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IMPACT OF FINANCIAL TECHNOLOGY ON COMMERCIAL BANKS IN INDIA - A CASE STUDY ON HYDERABAD REGION OF TELANGANA STATE

Mr. Chakkala Rajnath Simha[1], Dr. R S Ch Murthy Chodisetty[2]
[1]*Student of MBA (23881E0014), Department of Management studies,*
Vardhaman College of Engineering, Shamshabad, Hyderabad. Telangana
[2]*Associate Professor, Department of Management studies,*
Vardhaman College of Engineering, Shamshabad, Hyderabad. Telangana
0000-0001-6222-0373

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ABSTRACT

Purpose
This study investigates the influence of financial technology (FinTech) on the financial performance and operational efficiency of commercial banks in the Hyderabad region of Telangana, India. By analyzing FinTech's effects, this study aims to provide insights into how technological advancements are reshaping banking operations, enhancing customer experience, and improving financial inclusion.

Design/Methodology/Approach
The study utilized primary data collected via a structured online questionnaire targeted at banking professionals, FinTech experts, and customers using FinTech services. Reliability and validity were established using Cronbach's Alpha and descriptive statistics, with a sample size of 300 respondents from 5 commercial banks operating in Hyderabad.

Findings
The study found that FinTech has significantly impacted commercial banks by increasing transaction efficiency, customer satisfaction, and service accessibility. Furthermore, FinTech adoption has contributed to improved risk management practices and streamlined operations, enhancing overall financial performance. The study highlighted FinTech's essential role in bridging gaps in traditional banking services and providing innovative solutions to meet evolving customer needs. However, limitations were noted, particularly in areas requiring further technological integration and regulatory adaptation.

Originality
This research provides an in-depth examination of the role of FinTech in enhancing operational efficiencies and customer experiences within the Indian banking sector. The study focuses on top commercial banks in Hyderabad, including IDFC Bank, Axis Bank, HDFC Bank, ICICI Bank, and City Union Bank.

Research Limitations/Implications
This study underscores the importance of FinTech in advancing digital transformation in banking, addressing limitations in legacy banking processes, and emphasizing the need for continuous regulatory oversight to foster innovation while ensuring security and compliance.

Practical Implications
The practical applications of FinTech extend beyond improving transaction speed and customer convenience; they include transforming risk management, automating compliance, and enabling more data-driven decision-making. This adoption of FinTech can enhance banks' resilience, adaptability, and ability to serve a digitally empowered customer base.

Social Implications
The social implications of FinTech adoption in banking highlight its role in advancing financial inclusion, democratizing access to banking services, and supporting a cashless, digital society. By providing accessible financial services, FinTech contributes to socio-economic stability, transparency, and equitable growth.

KEYWORDS: *Financial Technology, FinTech, Digital Banking, Operational Efficiency, Customer Satisfaction, Financial Inclusion, Risk Management, Regulatory Compliance*
JEL Codes: *F36, F39, G0, G4, G6, G8*
Article classification: *Research Article with Empirical Study.*

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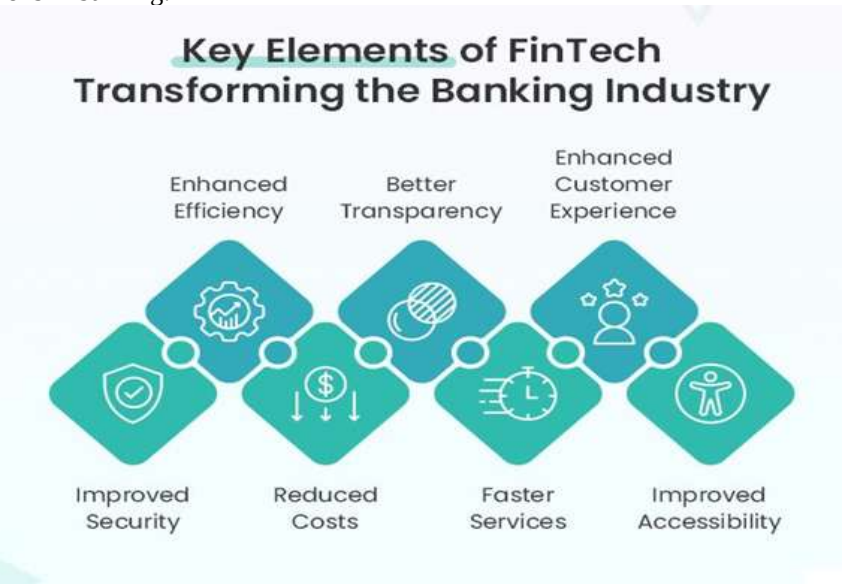
INTRODUCTION

Financial technology (FinTech) has transformed the landscape of the banking industry, reshaped traditional financial services and enhanced operational efficiencies. FinTech encompasses various technological innovations that automate financial services, optimize operational processes, and improve user experience. In India, the growing demand for digital banking solutions and services has led commercial banks to adopt FinTech tools rapidly, especially in urban areas like Hyderabad.

