



Exploring the Impact of Fintech Innovations on Financial Inclusion and Economic Development

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INTRODUCTION

ABSTRACT:

The rapid evolution of Financial Technology (Fintech) has disrupted traditional financial services, offering novel solutions that revolutionize the way individuals, businesses, and economies interact with financial systems. This capstone project aims to investigate the multifaceted impact of Fintech innovations on financial inclusion and economic development, with a focus on emerging markets. The research will adopt a mixed-methods approach, combining quantitative analysis of empirical data with qualitative exploration through interviews and case studies. The quantitative analysis will involve statistical examination of relevant indicators such as access to financial services, adoption rates of Fintech solutions, and economic growth metrics. Qualitative methods will delve into the perceptions, experiences, and challenges faced by stakeholders, including Fintech entrepreneurs, regulators, financial institutions, and end-users. By synthesizing quantitative findings and qualitative insights, this research aims to contribute to a deeper understanding of the complex interplay between Fintech innovations, financial inclusion, and economic development. The outcomes of this study will provide valuable insights for policymakers, industry stakeholders, and development practitioners seeking to leverage Fintech to promote inclusive and sustainable economic growth.

KEY WORDS:

Fintech,
Financial Inclusion,
Economic Development,
Emerging Markets,
Innovation,
Technology,
Financial Services,
Digitalization,
Access,
Sustainability.

INTRODUCTION:

The convergence of finance and technology, commonly known as Fintech, has emerged as a disruptive force reshaping the landscape of financial services worldwide. Fintech innovations encompass a wide array of technologies, including blockchain, artificial intelligence, big data analytics, and mobile applications, which are revolutionizing traditional banking and payment systems, investment platforms, insurance services, and regulatory frameworks. This transformation has profound implications for individuals, businesses, and economies, offering unprecedented opportunities to enhance financial inclusion, drive economic growth, and

promote sustainable development. However, alongside the promise of innovation, Fintech also presents regulatory, ethical, and socio-economic challenges that must be addressed to ensure equitable access, consumer protection, and systemic stability. This capstone project aims to explore the multifaceted impact of Fintech on financial inclusion and economic development, examining both the opportunities and challenges inherent in this rapidly evolving ecosystem.

LITERATURE REVIEWS:

1.**Rainer alt Thomas Puschmann:** Existing literature explores the evolution of electronic markets in banking, the role of IT innovations, and the challenges posed by non-bank entities. However, there's a gap regarding the integration of these factors into a cohesive strategy for customer-oriented financial market infrastructures. This paper bridges this gap by synthesizing insights from various domains to propose a holistic framework.

2.**Sulaman Muhammad, Yanchun Pan, Muhammad Waqas:** Existing literature has highlighted the potential environmental consequences of technological advancements, particularly in the fintech sector. However, there is a lack of comprehensive studies examining the specific relationship between fourth industrial revolution indicators and environmental efficiency. This paper fills this gap by synthesizing insights from relevant literature and proposing a framework for analysis.

3.**Parminder Varma, Shivinder Nijjer:** Existing literature has explored the implications of FinTech adoption on various aspects of the banking industry, including efficiency, competition, and market structure. However, there is a gap in understanding the specific relationship between FinTech, bank efficiency, and market power in the context of emerging markets like India. This manuscript aims to address this gap by synthesizing insights from relevant literature and proposing a framework for analysis.

4.**Dr.Girish Kumar Painoli, Dr.D.Paul Dhinakaran, Dr.C.Vijai:** Existing literature has documented the rise of Fintech and its implications for traditional banking institutions. However, there is a gap in understanding how Fintech influences the profitability of public and private sector banks in India specifically. This paper aims to bridge this gap by synthesizing insights from relevant sources and providing a comprehensive review of the literature on Fintech in the Indian context.

5.**Anjan V. Thakor:** This review paper explores the evolving landscape of financial technology (fintech) and its impact on banking. It covers innovations like payment systems, peer-to-peer lending, insurance, and Blockchain-assisted smart contracts. With a precise definition of fintech, the paper reviews statistics, stylized facts, and literature to address key research questions. Examining historical context and the surge of non-intermediated transactions in fintech, it assesses implications for banking, financial markets, and payment systems. The paper synthesizes existing knowledge, identifies gaps, and proposes a research agenda, offering insights into the promises and challenges fintech presents for the financial services industry.

