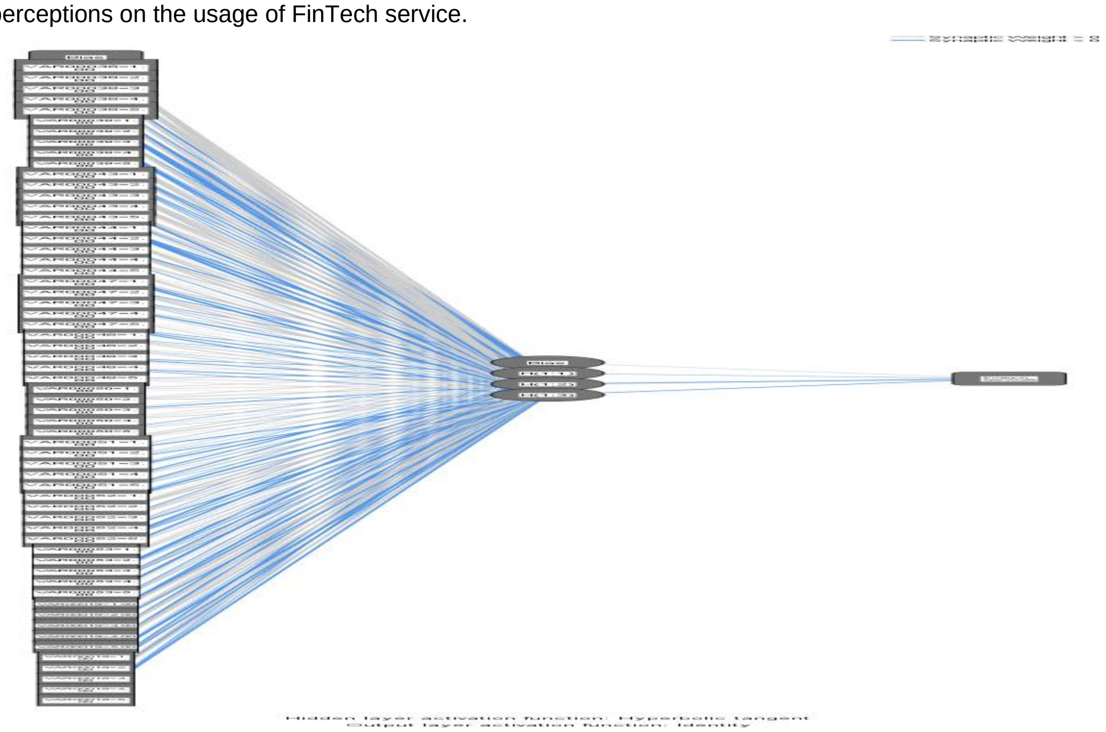
- **Sampling Method**: the study applied the convenient sampling method for the collection of primary data on 5-point Likert scale structure.
- **Sample Respondents**: the study only considers a limited number of factors that influence the customers' perceptions towards FinTech services, and the respondents are customers of KDCCB who have used or are familiar with FinTech services offered by the financial institution.
- **Statistical Tools:** The study applied the **Neural Network**[15]to identify the customers' perceptions on the usage of FinTech services and **E**xploratory **F**actor **A**nalysis **(EFA)**[16] to identify measures that can improve FinTech services offered by KDCCB for its customers.

**Data Analysis**

The primary data, relating to the customers' perceptions towards usage of the FinTech services offered by the KDCCBand collected on 5-Point Likert scale with the application of the Neural Network statistical method, are shown in the **table 1**.

The table 1 shows samples under training are 72.3% and the remaining 27.7% are undertesting sample.

The **Neural Network graph**[17] illustrates the network information in the form of layers as, each input is linked to a hidden layer, which in turn helps to generate the output layer to identify the customers' perceptions on the usage of FinTech service.



The scores of customers perception towards the usage of FinTech services extracted from the Neural Network graph are presented in the **table 2**, which represents the importance and normalized importance of various independent variables that were analysed **to understand customer perceptions** on the usage of FinTech services.

The table 2 exhibits that the most important variable appears to be *'FinTech services enables me to conduct transactions quickly & enhance effectiveness'* with an importance score of 0.128 and 100%, normalized importance suggesting that the speed and efficiency of transactions are highly valued by customers when it comes to FinTech services.

Followed by *'FinTech services is easy to learn'(*90.9%), *'My bank has a series of control check mechanisms to ensure customers are aware of transactions'*(87.3%), and *'Give info about time taken to complete financial transaction'(*70.8%). These variables suggest that customers highly value simplicity, transparency, and security when it comes to FinTech services.

While a few components such as *'Family and friends insist to use'*(59.4%) and *'Colleagues and peers insist to use'*(78.1%) suggest that social influence can also play a role in customers' adoption of FinTech services.

The components with lower importance scores such as *'Give prompt service as promised'*(38.9%) and *'I fear connectivity problem while using FinTech service in banking'*(35.3%) suggest that though these factors may be important to some extent, they are not as highly valued as other factors such as efficiency, security, and simplicity.