Key areas where FinTech impacts banking operations include digital payments, blockchain technology, artificial intelligence (AI), machine learning (ML), and data analytics. These tools are applied in diverse areas such as customer onboarding, credit scoring, fraud detection, and personalized financial advice. Banks leverage FinTech to streamline processes, reduce operational costs, and improve regulatory compliance. Here's a closer look at FinTech applications in banking:



- **Digital Payments and Mobile Banking:** Facilitating fast and secure transactions through digital wallets and mobile banking apps, allowing customers easy access to banking services on digital platforms.
- **Credit Scoring and Risk Assessment:** Using AI and ML to assess creditworthiness by analyzing non-traditional data sources, allowing for more accurate and inclusive lending practices.
- **Fraud Detection and Cybersecurity:** Implementing sophisticated AI-driven algorithms to detect fraud in real time, identifying unusual patterns and enhancing cybersecurity measures to protect customer data.
- **Blockchain Technology:** Providing secure, decentralized ledger systems that streamline processes like cross-border payments, enhancing transparency and transaction speed.
- **Data Analytics for Customer Insights:** Leveraging data analytics to gain deeper insights into customer behaviour, which helps banks personalize services and improve customer satisfaction.

REVIEW OF LITARATURE

- **Kelvin Leong and Anna Sung (2018):** The article defines FinTech as a multidisciplinary field merging finance, technology, and innovation. It categorizes FinTech applications into four key areas: payment, advisory services, financing, and compliance. The definition is presented to diverse audiences, including students and professionals, to enhance understanding and potential applications. Additionally, the article explores emerging technologies in FinTech and their potential to create business value. It aims to serve as a reference for researchers, particularly those with a technology background, in identifying and developing innovative FinTech solutions.

- **Maoyong Cheng , Yang Qu (2020):** The article aims to examine the impact of bank FinTech on credit risk in Chinese commercial banks. It constructs and measures a bank FinTech index using web crawler technology and word frequency analysis. The study analyses the differences in FinTech development across different types of banks and the specific impact of various FinTech subareas on credit risk. By investigating these relationships, the article contributes to the understanding of how bank FinTech can mitigate credit risk and its implications for different bank characteristics.

- **Mikhail Zveryakov, Victoria Kovalenko, Sergii Sheludko, Elena Sharah (2019):** This article aims to explore the impact of FinTech on the traditional banking sector. It seeks to understand the evolving landscape of financial services, where technology-driven innovation is challenging conventional practices. The study delves into the potential of FinTech to disrupt the banking industry, offering new services and alternative financial solutions. Additionally, the paper investigates the strategic responses of banks to this technological revolution, including potential collaborations with FinTech companies and the adoption of innovative technologies. Ultimately, the research aims to provide insights into the future of banking and the role of FinTech in shaping its evolution.

- **Santiago Carbó Valverde, Francisco Rodríguez Fernandez (2020**): This article explores some recent macroeconomic and microeconomic approaches to financial digitalization and the relationship between banks, FinTech and BigTech. It also deals with new approaches to identify the adoption and implications of financial digitalization by consumers. We show competition between traditional banks and tech companies is mostly driven by their relative ability to manage information sharing. Regulation is still considering ways of providing a level playing field while industry participants are reacting with a mixture of strategies, many of them based on cooperation. The paper also shows there are different ways in which customers access financial digital channels and new approaches from matching learning and brain studies to identify behavioural patterns in financial digitalization decisions

- **Victor Murinde, Efthymios Rizopoulos, Markos Zachariadis (2022)**: This paper aims to analyze the impact of FinTech on the global banking industry. By examining a comprehensive dataset of 115 countries over 16 years, the study seeks to identify the opportunities and risks posed by FinTech to traditional banks. The research explores the potential for FinTech to disrupt banking services, such as lending, and investigates the strategies banks are adopting to adapt to the changing landscape. Additionally, the paper highlights the influence of regulatory frameworks, global infrastructure, and geopolitical factors on the future of banking. Ultimately, the study aims to provide valuable insights for policymakers, practitioners, and researchers to navigate the evolving FinTech ecosystem.