6.**Amir Barnea, Henrik Cronqvist, Stephan Siegel:** This review paper investigates the origins of individual investor behavior by analyzing the financial portfolios of identical and fraternal twins. Through a decomposition analysis, the study reveals that genetic factors account for approximately one-third of the variation in stock market participation and asset allocation. The influence of family environment is notable among young individuals but diminishes with experience. Surprisingly, frequent contact among twins results in similar investment behavior, even for twins raised in different environments. The study suggests that a genetic component plays a role in the decision to invest in the stock market, indicating inherent differences in factors affecting participation costs. Furthermore, the genetic component of asset allocation, including the share of equities and portfolio volatility, is attributed to variations in risk preferences.

7.**Xavier Vives:** This review paper examines the impact of fintech on the banking sector and capital markets. It surveys the development of fintech, evaluating its influence on efficiency, market structure, strategies of incumbents and new entrants, and financial stability. The paper emphasizes the potential for fintech to disrupt established financial intermediaries, particularly banks, through the use of big data and advanced computing

power. It discusses the transformative effects of innovative information and automation technology in financial services, showcasing examples such as the growth of shadow banks in the US mortgage market. While acknowledging fintech's welfare-enhancing disruptive capability, the paper calls for adaptive regulation to ensure the promised benefits are realized without compromising financial stability. Overall, the study provides insights into the evolving landscape of fintech and its implications for the financial industry.

8.Victor Murinde, Efthymios Rizopoulos, Markos Zachariadis: This review paper delves into the global FinTech revolution, analyzing high-quality bank-level data from 115 countries over 16 years. The study explores key indicators to comprehend shifts in the banking landscape during the FinTech era, presenting preliminary findings that suggest traditional banks are not likely to be replaced by FinTech lenders. Instead, there is evidence of active engagement as banks develop their FinTech platforms or collaborate with FinTech startups. The paper also examines the role of regulation, global infrastructures, and geopolitical factors in shaping the future of banking. Identifying both opportunities and risks for banks, the study proposes promising research directions and outlines implications for policymakers and practitioners.

9.Ahmed T. Al Ajlouni, Monir Al Hakim: This review paper explores the growing impact of financial technology (FinTech) on the financial industry, with a particular focus on its influence on the banking sector. Characterized by heavy use of technology, FinTech encompasses various financial services, including payments, credit, deposit, and capital-raising services. Despite attracting attention from industry leaders and policymakers globally, scientific research on FinTech is still in its early stages. The paper aims to provide clarity on the development of FinTech, its current market segments, and alternative financing platforms. It further delves into the challenges and opportunities FinTech poses for the banking industry, proposing strategic responses. Additionally, the paper suggests future research directions, particularly focusing on the impact of FinTech on the financial industry and banking sector in Arab countries.

RESEARCH GAP

- 1.Research that would inform the economic importance of FinTech would be served with an increased understanding of FinTech firms and the FinTech industry.
- 2.Evaluate their impact on the traditional banking sector, considering factors such as scalability, interoperability, and the potential for integration into existing infrastructure.
- 3.The study lacks exploration of the opinion interactions among fintech, high-tech industry, and environmental efficiency, requiring deeper analysis for comprehensive insights.
- 4.The study lacks exploration of diverse FinTech indicators and their dynamic impact on both market power and efficiency in Indian banking.
- 5.Limited exploration on the specific mechanisms through which Fintech adoption in Indian banks influences profitability, considering evolving consumer behavior and industry dynamics, warrants further investigation.
- 6.Despite extensive literature on fintech's impact on banking and financial services, there remains a dearth of research examining the nuanced effects of specific innovations such as blockchain-assisted smart contracts on traditional banking operations and regulatory frameworks. Understanding these implications is crucial for informing effective strategies and policies in the evolving fintech landscape.
- 7.While this study provides valuable insights into the genetic and environmental factors influencing individual investor behavior, there remains a lack of research exploring the interplay between genetic predispositions, socio-economic factors, and cognitive biases in shaping investment decisions. Understanding these complex interactions is essential for developing tailored strategies to promote financial literacy and optimize investment outcomes for diverse populations.
- 8.Despite extensive examination of fintech's impact on banking and capital markets, there's a notable absence of

comprehensive studies investigating the long-term implications of fintech disruption on regulatory frameworks, systemic risk, and consumer protection measures. Understanding the dynamic interplay between fintech innovation and regulatory response is essential for fostering sustainable growth and stability in the financial sector.