Overall, the results suggest that customers highly value the speed, simplicity, transparency, and security of FinTech services, and that social influence can also play a role in adoption.

After understanding the customer perceptions on the usage of FinTech services, an attempt is made to examine the **measures for enhancing the FinTech Services** for the customers of KDCCB, with the help of **E**xploratory **F**actor **A**nalysis **(EFA)**, after applying the **K**aiser-**M**eyer-**O**lkin **(KMO)** Measure of Sample Adequacy Test and Bartlett's test to run the EFA. The t**able 3** depicts the results of KMO and Bartlett's tests.

The test result indicated that KMO measure of sampling adequacy value 0.755 is greater than 0.7 and the p-value is found to be significant. Hence, the study observed that sample is adequate to run the EFA for measures for enhancing FinTech services for customers by the KDCCB.

The **table 4** depicts the communalities showing the initial correlations of each measure with the overall construct of **enhancing FinTech services for customers,** as well as the extractions of these measures through a factor analysis. The highest communalities among the measures listed are *'Sign off/Clear the internet site on mobile device'* and *'Monitoring your account and to follow customer authentication procedure'*, with initial communalities of 1.000 and extraction factors of 0.548 and 0.556, respectively.

The results suggest that these two measures are the most important factors for enhancing FinTech services for customers according to the factor analysis. Followed by the lowest communalities are *'Cost saving avenue channel'* and *'Providing **P**ersonal **I**dentification **N**umber (PIN). and **O**ne **T**ime **P**assword **(OTP)**'*, with initial communalities of 1.000 and extraction factors of 0.659 and 0.600 respectively. The results suggest that these two measures are relatively less important factors for enhancing FinTech services for customers according to the factor analysis.

The factor analysis indicates that the KDCCB should prioritize measures such as encouraging customers to sign off and clear their browsing history when using FinTech services on their mobile devices and monitoring customer accounts and following authentication procedures to ensure security.

The offering of cost-saving avenues to customers using FinTech services and providing PIN and OTPs are important considerations, as they may have significant impact on enhancing FinTech services for customers according to this analysis.

The Component Matrix (**table 5)** extracted the loading factors in two components for the enhancement of measures to improve the FinTech service quality of KDCCB.

The inferences drawn from the table 5 are presented below:

**Component-1**

*'Compliance of anti-money laundering'*(0.788%), indicating that it is the most important measure that the KDCCB should focus on to enhance FinTech services for customers. It suggests that the KDCCB should ensure strict compliance with anti-money laundering regulations to prevent fraudulent activities and protect customers' interests.

*'Compliance of **K**now **Y**our **C**ustomer **(KYC)**'* (0.685%), indicating its importance in enhancing FinTech services, suggests that the KDCCB should ensure strict compliance with KYC regulations to verify the identity of customers and prevent fraudulent activities.

*'Monitoring your account and following customer authentication procedure*' (0.668%), indicating its importance in enhancing FinTech services, suggests that the KDCCB should monitor customer accounts for any suspicious activities and follow a robust authentication procedure to prevent unauthorized access.

*'Providing PIN and OTP*' (0.607%), indicating its importance in enhancing FinTech services, suggests that the KDCCB should provide PIN numbers and OTPs to customers for secure transactions.

*'Awareness about fraudulent Email/SMS/Document verification*' (0.660%), indicating its importance in enhancing FinTech services, suggests that the KDCCB should create awareness among customers about the risks associated with fraudulent emails, SMS, and document verification.

**Component-2**

*'Compliance of anti-money laundering*' (0.788%), indicating its importance in generating revenue, suggests the KDCCBmay avoid penalties and legal issues.

*'Compliance of KYC*' (0.685%), indicating its importance in generating revenue, suggests the KDCCBmay prevent fraudulent activities and maintain customer trust, which can lead to increased revenue.

*'Revenue generation channel*' (0.536%), indicating its importance in generating revenue, suggests that the KDCCB should focus on developing new revenue channels to increase its revenue.

*'Providing PIN and OTP'*(0.607%), indicating its less importance in generating revenue and infer that providing PIN and OTPs may enhance security, but may not directly impact revenue.

*'Cost-saving Avenue channel*' (0.505%), indicating its less importance in generating revenue, suggests that the KDCCB may not be able to generate significant revenue by focusing on cost-saving avenues.

The KDCCB may enhance its FinTech services for customers by focusing on measures that ensure compliance with anti-money laundering and KYC regulations, monitoring customer accounts, and creating awareness about fraudulent activities. These measures can help the KDCCB in preventing fraud, maintain customer trust, and avoid penalties and legal issues.

