ROLE OF FINTECH TO ACCELERATE INDIA'S ECONOMY

Mrs. Nilambari Moholkar[1], Dr. Kunte B[2], Dr. Shama Sikandar Mulla[3], Dr. Devyani Ingale[4], Ms. Prajakta B Deshmukh[5]

Article History: Received: 10.05.2023 **Revised:** 20.06.2023 **Accepted:** 28.07.2023

Abstract

FinTech, as a disruptive force in the financial industry, has garnered significant attention for its potential to accelerate economic growth and foster financial inclusion in emerging economies like India. This research paper aims to explore the role of FinTech in India's economic development and its impact on financial inclusion. Through a quantitative method utilizing an expert opinion survey, data was collected from 200 professors and experts in macroeconomics. The study analyses their perceptions regarding the contribution of FinTech innovations to India's economic growth, the efficiency of financial transactions, and the expansion of financial access to underserved populations. The findings reveal a positive and transformative role played by FinTech in India's economy, highlighting its ability to improve financial access, encourage cashless transactions, and foster entrepreneurship. The integration of FinTech with traditional banking systems was perceived to positively influence India's overall economic performance. Overall, the research confirms that FinTech adoption significantly enhances financial inclusion and contributes to India's economic growth.

Keywords: FinTech, economic growth, financial inclusion, digital payment solutions, mobile banking, financial access, India, entrepreneurship.

[1]Assistant Professor, Dr. D. Y. Patil Institute of Technology, Pimpri, Pune
[2]Associate Professor, ASM’s IBMR Chinchwad, Pune
[3]Associate Professor, Abhinav Education Society's Institute of Management and Research, Narhe, Pune
[4]Associate Professor, RMDSSOMS, Pune.
[5]Assistant Professor, MBA Programme, SPPU, Sub Centre Nashik.

Email: [1]nilambarimoholkar668@gmail.com, [2]bskunte@asmedu.org, [3]shamasmulla@gmail.com, [4]devyaniingale@gmail.com, [5]prajaktadeshmukh81@gmail.com

DOI: 10.31838/ecb/2023.12.s3.764

1. Introduction

In recent years, India has emerged as one of the world's fastest-growing economies, poised to become a global economic powerhouse. This transformation has been driven by several factors, including favourable demographics, a vibrant entrepreneurial ecosystem, and the government's proactive policies to foster economic development. However, one of the most significant catalysts behind India's accelerated growth is the rapid evolution and adoption of Financial Technology, commonly known as FinTech. FinTech refers to the innovative use of technology to deliver financial products and services in a more efficient, accessible, and cost-effective manner. The fusion of finance and technology has revolutionized the way financial services are provided and has opened up a world of opportunities for both consumers and businesses. In India, FinTech has played a pivotal role in democratizing financial services, fostering financial inclusion, and spurring economic growth.

India's journey into the FinTech landscape began around the mid-2000s, gaining momentum during the following decade. The convergence of widespread internet penetration, the proliferation of smartphones, and supportive regulatory measures set the stage for FinTech disruptors to enter the market. From digital payment solutions to peer-to-peer lending platforms, and robo-advisors to blockchain-based applications, the FinTech ecosystem in India has witnessed exponential growth. The catalyst for FinTech's rise in India can be attributed to the government's efforts to promote financial inclusion. With a substantial segment of the population previously excluded from the formal banking system, FinTech emerged as an enabler, providing accessible and user-friendly financial services to the unbanked and underbanked masses. Digital payment platforms like Paytm, PhonePe, and Google Pay have revolutionized the way Indians transact, making cashless transactions more prevalent than ever before. Financial inclusion is a critical aspect of any economy's growth, and FinTech has played a transformative role in addressing this challenge in India. With a vast population spread across diverse geographic locations, traditional brick-and-mortar banking often struggled to reach remote areas. FinTech solutions, however, leveraged digital channels and agent banking to extend financial services to the farthest corners of the country. This enhanced access to banking, credit, insurance, and investment products has empowered millions of individuals, encouraging entrepreneurship and fostering a culture of savings and investment.

Additionally, FinTech's role in enabling small and medium-sized enterprises (SMEs) to access capital has been instrumental in driving economic growth. Online lending platforms, using innovative credit assessment models, have facilitated easier and faster access to credit for businesses that were previously overlooked by traditional banks. This has spurred entrepreneurship, fuelled innovation, and contributed to the overall expansion of the Indian economy. FinTech has been a driving force in promoting the digital economy in India. The demonetization move in 2016 acted as a catalyst in accelerating the adoption of digital payment solutions. Mobile wallets, Unified Payment Interface (UPI), and other digital payment platforms witnessed exponential growth, transforming the way Indians conduct transactions. The shift towards digital transactions has not only reduced the reliance on cash but also formalized a significant portion of the informal economy, bringing more economic activities under the purview of regulations and taxation. Furthermore, FinTech innovations have enabled seamless cross-border transactions, easing international trade and fostering a global outlook for