9. Despite the extensive analysis of the global FinTech revolution and its impact on traditional banking, there is a lack of in-depth investigation into the specific strategies and mechanisms through which banks integrate FinTech solutions into their operations, including the challenges and opportunities presented by such integration for banks and FinTech firms alike. Understanding these dynamics is crucial for optimizing collaboration and innovation in the financial sector.

10. While there is considerable literature exploring the impact of FinTech on the global banking sector, there is a notable scarcity of research specifically investigating the adoption, challenges, and opportunities of FinTech within the banking industry in Arab countries. Understanding these dynamics is crucial for guiding tailored strategies and policies to foster innovation and sustainability in Arab banking sectors amidst the FinTech revolution.

Research Objectives:

To examine the historical evolution of Fintech in the Indian banking sector and its current presence, addressing the lack of comprehensive understanding regarding the specific context of Fintech development in India.

To analyze the market size and growth trends of Fintech services in India, addressing the gap in empirical research on the Fintech landscape within the Indian financial industry.

To explore how Fintech services are reshaping consumer behaviors and habits in the Indian finance sector, addressing the gap in understanding the transformative effects of Fintech on consumer preferences and banking practices.

To assess the implications of Fintech on the profitability of public and private sector banks in India, considering factors such as competition, innovation, and regulatory challenges, and bridging the gap in empirical research on the direct impact of Fintech on banking profitability in the Indian context.

Methodology:

Type of Research:

Research can be of many types. The important types of research are:

Basic Research Vs applied research:

Basic Research refers to research where the main objective is to enhance the knowledge in that discipline, it is basically done to improve the understanding of a topic. As per this description this study is basic research in nature.

Qualitative Vs Quantitative research:

In qualitative research we can try to understand how people behave, what are their motivations etc. using non-quantitative data making this study qualitative in nature.

Primary Vs Secondary:

Where the Primary data is studied is considered Primary research and where secondary data is used is considered secondary research. In this research paper primary data is being calculated.

Type of Research Design:

Research designs can be classified under three major types:

Exploratory Research: Exploratory research is the research in which a better understanding regarding an issue is developed and finding new insights.

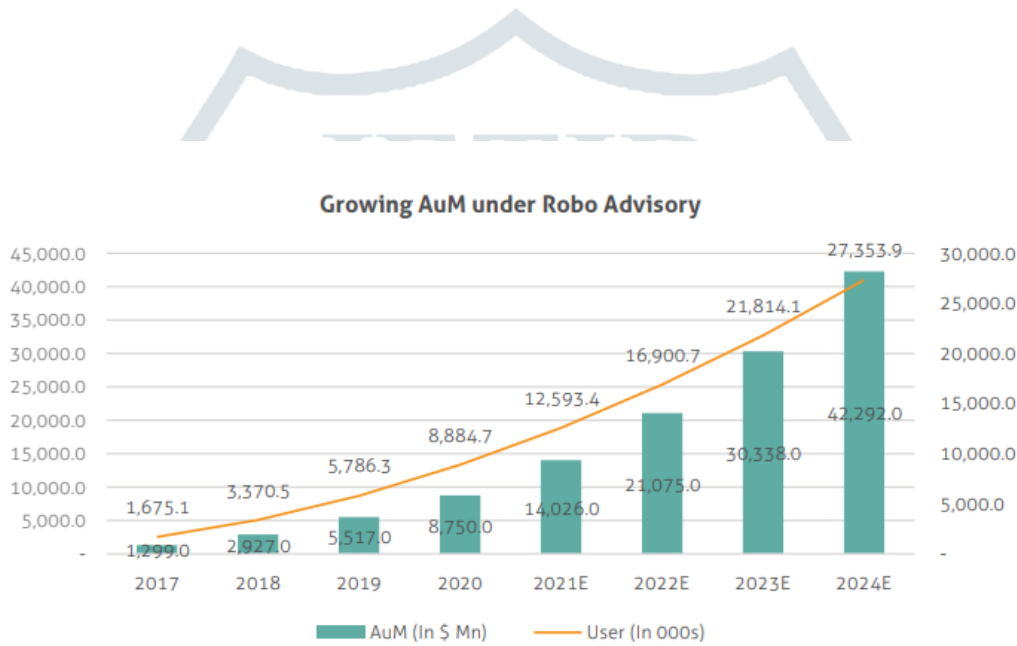
Descriptive Research: Description research usually aims at describing characteristics of the population or the situation or the problem.