**Findings**

- The study examined that Customers consider the speed and effectiveness of FinTech services as the most important factor (with a normalized importance of 100%) when it comes to using FinTech services for conducting transactions.
- It has been observed that ease of learning (90.9%) and clear instructions (75.4%) for using FinTech services are important factors that influence customer perceptions towards FinTech services.
- It has been found that the influence of family, friends (59.4%), colleagues, and peers (78.1%) on customer perceptions towards FinTech services is relatively lower than other factors.
- The study found that Compliance with anti-money laundering regulations is the most crucial measure for enhancing FinTech services by Karimnagar DCCB, with a high correlation coefficient of 0.788.
- The study observed other important measures include compliance with Know Your Customer regulations (correlation coefficient of 0.685), monitoring customer accounts (correlation coefficient of 0.668), and providing PIN numbers and OTPs (correlation coefficient of 0.607).

- It has been observed that Educating customers about FinTech security measures, such as fraudulent email/SMS/document verification and signing off/clearing internet sites on mobile devices, is also an essential measure, with correlation coefficient values of 0.660 and 0.523, respectively.
- The study examined FinTech services can be viewed as both a cost-saving channel (correlation coefficient of 0.505) and a revenue-generating channel (correlation coefficient of 0.536), highlighting the potential benefits of investing in FinTech services for financial institutions.

## Conclusion

The study examines the customers perception on the FinTech services usability in the aspect of KDCCB, by adopting the qualitative and exploratory research approach for the examination of customer perception towards FinTech services and identified the factors that influence customer adoption and usage of FinTech services.

The findings of the study highlight the importance of prioritizing customer needs and expectations in the development and delivery of FinTech services and suggests the financial institutions need to focus on enhancing the speed and effectiveness of their FinTech services to meet the customer demands. They should also prioritize compliance with regulations and educate customers about FinTech security measures to enhance customer trust and perception towards the FinTech services. Moreover, clear instructions and ease of learning are essential factors that financial institutions need to consider when developing FinTech services.

The study highlights the potential benefits of investing in FinTech services for financial institutions as, FinTech services can serve as both a cost-saving and revenue-generating channel and making them an attractive option for financial institutions looking to improve their bottom line. By considering the factors and by prioritizing customer needs, financial institutions can improve the adoption and usage of FinTech services, ultimately leading to greater customer satisfaction and business success.

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## Tables

**Table 1: Case Processing Summary**

| | | N | Percent |
|---|---|---|---|
| Sample | Training | 277 | 72.3% |
| | Testing | 106 | 27.7% |
| Valid | | 383 | 100.0% |
| Excluded | | 0 | |
| Total | | 383 | |

Source: Primary Data

**Table 2: Customers Perception towards FinTech services Usage**

| | Importance | Normalized Importance |
|---|---|---|
| FinTech services enables me to conduct transactions quickly & enhance effectiveness | 0.128 | 100.0% |
| FinTech services is useful as it meets my banking needs | 0.067 | 52.6% |
| FinTech Services is easy to learn | 0.116 | 90.9% |
| FinTech services instruction is clear and understandable | 0.097 | 75.4% |
| My bank has a series of control check mechanism to ensure customers are aware of transactions | 0.112 | 87.3% |
| I find safe of the account password for performing E banking transactions | 0.089 | 69.7% |
| Family and friends insist to use | 0.076 | 59.4% |
| Colleagues and peers insist to use | 0.100 | 78.1% |
| Give info about time taken to complete financial transaction | 0.091 | 70.8% |
| Give prompt service as promised | 0.050 | 38.9% |
| I fear of connectivity problem while using FinTech service in banking | 0.045 | 35.3% |
| In case of transaction error, I worry that I cannot get compensation from the bank | 0.029 | 22.3% |

Source: Primary Data

**Table 3: Sample Adequacy Test**

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | 0.755 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 402.669 |
| | Df | 28 |
| | Sig. | 0.000 |

Source: Primary Data

**Table 4: Communalities**

| | Initial | Extraction |
|---|---|---|
| Awareness about fraudulent Email / SMS/Document verification | 1.000 | 0.572 |
| Sign off/Clear the internet site on mobile device | 1.000 | 0.548 |
| Providing PIN NO. and OTP | 1.000 | 0.600 |
| Monitoring your account and to follow customer authentication procedure | 1.000 | 0.556 |
| Compliance of Know your customer | 1.000 | 0.510 |
| Compliance of anti-money laundering | 1.000 | 0.552 |
| Cost saving avenue channel | 1.000 | 0.659 |
| Revenue generation channel | 1.000 | 0.523 |

Source: Primary Data

**Table 5: Component Matrix**

| | Component | |
|---|---|---|
| | 1 | 2 |
| Awareness about fraudulent Email / SMS/Document verification | 0.660 | |
| Sign off/Clear the internet site on mobile device | 0.523 | |
| Providing PIN and OTP | 0.607 | |
| Monitoring your account and to follow customer authentication procedure | 0.668 | |
| Compliance of Know your customer | | 0.685 |
| Compliance of anti-money laundering | | 0.788 |
| Cost saving avenue channel | | 0.505 |
| Revenue generation channel | | 0.536 |

Source: Primary Data.

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