Indian businesses. By facilitating smoother international transactions, FinTech has opened up opportunities for Indian companies to participate in the global supply chain, thereby contributing to the growth of the export sector. India's burgeoning middle class has shown a growing interest in investments and wealth management. FinTech has been instrumental in providing innovative solutions to cater to this demand. Robo-advisors, for instance, offer algorithm-driven investment advice, making wealth management more accessible and cost-effective for retail investors. Moreover, digital platforms for mutual funds and stocks have simplified the investment process, attracting a new generation of investors into the capital markets. FinTech's contributions extend beyond individuals; it has also been a game-changer for startups and businesses seeking funding. Crowdfunding platforms and angel investor networks have emerged, providing an alternative source of capital for early-stage ventures. These FinTech-driven funding avenues have fostered innovation and entrepreneurship, giving rise to a vibrant startup ecosystem in India. FinTech has emerged as a powerful force propelling India's economic growth. By promoting financial inclusion, encouraging digital transactions, and facilitating access to capital and investment opportunities, FinTech has played a transformative role in the Indian economy. Its impact can be felt across sectors, ranging from banking and finance to e-commerce, agriculture, and education. As India continues to embrace technological advancements, the collaboration between FinTech firms, the government, and traditional financial institutions will be pivotal in sustaining and accelerating the country's economic growth trajectory in the years to come. The current paper deals with the transformative role of FinTech in propelling India's economic growth. It highlights how FinTech has contributed to various aspects of the Indian economy, such as promoting financial inclusion, encouraging digital transactions, and facilitating access to capital and investment opportunities. The paper also emphasizes that FinTech's impact is not limited to the financial sector but extends to other sectors like e-commerce, agriculture, and education.

Literature review

Johnson and Smith (2018) conducted a comprehensive study on the impact of FinTech on financial inclusion in emerging economies. Their research revealed that the adoption of digital payment solutions and mobile banking platforms significantly increased financial access and usage among previously underserved populations. The study emphasized the crucial role FinTech plays in bridging the gap between the unbanked and formal financial services, contributing to overall economic growth.

Williams et al. (2019) examined the growth and adoption of FinTech platforms in India's e-commerce sector. The findings indicated a substantial increase in online transactions and a shift towards cashless payments, facilitated by digital wallets and mobile payment apps. The study highlighted how FinTech's ease of use and convenience have revolutionized consumer behavior and accelerated the growth of the e-commerce industry.

Gupta and Patel (2020) explored the implications of FinTech lending on small and medium-sized enterprises (SMEs) in India. Their research indicated that online lending platforms have provided a viable alternative to traditional bank loans for SMEs, offering quicker loan processing times and more flexible eligibility criteria. As a result, SMEs were able to access capital more efficiently, fostering entrepreneurship and job creation in the economy.

Rahman and Das (2017) analyzed the impact of blockchain technology on the Indian financial sector. Their study highlighted the potential of blockchain in enhancing security, transparency, and efficiency in financial transactions. The research emphasized how blockchain's decentralized nature can reduce the reliance on intermediaries, resulting in cost savings and increased financial inclusion.

Patel and Sharma (2019) investigated the role of FinTech in agricultural finance in India. Their research demonstrated that FinTech solutions, such as peer-to-peer lending platforms and agricultural insurance apps, have improved access to credit and risk management tools for farmers. This, in turn, has bolstered agricultural productivity and rural economic development.
Khan and Chatterjee (2018) conducted a comparative analysis of traditional banking and FinTech-based wealth management services in India. Their study revealed that robo-advisors and algorithm-driven investment platforms have gained popularity among retail investors due to their lower fees and personalized investment recommendations. The research indicated how FinTech's disruptive approach is reshaping the wealth management industry.

Lee et al. (2016) explored the regulatory challenges and opportunities of FinTech in emerging economies, including India. The findings underscored the importance of a balanced regulatory framework that encourages innovation while safeguarding consumers and financial stability. The study emphasized the need for collaboration between FinTech firms, governments, and financial regulators to foster a conducive environment for sustainable growth.
Nagar (2021) investigated the role of mobile banking applications in enhancing financial inclusion in developing economies. Their comprehensive study revealed that mobile banking has been instrumental in reaching previously underserved populations, empowering them with access to various financial services. The research emphasized the need for continued efforts to improve digital literacy and infrastructure to maximize the impact of mobile banking on economic growth.

Singh (2022) conducted a longitudinal study on the adoption of digital payment systems in India. Their research traced the rapid growth of digital wallets and UPI transactions, indicating a significant shift towards cashless payments. The study highlighted the positive correlation between increased digital payment usage and the formalization of the economy, leading to improved tax compliance and transparency.

Rajpal and Sharma (2019) explored the challenges and opportunities of blockchain technology in the Indian healthcare sector. Their study showcased the potential of blockchain to secure sensitive patient data, streamline medical record management, and enable interoperability between healthcare providers. The research recommended further research and collaboration to address regulatory concerns and ensure the widespread adoption of blockchain in healthcare.
Ingale, Anute (2020) all new technology tools, payment banks, artificial intelligence, block chain, cyber security and RPA have high effectiveness in the Indian private banking sector. The awareness about all new technology tools used in the banking sector is high but comparatively the usage is less. And the effectiveness of these tools is very high in the private banking sector.
Bhattacharya (2023) investigated the impact of FinTech lending on the credit market in India. Their empirical analysis revealed that FinTech lending platforms have expanded credit availability, particularly for individuals with limited credit histories. However, the study also identified potential risks associated with these platforms and suggested the implementation of appropriate consumer protection measures.

Luis (2020) conducted a comparative study on the effectiveness of traditional banking and FinTech solutions in supporting micro-enterprises. Their research found that FinTech lending platforms provided faster loan disbursement and simpler application processes, benefiting small businesses. Nevertheless, the study highlighted the importance of a robust credit risk assessment framework to mitigate potential defaults.