Causal Research: Causal research as the name suggests tries to establish a cause-and-effect relationship between various variable involved in the research. The relationship can be dependency relationship of effect on the dependent variable by changing the independent variable or it can correlational relationship as well.

This research has elements of both Causal Research and Descriptive research from design point of view.

Data Analysis:

Wealth Tech:



- The number of automated transactions under robo-advisory in the United States is growing at a steady pace.
- From 2017 to 2023, the number of users increased from 1.3 million to 42.3 million.
- Over the same time period, the total amount of money managed by robo-advisors grew from \$1.6 billion to \$45 billion.

Insur Tech:

A comparative analysis of gross domestic premium earned.

Gross Direct Premium Earned for 6 Months Period Ended (In INR Bn)						
Insurer	30-Sep-18	31-Mar-19	30-Sep-19	31-Mar-20	30-Sep-20	2 Year CAGR
Digital						
Digit	2.74	6.21	12.04	9.95	13.00	
Growth	127%		21%	60%	8%	118%
Acko	0.23	1.19	2.08	1.66	1.49	
Growth	419%		26%	39%	-28%	155%

Traditional

ICICI Lombard	73.05	71.84	68.73	64.40	64.92	
Growth		-2%	7%	-10%	-6%	-6%
New India Assurance	117.62	121.48	131.55	135.44	141.00	
Growth		3%	-3%	11%	7%	9%
SBI General	20.64	26.42	36.76	31.14	36.20	
Growth		28%	18%	18%	-2%	32%

Growth of Digital Insurers:

- Digit's Gross Direct Premium Earned has grown significantly over the past two years, with a 2 year CAGR of 118%.
- Acko's Gross Direct Premium Earned has also grown significantly, with a 2 year CAGR of 155%.

Growth of Traditional Insurers:

- The growth of traditional insurers has been slower and more stable than the growth of digital insurers.
- ICICI Lombard's Gross Direct Premium Earned has had a negative 2 year CAGR of -6%.
- New India Assurance's Gross Direct Premium Earned has grown with a 2 year CAGR of 9%.
- SBI General's Gross Direct Premium Earned has grown with a 2 year CAGR of 32%.

Funding and Valuation Trends:

Companies	Segment	Month	Latest round (\$Mn)	Total Funding (\$Mn)
IndWealth	WealthTech	Jan-20	12.2	57.2
Digit Insurance	InsureTech	Jan-20	83.9	187.6
PineLabs	Payments	Jan-20	NA	NA
BharatPe	Payments	Feb-20	74.2	141.5
Coverfox	InsureTech	Mar-20	2.1	31.9
CapitalFloat	Lending	Apr-20	14.4	128.8
Navi Technologies	Lending	Apr-20	26.8	70.4
BankBazaar	WealthTech	Jun-20	6.0	117.5
Turtlemint	InsureTech	Jul-20	30.0	61.0
Groww	WealthTech	Sep-20	30.0	59.2
Acko	InsureTech	Sep-20	60.0	205.2
RazorPay	Payments	Oct-20	100.0	207.1
Mobikwik	Payments	Nov-20	7.1	179.7
PhonePe	Payments	Dec-20	700.0	1,277.2

Companies:

Payments: Razorpay, PhonePe, Mobikwik, PineLabs, BharatPe

WealthTech : Groww, BankBazaar, IndWealth

Lending: Capital Float, Navi Technologies

InsureTech: Digit Insurance, Coverfox, Turtlemint, Acko

Funding Rounds:

The table shows the month of the company's latest funding round in 2020. It doesn't show the total number of funding rounds each company had in 2020.