- **Mercurius Broto Legowo, Steph Subanidja, Fangky Antoneus Sorongan (2021):** This research aims to provide a comprehensive analysis of the historical evolution, current state, and future trajectory of FinTech and its impact on Indonesian banking. By examining the past, present, and future of this dynamic relationship, the study seeks to identify key challenges and opportunities for banks, propose strategies for adaptation, and highlight the potential of FinTech to enhance financial inclusion. Ultimately, this research aims to contribute to a deeper understanding of the FinTech-banking nexus and stimulate further research into the specific impacts of FinTech on Indonesian banking.

- **Cristina Chueca Vergara and Luis Ferruz Agudo (2021):** The article aims to explore the intersection of Fintech and sustainable finance. It analyses how Fintech can contribute to sustainable financial practices, including green finance, social responsibility, and environmental impact. The study examines the role of Fintech in promoting transparency, efficiency, and innovation in the financial sector. It also discusses the potential of Fintech to address challenges like greenwashing and deceptive behavior. By highlighting the synergies between Fintech and sustainability, the article emphasizes the importance of leveraging technology to drive positive environmental and social change.

- **Lars Hornuf, Milan F. Klus, Todor S. Lohwasser, Armin Schwienbacher (2021):** This research aims to investigate the strategic alliances between traditional banks and fintech firms. Specifically, the study seeks to understand which banks are most likely to collaborate with fintech's, the intensity of such collaborations, and the preferred forms of alliances. By analysing a comprehensive dataset of large banks from four major economies, the research aims to provide empirical evidence on the factors driving bank-fintech collaborations and the strategic implications of different alliance types. The findings of this study will contribute to a deeper understanding of the evolving landscape of the financial industry and the role of strategic partnerships in driving digital transformation.

- **Khakan Najaf, Mohsin Ali, Kaveh Asiaei, Mohamed M. Dhiaf (2024)**: This study aims to investigate the impact of Scope 3 carbon emissions on the market performance of financial firms, particularly fintech firms. It seeks to understand how fintech firms, with their innovative business models and lower carbon footprints, differ from traditional financial firms in this regard. The study also explores the moderating role of fintech on the relationship between Scope 3 emissions and market performance.

- **Giovanna Ferraro, Antonio Iovanella, Alessandro Ramponi, Giulia Rotundo (2024):** The article aims to delve into the technological landscape of Fintech by analysing patent data from the World Intellectual Property Organization (WIPO). By employing network analysis and the Bass diffusion model, the study seeks to identify key technological clusters, understand their diffusion patterns, and assess the influence of various players. Additionally, the research focuses on the emergence and evolution of "green" technologies within the Fintech sector, predicting their future trajectory. Ultimately, the article aims to provide a comprehensive overview of the Fintech patent landscape, highlighting technological trends, influential companies, and the overall lifecycle of innovations in this dynamic field.

- **Anjan V. Thakor (2019)**: The paper aims to review the literature on Fintech and its impact on the banking industry. It focuses on innovations in payment systems, credit markets, and insurance, particularly those enabled by Blockchain technology. The study seeks to define Fintech, analyse relevant statistics, and explore the theoretical and empirical literature. The paper addresses four key research questions related to the integration of Fintech and traditional banking, the role of trust in financial intermediation, and the potential impact of innovations like P2P lending and cryptocurrencies. By examining these issues, the paper aims to contribute to a better understanding of the evolving Fintech landscape and its implications for the future of finance.

- **Vivek Dubey (2019**): The article aims to explore the role of Artificial Intelligence, Augmented Reality, and Blockchain technologies in revolutionizing digital banking. It delves into the potential of these technologies to streamline processes, reduce costs, and enhance customer experience. The paper discusses how AI can improve decision-making, AR can enhance user interactions, and Blockchain can ensure security and transparency in financial transactions. By analyzing the current trends and future possibilities, the article highlights the significant impact of Fintech on the banking industry.

- **Cătălin Mihail Barbu, Dorian Lauren¸tiu Florea, Dan-Cristian Dabija, Mihai Constantin Răzvan Barbu (2021):** The article aims to understand and improve customer experience in the fintech sector. It proposes a model based on the S-O-R approach to identify the key determinants of customer experience, including perceived value, customer support, assurance, speed, and perceived firm innovativeness. The study also explores the impact of customer experience on loyalty intentions. By understanding these factors, fintech companies can develop strategies to enhance customer satisfaction and loyalty, ultimately leading to business success.