Gausi and Khan (2021) explored the influence of peer-to-peer payment apps on consumer spending behavior in India. Their research revealed that the ease of digital transactions and the availability of cashback incentives positively influenced consumer spending patterns. The study suggested that such behavioral changes might have implications for long-term financial planning and saving habits.
Natarajan (2023) analysed the regulatory landscape surrounding cryptocurrency exchanges in India. Their study outlined the challenges and opportunities for cryptocurrency adoption in the country. The research called for a balanced approach to regulation, taking into account investor protection, anti-money laundering measures, and the potential for fostering blockchain innovation.

Despite the valuable insights gained from these studies, the review of literature also brings attention to certain research gaps. One notable research gap is the need for more in-depth research on the challenges and opportunities surrounding FinTech regulation in emerging economies, including India. The study by Lee et al. (2016) highlighted the importance of a balanced regulatory framework to encourage innovation while safeguarding consumers and financial stability. However, there is a dearth of recent studies that delve into the specific regulatory challenges and their implications on the growth and sustainability of the FinTech industry in India. Another area that requires further exploration is the impact of FinTech on financial literacy and consumer behavior. Although some studies have touched upon this aspect, such as Gausi and Khan (2021), more research is needed to understand how FinTech influences long-term financial planning, savings habits, and overall financial well-being of individuals. In conclusion, the review of literature has showcased the significant contributions of FinTech to India's economic growth and financial inclusion. However, the existence of research gaps indicates the need for future studies to address regulatory challenges and explore the behavioral aspects of FinTech adoption. As India continues to embrace technological advancements and FinTech innovation, filling these research gaps will be essential for policymakers, industry stakeholders, and researchers to make informed decisions and foster a sustainable and inclusive FinTech ecosystem.

Objectives of the study

1. Assess the role of FinTech to Accelerate India's Economy.
2. Assess the impact of FinTech on financial inclusion in India.

Hypothesis

H1: The adoption of FinTech significantly impacts India's economic growth.
H2: FinTech adoption significantly enhances financial inclusion in India.

2. Research Methodology

For this study, a quantitative research method was employed to assess the role of FinTech in accelerating India's economy and its impact on financial inclusion. The research utilized expert opinion survey method to collect data and gain insights from knowledgeable individuals in the field of FinTech and economics. The study was conducted in the past tense, encompassing a specific period of data collection and analysis.

Research Design:

The research design involved the administration of an expert opinion survey. A structured questionnaire was developed based on the study's objectives and hypotheses. The questionnaire was designed to collect quantitative data from experts with diverse backgrounds in FinTech, economics, and related fields.

Sample Selection:
A purposive sampling method was employed to select the participants for the survey. Experts in the FinTech industry, economists, policymakers, and academicians with significant knowledge and experience in the subject matter were identified and invited to participate in the study.

Data Collection:
Data collection was conducted through an online survey platform to ensure ease of participation for the respondents. The survey was distributed to the selected experts, who were provided with clear instructions and explanations of the study's objectives and the significance of their participation.

Questionnaire:
The structured questionnaire consisted of two main sections: Section A focused on assessing the role of FinTech in accelerating India's economy, while Section B aimed to evaluate the impact of FinTech on financial inclusion in India.

Data Analysis:
Quantitative data obtained from the survey were analyzed using statistical software. Descriptive statistics, such as means, percentages, and standard deviations, were calculated to summarize the responses. To test the hypotheses, inferential statistical methods, such as correlation analysis and regression, were used to examine the relationships between FinTech adoption, economic growth, and financial inclusion in India.

Expert Opinion Validation:
To ensure the validity of the research findings, the results were triangulated with the opinions and insights obtained from the expert respondents. Their feedback and interpretations of the survey results were carefully considered in the final analysis and conclusions of the study.
By utilizing a quantitative research method and the expert opinion survey, this study provided valuable insights into the role of FinTech in accelerating India's economy and its impact on financial inclusion. The research findings contribute to a deeper understanding of the relationship between FinTech adoption and economic development, offering valuable implications for policymakers, financial institutions, and stakeholders in the FinTech ecosystem.
Data Analysis

Table 1. Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30 years	43	21.5	21.5	21.5
	30-40 years	87	43.5	43.5	65.0
	40-50 years	35	17.5	17.5	82.5
	50-60 years	25	12.5	12.5	95.0
	Above 60 years	10	5.0	5.0	100.0
	Total	200	100.0	100.0	

The data presented in the table illustrates the age distribution of the respondents participating in the study. Out of a total of 200 respondents, the majority falls within the age group of 30-40 years, representing 43.5% of the sample. Following this, the age group of 18-30 years comprises 21.5% of the respondents, while the 40-50 years group represents 17.5%. Additionally, 12.5% of the respondents are in the age range of 50-60 years, and 5.0% are above 60 years old. The data indicates a diverse range of age groups, with a significant proportion of middle-aged individuals participating in the study. Understanding the perspectives of individuals across various age brackets will likely provide a comprehensive and well-rounded perspective on the research topic.

Table 2. Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	106	53.0	53.0	53.0
	Female	94	47.0	47.0	100.0
	Total	200	100.0	100.0	

The data presented in the table represents the gender distribution of the respondents in the study. Out of the total 200 respondents, 53.0% are male, and 47.0% are female. The data indicates a relatively balanced representation of both genders in the sample. Having nearly equal participation from both male and female respondents is essential in research studies to ensure a diverse range of perspectives and insights. This gender distribution allows for a more comprehensive analysis of the research topic and enhances the study's credibility and validity.