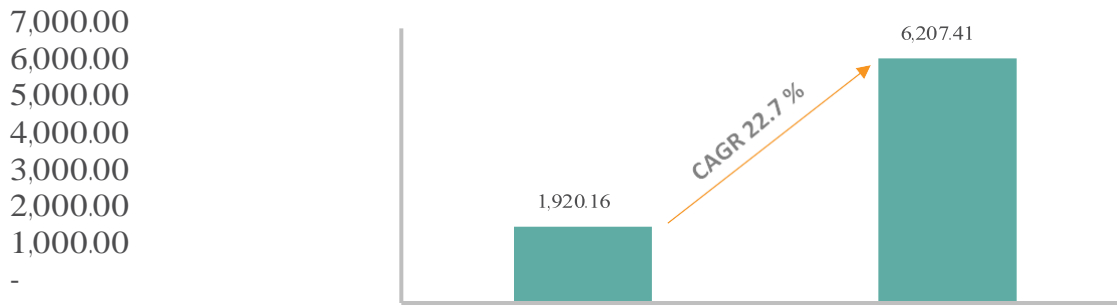
Total Funding:

The table shows the total funding amount each company had received in all their funding rounds by the date mentioned in the 'Latest round' column. For example, PhonePe had received a total of \$1,277.2 million by December 2020.

Unicorns	Entry	Latest available Valuation (\$Bn)
PayTM	2015	16
Billdesk	2018	1.5
PolicyBazaar	2018	1
PineLabs	2020	1.5
Zerodha	2020	3
Razorpay	2020	1

- **Growth in Valuation:** The data shows PayTM as the most valuable company at \$16 billion. You can analyze how the valuation of these companies has changed since their entry year to understand their growth trajectory.
- **Year-wise Growth:** By finding data on funding rounds for these companies, you can analyze if there are any specific years where they saw significant growth in valuation.
- **Sectoral Analysis:** You can categorize these companies based on their sector (payments, wealth management, etc.) and compare their valuations to see if specific sectors have higher valuations.

Fintech Market Size (INR Bn)



- The Fintech market size in India is in Billion Indian Rupees (INR Bn).
- The market size in 2019 was INR 1,920.16 Bn.
- The market size in 2025 is estimated to be INR 7,000.00 Bn.
- There is a Compound Annual Growth Rate (CAGR) of 22.7% between 2019 and 2025.

Usefulness of this chart:

You can use this data as a starting point to understand the growth of the Fintech market in India.

You can research the factors that are driving the growth of the Fintech market in India.

You can focus your capstone project on a specific segment of the Fintech market (e.g., payments, lending, wealth management) and analyze its growth trends.

You can compare the growth of the Fintech market in India to the growth of the Fintech market in other countries.

Conclusion:

1. Fintech innovations have significantly disrupted traditional financial services, offering novel solutions that revolutionize interactions with financial systems.
2. The multifaceted impact of Fintech on financial inclusion and economic development presents both opportunities and challenges that must be addressed for sustainable growth.
3. There is a gap in understanding how Fintech influences the profitability of public and private sector banks in India specifically, highlighting the need for further research in this area.
4. The integration of Fintech solutions into existing banking infrastructure requires deeper exploration to understand scalability, interoperability, and potential challenges for traditional banks.
5. Research on the nuanced effects of specific innovations like blockchain-assisted smart contracts on traditional banking operations and regulatory frameworks is essential for informed decision-making in the evolving Fintech landscape.
6. Understanding the interplay between genetic predispositions, socio-economic factors, and cognitive biases in shaping investment decisions is crucial for promoting financial literacy and optimizing investment outcomes for diverse populations.
7. Comprehensive studies investigating the long-term implications of Fintech disruption on regulatory frameworks, systemic risk, and consumer protection measures are needed to ensure sustainable growth and stability in the financial sector.
8. Exploring the specific strategies and mechanisms through which banks integrate Fintech solutions into their operations, along with the challenges and opportunities presented by such integration, is vital for optimizing collaboration and innovation in the financial sector.

In conclusion, this highlights the transformative potential of Fintech innovations in promoting financial inclusion and economic development, while also underscoring the importance of addressing regulatory, ethical, and socio-economic challenges to ensure equitable access and systemic stability in the evolving Fintech ecosystem.

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