- **Kuan-Chieh Chen (2020):** The article aims to assess the impact of Internet-only banking on traditional banks in China. By employing data envelopment analysis (DEA) and regression analysis, the study examines changes in bank efficiency and performance before and after the entry of Internet-only banks. The research explores how traditional banks have responded to increased competition and technological advancements, including diversification of income sources, cost reduction strategies, and human capital management. The findings provide insights into the evolving landscape of the Chinese banking industry and the challenges and opportunities posed by Fintech.

- **Weidong Huo, Wang Xiohui, Muhammad Zulfiqar, Ahmed Chand, Muhammad Rizwan Ullah (2024):** The article aims to explore the impact of Fintech on financial inclusion in Pakistan, particularly among small business owners and individuals in the informal sector. It investigates the relationship between communication dynamics, Fintech use, intentions, cashless transaction adoption, financial literacy, personal innovativeness, and socioeconomic development. The study employs a dual methodology to analyse the data collected from a survey of 394 respondents. The research seeks to understand the factors influencing the adoption of cashless transactions, the role of financial literacy and personal innovativeness, and the potential impact of Fintech on financial inclusion and sustainable livelihoods

- **Vinicius Dezem, Swati Sachan, Marcelo Macedo and André Andrade Longaray (2024):** The article aims to help traditional banks navigate the challenges posed by open banking by developing a decision-support tool. This tool, based on the Strategic Value Index (SVI), assists banks in selecting optimal digital strategies to maintain competitiveness. By analysing multiple strategic objectives and considering factors like time, cost, and importance, the SVI helps banks balance in-house and outsourced technological developments. The study emphasizes the importance of strategic partnerships with FinTech and BigTech firms to access innovative solutions and expand services. Ultimately, the research aims to provide banks with a framework to effectively leverage open banking data and drive digital transformation.

- **Askar Garad, Hosam Alden Riyadh, Abdullah M. Al-Ansi, Baligh Ali Hasan Beshr (2013):** The article aims to explore the strategic importance of information management in driving financial innovation. It focuses on the integration of advanced technologies such as AI, ML, Blockchain, Big Data Analytics, Cloud Computing, LLMs, RPA, IoT, Cybersecurity Technologies, and Quantum Computing. The research highlights how these technologies can enhance decision-making, operational efficiency, risk management, and compliance within the financial sector. The study emphasizes the need for robust data governance, effective risk management, and compliance frameworks to ensure the successful implementation of these technologies. Ultimately, the article underscores the importance of strategic investment in information management to maintain competitiveness, improve decision-making, and foster sustainable growth in the evolving digital economy.

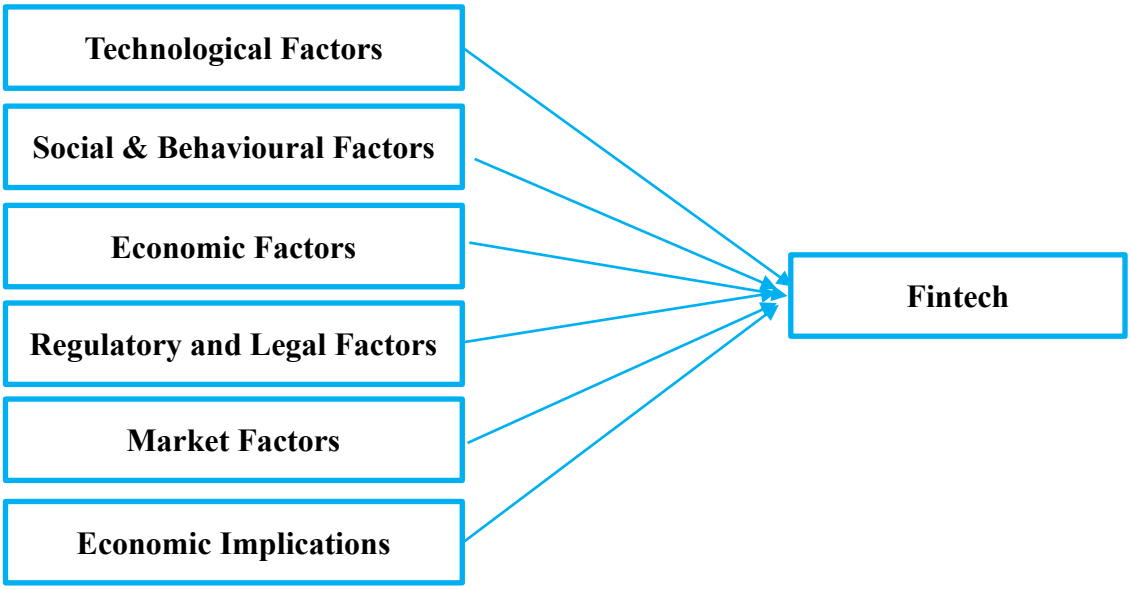
- **Anne-Laure Mention (2021):** The article aims to identify the key building blocks for the future of FinTech and explore the challenges and opportunities associated with its development. It focuses on the need for a comprehensive understanding of FinTech as a socially-constructed phenomenon, considering factors like consumer trust, regulation, and scalability. The study provides recommendations for future research, policy, and practice to guide the evolution of FinTech and its impact on the financial industry. By addressing these critical areas, the paper seeks to contribute to the ongoing discourse on the future of FinTech and its role in shaping the financial landscape.