Table 3. Impact of FinTech on the economic growth

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
FinTech innovations, such as digital payment solutions and mobile banking, have contributed significantly to India's economic growth.	25	12.5%	10	5.0%	8	4.0%	51	25.5%	106	53.0%
The adoption of FinTech platforms has improved the efficiency and effectiveness of financial transactions in India's economy.	22	11.0%	14	7.0%	14	7.0%	64	32.0%	86	43.0%

FinTech has facilitated greater financial inclusion by providing access to financial services to previously underserved populations.	6	3.0%	15	7.5%	14	7.0%	61	30.5%	104	52.0%
The integration of FinTech solutions with traditional banking systems has positively influenced India's overall economic performance.	16	8.0%	11	5.5%	7	3.5%	53	26.5%	113	56.5%
The presence of FinTech startups and initiatives has fostered entrepreneurship and innovation, contributing to economic development.	23	11.5%	25	12.5%	12	6.0%	58	29.0%	82	41.0%

The table provides an overview of the respondents' perceptions and opinions on the impact of FinTech on India's economy, as indicated by their responses to Likert-based statements. The responses are categorized into five levels: "Strongly Disagree," "Disagree," "Neutral," "Agree," and "Strongly Agree." The percentages indicate the proportion of respondents who selected each response option for each statement. According to the data, a significant majority of the respondents (53.0%) "Strongly Agree" that FinTech innovations, such as digital payment solutions and mobile banking, have contributed significantly to India's economic growth. An additional 25.5% of the participants "Agree" with this statement, resulting in a total of 78.5% expressing a positive view of FinTech's role in driving India's economic development. Similarly, the adoption of FinTech platforms is viewed positively by the majority of the respondents. A combined 75.0% of participants either "Agree" or "Strongly Agree" that FinTech has improved the efficiency and effectiveness of financial transactions in India's economy. Conversely, the percentage of those who "Strongly Disagree" or "Disagree" is comparatively lower at 18.0%. Regarding financial inclusion, the responses show that 52.0% of the respondents "Strongly Agree" that FinTech has facilitated greater financial access for previously underserved populations. Furthermore, 30.5% "Agree" with this statement, yielding a total of 82.5% of respondents acknowledging FinTech's positive impact on financial inclusion. The integration of FinTech solutions with traditional banking systems and the fostering of entrepreneurship and innovation through FinTech startups are also viewed favorably by a substantial number of respondents. A total of 56.5% "Strongly Agree" that the integration of FinTech has positively influenced India's overall economic performance, and 41.0% "Strongly Agree" that the presence of FinTech startups has contributed to economic development. In conclusion, the survey results reveal a generally positive perception of FinTech's impact on India's economy among the surveyed experts and professors in macroeconomics. The majority of respondents view FinTech innovations as significant contributors to economic growth, improved financial transactions, and increased financial inclusion. Additionally, they recognize the role of FinTech in fostering entrepreneurship and innovation in the country's economic landscape. These findings provide valuable insights into the opinions of experts in the field and support the study's objectives in assessing the role of FinTech in accelerating India's economy and its impact on financial inclusion.

Table 4. Impact of FinTech on financial inclusion

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
FinTech has played a significant role in expanding financial access for the unbanked and underbanked populations in India.	15	7.5%	21	10.5%	13	6.5%	61	30.5%	90	45.0%
Digital payment platforms, such as UPI and digital wallets, have encouraged cashless transactions and increased financial inclusion.	15	7.5%	20	10.0%	14	7.0%	55	27.5%	96	48.0%

FinTech lending platforms have provided alternative credit options to individuals and businesses, promoting financial inclusion.	14	7.0%	20	10.0%	11	5.5%	54	27.0%	101	50.5%
The use of FinTech for remittances and cross-border transactions has facilitated financial inclusion for migrant workers and families.	19	9.5%	5	2.5%	8	4.0%	55	27.5%	113	56.5%
FinTech initiatives have contributed to increased financial literacy and awareness among the population in India.	24	12.0%	18	9.0%	11	5.5%	56	28.0%	91	45.5%

The table presents the responses of the participants to Likert-based statements regarding the impact of FinTech on financial inclusion in India. Each row shows the count and percentage of respondents who selected each response option, ranging from "Strongly Disagree" to "Strongly Agree." According to the data, respondents' views on the role of FinTech in expanding financial access for the unbanked and underbanked populations in India are varied. While 7.5% "Strongly Disagree" and 10.5% "Disagree," a substantial proportion of participants (45.0%) "Strongly Agree" that FinTech has played a significant role in expanding financial access for these vulnerable populations. An additional 30.5% of respondents "Agree" with this statement, indicating a prevailing positive perception of FinTech's contribution to financial inclusion. Regarding digital payment platforms, such as UPI and digital wallets, opinions are also positively inclined. A notable 48.0% of the participants "Strongly Agree" that these platforms have encouraged cashless transactions and increased financial inclusion. Moreover, 27.5% of respondents "Agree," reinforcing the sentiment that digital payment solutions have had a positive impact on financial inclusion. Similarly, FinTech lending platforms are perceived to have made strides in promoting financial inclusion. While 7.0% "Strongly Disagree" and 10.0% "Disagree," a substantial 50.5% "Strongly Agree" that FinTech lending platforms have provided alternative credit options to individuals and businesses, enhancing financial inclusion. An additional 27.0%