- **Ahmed T. Al Ajlouni, Monir Al-hakim (2018):** The article aims to identify the future-oriented challenges and opportunities of FinTech. It explores the building blocks for the future of FinTech, including consumer trust, regulation, scalability, and innovation. By addressing these key areas, the paper seeks to provide insights for future research, policy, and practice in the field of FinTech. The study aims to contribute to a deeper understanding of the evolving FinTech landscape and its potential impact on the financial industry.

- **Thomas j. Chemmanur, michael b. Imerman, harshit rajaiya, qianqian yu (2020):** The article aims to provide a comprehensive overview of recent developments in the FinTech industry. It explores the financing of FinTech startups, innovation by FinTech firms and incumbent financial intermediaries, and potential sources of value creation for FinTech firms. The study also discusses the regulatory environment facing FinTech firms and the buy-versus-build decisions made by firms entering the FinTech sector. By analysing these aspects, the article seeks to contribute to a better understanding of the FinTech landscape and its implications for the future of the financial services industry.

RESEARCH METHODOLOGY

- **Conceptual Model**



- **Statement of the Problem:**
  The financial services sector in India has undergone a transformative shift due to the rapid rise of Financial Technology (FinTech). FinTech has significantly disrupted traditional banking models, offering new

solutions that improve the accessibility, efficiency, and convenience of financial services. The emergence of FinTech in India has presented both opportunities and challenges for commercial banks, as they strive to adapt to an increasingly digital ecosystem. The research aims to provide a comprehensive analysis of the evolving relationship between FinTech and commercial banks in India, identifying both the opportunities and challenges faced by the banking sector as it embraces technological advancements. By assessing the strategic responses of commercial banks to the FinTech revolution, this study will contribute to a better understanding of how the Indian banking landscape is evolving in the digital age.

- **Research Gap**

These research gaps highlight the need for a more comprehensive understanding of how FinTech affects the various dimensions of commercial banking in India. Filling these gaps would provide valuable insights for banks, regulators, and FinTech companies as they navigate the digital transformation of the banking sector. Moreover, addressing these gaps could guide policy-making, improve operational efficiency, enhance customer service, and foster inclusive growth in the financial sector.

- **Objectives of the Study**

1. To study customers perception towards commercial bank services in Hyderabad region of Telangana.
2. To study usage of banking applications for customer financial activity in Hyderabad region of Telangana.
3. To measures factors effecting customer usage of fintech services in Hyderabad region of Telangana.
4. To analyse the satisfaction with fintech among in Hyderabad region of Telangana.

- **Hypothesis of the Study**

H0: Customers perception not influencing towards commercial bank services in Hyderabad region of Telangana.

H1: Customers perception a influencing towards commercial bank services in \Hyderabad region of Telangana.

H0: There is no factors effecting customer usage of fintech services in Hyderabad region of Telangana.
H2: There is an factor effecting customer usage of fintech services in Hyderabad region of Telangana.

- **Scope of the Study**

According to my analysis we select top 5 Public and Private sector Banks, Namely IDFC Bank, Axis Bank, HDFC Bank, ICICI Bank, City Union Bank. And also take 5 Regions in Telangana state namely Jubilee Hills, Manikonda, Kukatpally, Carminar and Secunderabad

ANALYSIS

Results and Discussion

Reliability Analysis

When a psychological test is used to measure an attribute or behavior, reliability becomes an important consideration (Rosenthal and Rosnow, 1991). For example, in order to understand how a test works, it's important that the test consistently discriminates individuals either at one point in time or over time. Reliability can be defined as the extent to which measurements can be repeated, meaning that different people can use different instruments to measure the same thing. In sum, reliability can be defined as either consistency of measurement (Bollen, 1989) or stability of measurement over a variety of conditions in which essentially the same results should be obtained (Nunnally, 1978).

Variables	Numbers of Items	Cronbach Alpha
Technological Factors	4	0.857
Social & Behavioural Factors	4	0.874
Economic Factors	4	0.883
Regulatory and Legal Factors	4	0.891
Market Factors	5	0.893
Economic Implications	5	0.892
Fintech	4	0.866

The reliability score of 0.857 indicates strong internal consistency among the four items measuring technological factors, suggesting that these items effectively assess this dimension. The reliability coefficient of 0.874 indicates a high level of consistency among the four items assessing social and behavioral factors, confirming the scale's

dependability for this measurement. A Cronbach Alpha of 0.883 indicates excellent reliability for the four items related to economic factors, demonstrating strong coherence in their representation of this construct. A score of 0.891 demonstrates significant reliability and internal consistency across the four items evaluating regulatory and legal factors. The five items assessing market factors exhibit a high Cronbach Alpha of 0.893, indicating strong consistency in measuring this variable. The five items associated with economic implications yield a Cronbach Alpha of 0.892, indicating a high degree of reliability.

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed data. Confirmatory Factor Analysis (CFA) allows for the evaluation of the hypothesis that a relationship exists between observed variables and their underlying latent constructs. The individual employs theoretical knowledge, empirical research, or a blend of both, establishes the relationship pattern beforehand, and then statistically tests the hypothesis (Suhr, 2006).

(Table – 2 Fit Indices of Confirmatory Factor Analysis)

Fit Indices	Recommended	Observed	Result
CMIN/df (minimum discrepancy as indexed chi-square)	>5 Terrible, >3 Acceptable, >1 Excellent	2.592	Acceptable Fit
GFI	>0.80	0.896	Good Fit
CFI (Comparative Fit Index)	<0.90 Terrible, <0.95 Acceptable, >0.95 Excellent	0.952	Excellent Fit
TLI (Tucker–Lewis index)	> 0.9	0.934	Good Fit
PNFI (Parsimony-Adjusted Measures)	> 0.5	0.757	Good Fit
RMSEA (Root mean square error of approximation)	>0.08 Terrible, >0.06 Acceptable, >0.05 Excellent	0.06	Acceptable fit

The CMIN/df value of 2.592 is within the acceptable range, suggesting that the model adequately fits the data. The GFI value of 0.896 exceeds the recommended threshold of 0.80, indicating a favorable model fit. The CFI value of 0.952 surpasses the threshold of 0.95, which is deemed excellent, signifying a robust comparative fit of the model. The observed value of 0.934 exceeds the recommended threshold of 0.90, indicating a good fit. The PNFI value of 0.757 exceeds the threshold of 0.50, indicating that the model is both parsimonious and exhibits a good fit. The RMSEA value of 0.06 indicates that the model is within the acceptable range, reflecting a reasonable level of approximation error.

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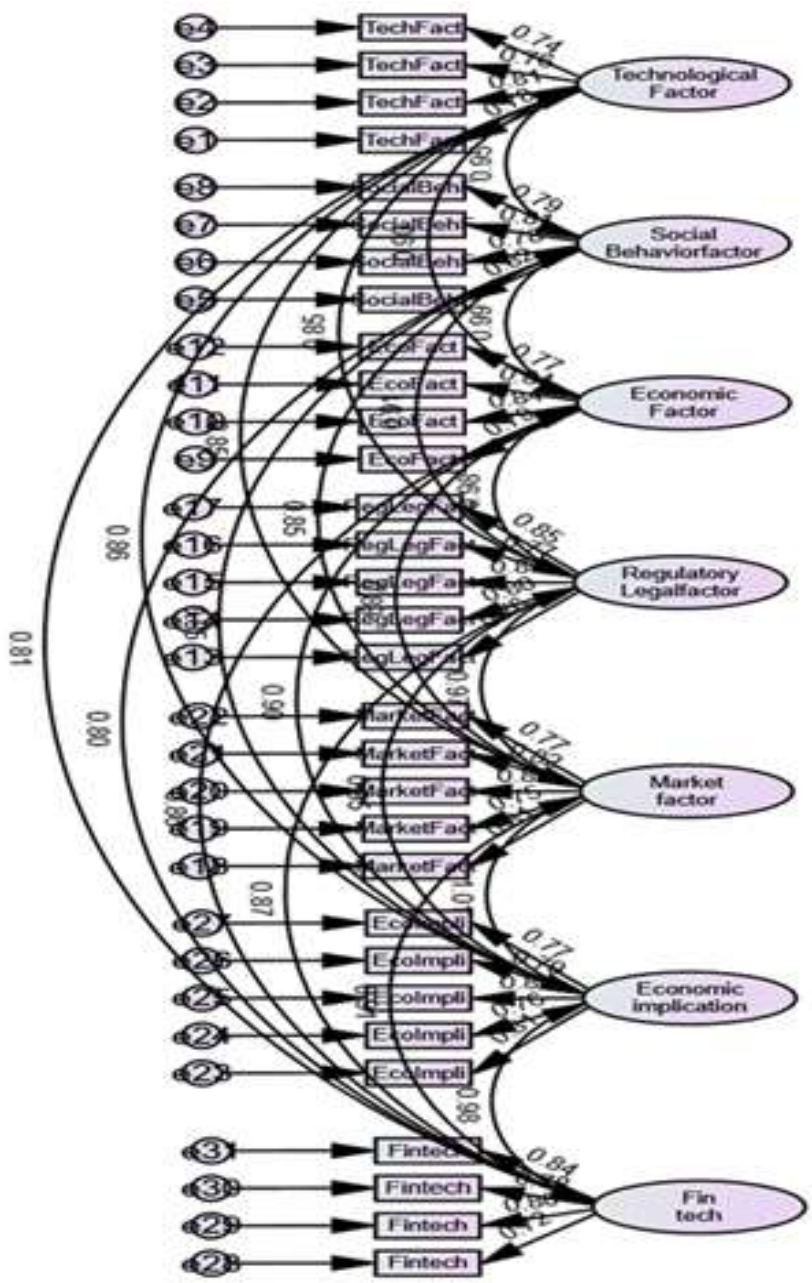