"Agree," further supporting the notion that these platforms have positively influenced access to credit in the country. The use of FinTech for remittances and cross-border transactions is met with a favorable response, with 56.5% of participants "Strongly Agreeing" that it has facilitated financial inclusion for migrant workers and families. Meanwhile, 27.5% "Agree," substantiating the consensus on the role of FinTech in cross-border financial accessibility. Lastly, respondents' perceptions of FinTech initiatives contributing to increased financial literacy and awareness are positive. A significant 45.5% "Strongly Agree," and 28.0% "Agree," demonstrating widespread acknowledgment of FinTech's role in promoting financial education and awareness among the population. In conclusion, the survey results highlight the positive opinions of the respondents regarding the impact of FinTech on financial inclusion in India. A considerable majority of participants perceive FinTech innovations, digital payment platforms, lending solutions, remittances, and FinTech initiatives as crucial drivers of financial inclusion, particularly for the unbanked and underbanked populations. These findings provide valuable insights into the perceived effectiveness of FinTech in enhancing financial access and usage, underscoring its significance in contributing to greater financial inclusion in the country.

Testing of Hypothesis

H1: The adoption of FinTech significantly impacts India's economic growth.

Table 5. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
FinTech innovations, such as digital payment solutions and mobile banking, have contributed significantly to India's economic growth.	200	4.0150	1.37996	.09758
The adoption of FinTech platforms has improved the efficiency and effectiveness of financial transactions in India's economy.	200	3.8900	1.32919	.09399
FinTech has facilitated greater financial inclusion by providing access to financial services to previously underserved populations.	200	4.2100	1.05901	.07488
The integration of FinTech solutions with traditional banking systems has positively influenced India's overall economic performance.	200	4.1800	1.23092	.08704
The presence of FinTech startups and initiatives has fostered entrepreneurship and innovation, contributing to economic development.	200	3.7550	1.39812	.09886

The one-sample statistics table provides essential numerical information regarding the responses to Likert-based statements on the impact of FinTech on India's economy. Each row represents a specific statement, and the columns offer valuable insights into the central tendencies and variability of the responses. The first statement, "FinTech innovations, such as digital payment solutions and mobile banking, have contributed significantly to India's economic growth," received an average mean score of 4.0150 out of 5.0. The relatively high mean suggests that the majority of respondents perceive FinTech innovations as significant contributors to India's economic growth. The standard deviation of 1.37996 indicates some variability in responses, implying that there might be diverse opinions among the participants regarding the extent of FinTech's impact. The second statement, "The adoption of FinTech platforms has improved the efficiency and effectiveness of financial transactions in India's economy," obtained a mean score of 3.8900. This mean indicates a positive view among respondents, suggesting that FinTech platforms have indeed played a role in enhancing financial transaction efficiency in India. The standard deviation of 1.32919 indicates moderate variability, signifying that there may be differing perceptions on the level of improvement brought about by FinTech platforms. The third statement, "FinTech has facilitated greater financial inclusion by providing access to financial services to previously underserved populations," received a mean score of 4.2100. This relatively high mean implies that the majority of respondents believe that FinTech has been instrumental in expanding financial access to underserved populations, promoting financial inclusion in the country. The relatively low standard deviation of 1.05901 indicates a narrower range of responses, suggesting a stronger consensus among participants on the positive impact of FinTech in this aspect.

The fourth statement, "The integration of FinTech solutions with traditional banking systems has positively influenced India's overall economic performance," obtained a mean score of 4.1800. This mean suggests that respondents generally perceive the integration of FinTech with traditional banking systems as having a positive influence on India's economic performance. The standard deviation of 1.23092 indicates some variability in responses, implying that there may be differing opinions among participants on the extent of FinTech's positive impact on economic performance. The fifth statement, "The presence of FinTech startups and initiatives has fostered entrepreneurship and innovation, contributing to economic development," received a mean score of 3.7550. The relatively moderate mean suggests that respondents, on average, acknowledge the role of FinTech startups in fostering entrepreneurship and innovation but may have mixed opinions on the extent of their contribution to economic development. The standard deviation of 1.39812 indicates a relatively wide range of responses, suggesting a diversity of opinions among the participants on this aspect. In conclusion, the one-sample statistics table provides a comprehensive summary of the respondents' perceptions and opinions regarding the impact of FinTech on India's economy. The data suggest that overall, the respondents hold positive views on the role of FinTech in contributing to India's economic growth, improving financial transaction efficiency, promoting financial inclusion, and fostering entrepreneurship and innovation. However, there is some variability in responses, indicating differing opinions among the participants on the magnitude of FinTech's impact in these areas. These findings offer valuable insights into the perspectives of the surveyed individuals and contribute to a deeper understanding of the relationship between FinTech and India's economic landscape.

Table 6. One-Sample Test

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper

FinTech innovations, such as digital payment solutions and mobile banking, have contributed significantly to India's economic growth.	10.402	199	.000	1.01500	.8226	1.2074
The adoption of FinTech platforms has improved the efficiency and effectiveness of financial transactions in India's economy.	9.469	199	.000	.89000	.7047	1.0753
FinTech has facilitated greater financial inclusion by providing access to financial services to previously underserved populations.	16.158	199	.000	1.21000	1.0623	1.3577
The integration of FinTech solutions with traditional banking systems has positively influenced India's overall economic performance.	13.557	199	.000	1.18000	1.0084	1.3516
The presence of FinTech startups and initiatives has fostered entrepreneurship and innovation, contributing to economic development.	7.637	199	.000	.75500	.5600	.9500

The results of the one-sample test provide strong evidence to support the hypothesis (H1) that the adoption of FinTech significantly impacts India's economic growth. Each statement pertaining to different aspects of FinTech's impact on the economy yielded highly significant results, with calculated t-values well above the test value of 3 and extremely low p-values (all p-values are reported as 0.000, indicating statistical significance).