Structure Equation Model

Structural equation modeling is a methodology that endeavors to express hypotheses regarding the means, variances, and covariances of observable data in terms of a reduced number of "structural" parameters that are determined by an underlying conceptual or theoretical model. In the past, structural equation modeling was the result of the fusion of two distinct statistical traditions. The initial tradition is factor analysis, which has its roots in the fields of psychology and psychometrics. The second tradition is simultaneous equation modeling, which was first introduced to sociology as route analysis and has a history in genetics. It originated in econometrics (Kaplan, 2001).

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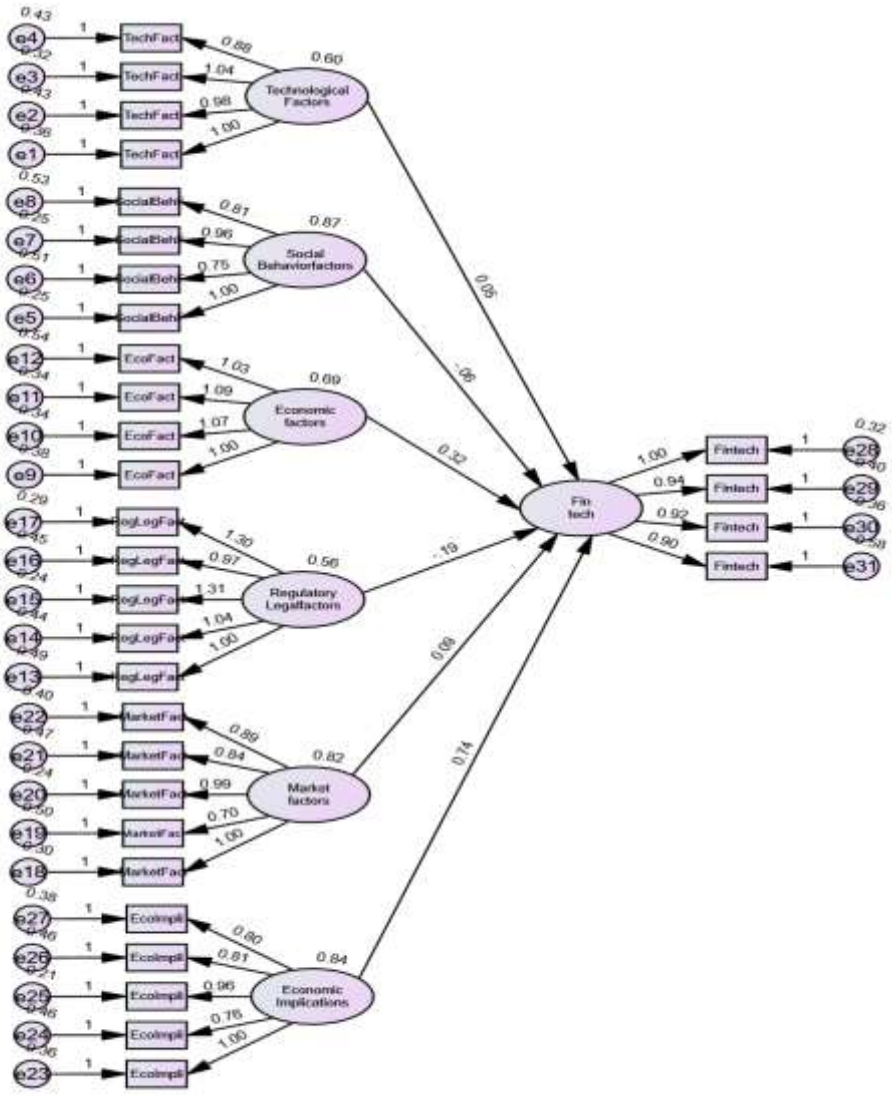
(Table – 3 Fit Indices of Structure Equation Modelling)

Fit Indices	Recommended	Observed	Result
CMIN/df (minimum discrepancy as indexed chi-square)	>5 Terrible, >3 Acceptable, >1 Excellent	3.702	Acceptable fit
GFI	>0.80	0.802	Good fit
CFI (Comparative Fit Index	<0.90 Terrible, <0.95 Acceptable, >0.95 Excellent	0.944	Acceptable fit
TLI (Tucker–Lewis's index)	> 0.9	0.971	Excellent fit
PNFI (Parsimony-Adjusted Measures)	> 0.5	0.528	Good fit
RMSEA (Root mean square error of approximation)	>0.08 Terrible, >0.06 Acceptable, >0.05 Excellent	0.064	Acceptable fit

CMIN/df value of 3.702 falls within the acceptable range, indicating a reasonable level of model-data fit. However, it could be improved further to bring it closer to 3 or below. The GFI value of 0.802 is just above the threshold of 0.80, suggesting a good model fit, although there is room for improvement to enhance the model's overall fit. The value of 0.944 is in the acceptable range, as it is close to but slightly below the excellent threshold of 0.95. This indicates the model compares well to a null or baseline model. The TLI value of 0.971 exceeds the recommended threshold of 0.90, placing it in the excellent category, which reflects a strong fit of the model to the data. The PNFI value of is above the threshold of 0.50, demonstrating good parsimony while maintaining a well-fitting model.



Hypothesis Testing
(Table -4 Hypothesis Testing)

Hypothesis	P-Value	Result
H1: Technological Factors & Fintech	0.163	Not Significant
H2: Social and Behavioural Factors & Fintech	0.51	Not Significant
H3: Economic Factors & Fintech	0.00	Significant
H4: Regulatory and Legal Factors & Fintech	0.00	Significant
H5: Market Factors & Fintech	0.002	Significant
H6: Economic Implications & Fintech	0.00	Significant

Interpretation
Technological Factors & Fintech (H1): At the 5% significance level, the P-value of 0. 163 shows that the relationship between technological components and fintech is not statistically significant. Consequently, insufficient data exist to justify the other theory.

Social and Behavioural Factors & Fintech (H2): With a P-value of 0.51, the association between social and behavioral factors and fintech is not statistically significant, implying little strong data to refute the hypothesis.

Economic Factors & Fintech (H3): The P-value (0.00) indicates to a statistically significant relationship between fintech adoption or development and economic issues, therefore implying that these elements greatly affect each other.

Regulatory and Legal Factors & Fintech (H4): With a P-value of 0.00, legal and regulatory considerations are also statistically significant, suggesting they are absolutely vital in fintech.

Market Factors& Fintech (H5): Underlining their impact, the P-value (0.002) shows a statistically significant relationship between market conditions and fintech.

Economic Implications & Fintech (H6): Emphasizing their relevance in the framework of fintech, the P-value (0.00) indicates a noteworthy correlation between economic implications and fintech.

CONCLUSION

The results show that fintech adoption and development are much influenced by economic, legal, regulatory, commercial, and financial aspects as well as by their consequences. These elements underline the need of a stable macroeconomic climate, well-defined regulations, market competitiveness, and real financial advantages for fintech for it to thrive.

By contrast, fintech does not exhibit a statistically significant relationship between technology factors and social and behavioral variables. This implies that, even if consumer behavior and technology are crucial elements, they are not the main forces behind fintech success. Rather, fintech evolution seems to depend more on outside structural and economic elements.

Having everything considered, the report emphasizes the need of removing legal, financial, and market-related obstacles as well as offering a conducive environment for fintech developments to reach adoption and sustained growth. Future studies should look at how these important elements interact and the part other developing issues like sustainability and digital literacy play in fintech adoption.

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