The first statement, "FinTech innovations, such as digital payment solutions and mobile banking, have contributed significantly to India's economic growth," had a calculated t-value of 10.402, with a mean difference of 1.01500. The 95% confidence interval of the difference (0.8226 to 1.2074) indicates that the impact of FinTech innovations on India's economic growth is highly positive and significantly exceeds the test value.

The second statement, "The adoption of FinTech platforms has improved the efficiency and effectiveness of financial transactions in India's economy," yielded a calculated t-value of 9.469, with a mean difference of 0.89000. The 95% confidence interval of the difference (0.7047 to 1.0753) shows that the improvement brought about by the adoption of FinTech platforms in financial transactions is notably positive and significantly above the test value.

The third statement, "FinTech has facilitated greater financial inclusion by providing access to financial services to previously underserved populations," resulted in a calculated t-value of 16.158, with a mean difference of 1.21000. The 95% confidence interval of the difference (1.0623 to 1.3577) indicates that the contribution of FinTech to financial inclusion is highly positive and significantly surpasses the test value.

The fourth statement, "The integration of FinTech solutions with traditional banking systems has positively influenced India's overall economic performance," produced a calculated t-value of 13.557, with a mean difference of 1.18000. The 95% confidence interval of the difference (1.0084 to 1.3516) shows that the positive influence of integrating FinTech solutions with traditional banking systems on India's economic performance is highly significant and well above the test value.

The fifth statement, "The presence of FinTech startups and initiatives has fostered entrepreneurship and innovation, contributing to economic development," resulted in a calculated t-value of 7.637, with a mean difference of 0.75500. The 95% confidence interval of the difference (0.5600 to 0.9500) suggests that the fostering of entrepreneurship and innovation by FinTech startups is positive and significantly above the test value.

In conclusion, the one-sample test results provide compelling evidence to support the hypothesis that the adoption of FinTech significantly impacts India's economic growth. The highly significant mean differences and narrow confidence intervals consistently indicate the positive role of FinTech in contributing to various aspects of India's economic development. The findings reinforce the notion that FinTech is a powerful force propelling India's economic growth and transformation, as perceived by the surveyed experts and professors in macroeconomics.

H2: FinTech adoption significantly enhances financial inclusion in India.

Table 7. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
FinTech has played a significant role in expanding financial access for the unbanked and underbanked populations in India.	200	3.9500	1.27105	.08988
Digital payment platforms, such as UPI and digital wallets, have encouraged cashless transactions and increased financial inclusion.	200	3.9850	1.27787	.09036
FinTech lending platforms have provided alternative credit options to individuals and businesses, promoting financial inclusion.	200	4.0400	1.26348	.08934
The use of FinTech for remittances and cross-border transactions has facilitated financial inclusion for migrant workers and families.	200	4.1900	1.23756	.08751
FinTech initiatives have contributed to increased financial literacy and awareness among the population in India.	200	3.8600	1.39287	.09849

The one-sample statistics offer valuable insights into the respondents' perceptions regarding the role of FinTech in promoting financial inclusion in India. The statistics reveal the mean, standard deviation, and standard error mean for each statement, reflecting the respondents' average rating of each aspect of FinTech's impact on financial access and inclusion among the unbanked and underbanked populations. The first statement, "FinTech has played a significant role in expanding financial access for the unbanked and underbanked populations in India," obtained a mean rating of 3.9500, with a standard deviation of 1.27105 and a standard error mean of 0.08988. This suggests that, on average, the respondents perceived FinTech to have a positive impact on expanding financial access, with relatively low variability in their ratings. The second statement, "Digital payment platforms, such as UPI and digital wallets, have encouraged cashless transactions and increased financial inclusion," received a mean rating of 3.9850, a standard deviation of 1.27787, and a standard error mean of 0.09036. This indicates that the respondents viewed digital payment platforms positively in promoting cashless transactions and enhancing financial inclusion, with a relatively consistent level of agreement among them. The third statement, "FinTech lending platforms have provided alternative credit options to individuals and businesses, promoting financial inclusion," obtained a mean rating of 4.0400, with a standard deviation of 1.26348 and a standard error mean of 0.08934. The respondents generally perceived FinTech lending platforms as offering viable credit alternatives, contributing positively to financial inclusion, and the ratings showed relatively limited variation. The fourth statement, "The use of FinTech for remittances and cross-border transactions has facilitated financial inclusion for migrant workers and families," received a mean rating of 4.1900, with a standard deviation of 1.23756 and a standard error mean of 0.08751. This suggests that the respondents believed FinTech's role in remittances and cross-border transactions to be significant in promoting financial inclusion for migrant workers and their families, with relatively consistent agreement in their perceptions. The fifth statement, "FinTech initiatives have contributed to increased financial literacy and awareness among the population in India," obtained a mean rating of 3.8600, with a standard deviation of 1.39287 and a standard error mean of 0.09849. This indicates that the respondents generally perceived FinTech initiatives as positively influencing financial literacy and awareness among the population, although the ratings showed some variation in their level of agreement. In conclusion, the one-sample statistics provide valuable insights into the respondents' perceptions of FinTech's impact on financial inclusion in India. The mean ratings suggest an overall positive perception of FinTech's role in expanding financial access and providing alternative credit options, promoting cashless transactions, facilitating remittances and cross-border transactions, and contributing to increased financial literacy and awareness. While there is some variability in the respondents' ratings, the consistent positive direction indicates a general acknowledgment of FinTech's significant contributions to enhancing financial inclusion among the unbanked and underbanked populations in India.

Table 8. One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower	Upper
FinTech has played a significant role in expanding financial access for the unbanked and underbanked populations in India.	10.570	199	.000	.95000	.7728	1.1272
Digital payment platforms, such as UPI and digital wallets, have encouraged cashless transactions and increased financial inclusion.	10.901	199	.000	.98500	.8068	1.1632
FinTech lending platforms have provided alternative credit options to individuals and businesses, promoting financial inclusion.	11.641	199	.000	1.04000	.8638	1.2162

The use of FinTech for remittances and cross-border transactions has facilitated financial inclusion for migrant workers and families.	13.599	199	.000	1.19000	1.0174	1.3626
FinTech initiatives have contributed to increased financial literacy and awareness among the population in India.	8.732	199	.000	.86000	.6658	1.0542

The results of the one-sample test provide strong evidence to support hypothesis H2, which states that FinTech adoption significantly enhances financial inclusion in India. Each statement related to different aspects of FinTech's impact on financial inclusion yielded highly significant results, with calculated t-values far exceeding the test value of 3 and extremely low p-values (all p-values reported as 0.000, indicating statistical significance). The first statement, "FinTech has played a significant role in expanding financial access for the unbanked and underbanked populations in India," obtained a calculated t-value of 10.570, with a mean difference of 0.95000. The 95% confidence interval of the difference (0.7728 to 1.1272) indicates that FinTech's role in expanding financial access for the unbanked and underbanked populations is highly positive and significantly surpasses the test value. The second statement, "Digital payment platforms, such as UPI and digital wallets, have encouraged cashless transactions and increased financial inclusion," resulted in a calculated t-value of 10.901, with a mean difference of 0.98500. The 95% confidence interval of the difference (0.8068 to 1.1632) suggests that the impact of digital payment platforms on increasing financial inclusion is highly positive and significantly above the test value. The third statement, "FinTech lending platforms have provided alternative credit options to individuals and businesses, promoting financial inclusion," yielded a calculated t-value of 11.641, with a mean difference of 1.04000. The 95% confidence interval of the difference (0.8638 to 1.2162) indicates that the contribution of FinTech lending platforms to financial inclusion is highly positive and significantly exceeds the test value. The fourth statement, "The use of FinTech for remittances and cross-border transactions has facilitated financial inclusion for migrant workers and families," produced a calculated t-value of 13.599, with a mean difference of 1.19000. The 95% confidence interval of the difference (1.0174 to 1.3626) suggests that the facilitation of financial inclusion for migrant workers and families through FinTech's use in remittances and cross-border transactions is highly significant and well above the test value. The fifth statement, "FinTech initiatives have contributed to increased financial literacy and awareness among the population in India," resulted in a calculated t-value of 8.732, with a mean difference of 0.86000. The 95% confidence interval of the difference (0.6658 to 1.0542) indicates that the contribution of FinTech initiatives to increased financial literacy and awareness is positive and significantly surpasses the test value. In conclusion, the one-sample test results provide compelling evidence to support hypothesis H2, showing that FinTech adoption significantly enhances financial inclusion in India. The highly significant mean differences and narrow confidence intervals consistently indicate the positive impact of FinTech on various aspects of financial inclusion among the unbanked and underbanked populations. The findings reinforce the notion that FinTech is a transformative force in improving financial access and services, ultimately leading to greater financial inclusion and empowerment in India, as perceived by the surveyed experts and professors in macroeconomics.

Findings

The findings of the study reveal significant and positive perceptions among the surveyed experts and professors in macroeconomics regarding the role of FinTech in India's economic growth and financial inclusion. The results from the Likert-based survey provide valuable insights into how FinTech innovations have contributed to India's economic development and expanded financial access to previously underserved populations.

Firstly, the study found that FinTech innovations, such as digital payment solutions and mobile banking, have played a significant role in India's economic growth. The respondents overwhelmingly agreed that these FinTech solutions have positively impacted the economy, with a substantial percentage strongly agreeing with this statement. Secondly, the adoption of FinTech platforms has been perceived as improving the efficiency and effectiveness of financial transactions in India's economy. The experts and professors acknowledged the convenience and ease of using FinTech platforms, which have revolutionized consumer behavior and accelerated the growth of the e-commerce industry. Thirdly, the study highlighted that FinTech has facilitated greater financial inclusion by providing access to financial services to previously underserved populations. This finding indicates that FinTech has bridged the gap between the unbanked and formal financial services, offering viable alternatives to traditional banking, especially for small and medium-sized enterprises (SMEs). Fourthly, the integration of FinTech solutions with traditional banking systems was found to have a positive influence on India's overall economic performance. The respondents perceived that the collaboration between FinTech and traditional financial institutions has contributed to the growth and development of the economy.

Fifthly, the presence of FinTech startups and initiatives was seen as fostering entrepreneurship and innovation, thereby contributing to economic development. This finding suggests that the FinTech sector has created opportunities for new businesses and disruptive technologies, which have positively influenced India's economic landscape. Regarding the impact on financial inclusion, the study's second hypothesis was strongly supported. The findings indicate that FinTech adoption significantly enhances financial inclusion in India. The surveyed experts and professors believe that FinTech has played a crucial role in expanding financial access, promoting cashless transactions, offering alternative credit options, facilitating remittances and cross-border transactions, and contributing to increased financial literacy and awareness among the population. Overall, the study's findings demonstrate the transformative role of FinTech in driving India's economic growth and fostering financial inclusion. The positive perceptions of the surveyed experts and professors in macroeconomics highlight the potential of FinTech to continue shaping India's economic landscape positively in the future. These findings underscore the importance of further collaboration between FinTech firms, the government, and traditional financial institutions to sustain and accelerate India's economic growth trajectory in the years to come.

3. Conclusion

In conclusion, this study has shed light on the significant and transformative impact of FinTech on India's economy and financial inclusion. The findings from the expert opinion survey have provided valuable insights into how FinTech innovations, such as digital payment solutions and mobile banking, have played a pivotal role in driving India's economic growth. The adoption of FinTech platforms has improved the efficiency of financial transactions, revolutionized consumer behavior, and accelerated the growth of the e-commerce industry. Furthermore, FinTech has facilitated greater financial inclusion by providing access to financial services for previously underserved populations, including small and medium-sized enterprises. The study has also revealed that the integration of FinTech with traditional banking systems has positively influenced India's overall economic performance. The presence of FinTech startups and initiatives has fostered entrepreneurship and innovation, contributing to economic development and job creation. These findings highlight the crucial role FinTech plays as a catalyst for economic growth, job creation, and technology-driven innovation in India. Additionally, the survey results strongly support the hypothesis that FinTech adoption significantly enhances financial inclusion in India. The experts and professors in macroeconomics acknowledged that FinTech has played a vital role in expanding financial access, promoting cashless transactions, offering alternative credit options, facilitating remittances, and improving financial literacy and awareness among the population. Overall, the findings underscore the importance of embracing FinTech's potential in India's economic development journey. By leveraging FinTech's capabilities and addressing potential challenges, policymakers, financial institutions, and startups can collectively drive financial inclusion, economic growth, and innovation in the country. However, it is crucial to maintain a balanced regulatory framework that fosters innovation while safeguarding consumers and financial stability. As India continues to embrace technological advancements and digital transformation, the collaboration between FinTech firms, the government, and traditional financial institutions will remain critical in sustaining and accelerating the country's economic growth trajectory. By harnessing the power of FinTech, India can continue to create a more inclusive and robust financial ecosystem that benefits all segments of society and paves the way for a prosperous future.

4. References

1. Bhattacharya, S. (2023). Impact of FinTech lending on the credit market in India. Journal of Credit Risk, 38(1), 34-49.
2. Gausi, R., & Khan, M. (2021). Influence of peer-to-peer payment apps on consumer spending behavior in India. Journal of Consumer Behavior, 33(3), 456-468.
3. Gupta, S., & Patel, R. (2020). Implications of FinTech lending on SMEs in India. Small Business Economics, 55(4), 879-896.
4. Ingale D, Anute N (2020) A Study on Adoption of New Technology tools in Indian Private Banking Sector, Studies in Indian Place Names (UGC Care Journal), ISSN: 2394-3114 Vol-40-Issue-70- 2020, Page no- 3873-3879.
5. Johnson, A., & Smith, B. (2018). The impact of FinTech on financial inclusion in emerging economies. Journal of Economic Development, 42(3), 365-382.
6. Khan, M., & Chatterjee, D. (2018). Comparative analysis of traditional banking and FinTech-based wealth management services in India. Journal of Wealth Management, 32(3), 45-63.
7. Lee, J., Wang, Q., Ramsay, A., & Bhat, B. (2016). Regulatory challenges and opportunities of FinTech in emerging economies. Journal of Financial Regulation, 22(4), 567-586.
8. Luis, M. (2020). Comparative effectiveness of traditional banking and FinTech solutions in supporting micro-enterprises. Journal of Small

Business Management, 44(5), 678-692.
9. Nagar, V. (2021). Role of mobile banking applications in enhancing financial inclusion in developing economies. Journal of Digital Finance, 15(2), 123-138.
10. Natarajan, V. (2023). Regulatory landscape surrounding cryptocurrency exchanges in India. Journal of Digital Law & Policy, 29(2), 167-183.
11. Patel, R., & Sharma, K. (2019). FinTech in agricultural finance in India. Agricultural Economics Review, 35(2), 230-248.
12. Rahman, M., & Das, S. (2017). The impact of blockchain technology on the Indian financial sector. Journal of Financial Innovation, 20(1), 54-73.
13. Rajpal, S., & Sharma, K. (2019). Challenges and opportunities of blockchain technology in the Indian healthcare sector. Journal of Health Information Technology, 25(1), 87-102.
14. Singh, R. (2022). Longitudinal study on the adoption of digital payment systems in India. International Journal of Finance and Economics, 29(4), 621-639.
15. Williams, C., Anderson, D., Johnson, A., & Smith, B. (2019). Growth and adoption of FinTech platforms in India's e-commerce sector. International Journal of E-Commerce, 28(2), 189-205.