

Study on Financial Technology, Financial Inclusion, and Sustainable Economic Growth: An conceptual Study in the Indian Context

NIRMALA S¹, POORNIMA K², DR. ITI VERMA³

¹Assistant Professor, Jain deemed to be University, Jayanagar, Bengaluru

²Assistant Professor, Department of Commerce and Management, Seshadripuram College

³Assistant Professor, Jain University, Jayanagar, Bengaluru

Abstract- With the advent of Financial Technology (Financial Technology), financial services are making their way towards being more accessible, efficient and inclusive all over the world. In emerging market countries like India, Financial Technology has proven to be a significant enabler in terms of making financial services more accessible to those who are not well-served by traditional financial services. This study delves into the potential effect of Financial Technology in Indian context in terms of enhancing financial inclusion and sustainable economic growth. The study will explore a variety of digital financial innovations (DFI) including mobile banking, digital payments, P2P lending, digital wallets and additional digital financial services and how they can improve access to financial resources for households and enterprises. This study is based on the assumption that "financial inclusion" enables greater involvement in economic activities, better savings habits, easier access to credit and helps foster entrepreneurship, which in turn helps growth in a sustainable manner. The paper aims to provide a conceptual framework for the analysis of the relation between the adoption of Financial Technology, financial inclusion and sustainable economic growth. The study also explores a mediation of the effect of the Financial Technology on the economic development outcomes through financial inclusion. The research draws on the existing literature and policy initiatives, as well as the rapid proliferation of Dfins in India, to note the remarkable impact of Financial Technology on financial inclusion and inclusive growth. The outcomes will provide policy makers, financial institutions, Financial Technology firms and researchers with valuable information to grasp the potential of digital financial innovations for the achievement of sustainable goals. The study is part of an increasing body of research, financial transformation due to Financial Technology, and offers insights and action points to enhance financial inclusion approaches in developing countries. The results underline the need for setting up the right enabling regulatory environment, developing digital infrastructure and

increasing financial literacy to unlock the full development potential of Financial Technology and ensure sustainable economic growth in the future.

Keywords: Financial Technology (Financial Technology), Financial Inclusion, Sustainable Economic Growth, Digital Finance, Economic Development, Financial Innovation, India

I. INTRODUCTION

The financial services sector has undergone a major transformation in the past decade, largely as a result of the advances of digital technologies. Financial Technology (Financial Technology) is redefining financial services design, delivery and consumption across the globe. Financial Technology: The application of technology and innovation in the financial sector to enhance access, transparency, customer experience and efficiency. Financial Technology has opened up fresh opportunities for individuals and businesses to access financial services that are beyond the reach of traditional banking institutions by employing technologies like artificial intelligence, block chain, big data analytics, cloud computing, mobile applications, and digital payment systems. With the increasing acceptance of Financial Technology solutions, the financial landscape has been revolutionized, particularly in emerging markets where many have never had access to conventional financial services.

India is fast emerging as one of the top five digital markets in the world, as the digital revolution, the growing penetration of the Internet, and supportive government regulations have made it so with the

digital revolution and increasing Internet penetration, as well as smart phone use and supportive government policies, India has become one of the world's fastest-growing Financial Technology markets. Projects such as Digital India, Jan Dhan Yojana, Aadhaar, Unified Payments Interface (UPI) and paid less payments have resulted in the financial sector going digital. These have contributed to making financial services available to millions of people, particularly in the rural and semi-urban communities. As financial services were made more accessible and affordable by the launch of Financial Technology platforms that were facilitating digital payments, mobile banking, digital lending, insurance technology (InsurTech) and investment services, so was this reinforced.

Financial inclusion is becoming key to attaining economic development goals in developed and developing countries around the world. According to the World Bank, financial inclusion refers to "making useful and affordable financial products and services available and accessible to individuals and businesses, and making them accessible in a responsible and sustainable manner to meet their needs. Financial inclusion is the access to financial services, including savings, credit, insurance, payment and investment services. Despite the tremendous progress made in the banking industry, many people in the world are still unable to access the formal banking system because of geographical limitations, high costs, insufficient documentation, financial illiteracy and weak banking infrastructure. Financial exclusion is still a significant issue affecting economic participation and social development in developing countries.

Financial inclusion is more than just access to financial services. Financial services facilitate safe saving and the management of financial risk, education and health care investments, and entrepreneurial activities. Financial inclusion opens doors to access to finance and capital for growth and expansion, especially for MSMEs. As such, financial inclusion helps to reduce poverty, promote income generation, create employment and foster overall economic growth. Consequently, financial inclusion has gained traction as a crucial component of

sustainable economic growth by many governments, regulatory bodies, and international bodies.

Sustainable economic growth is an economic growth that is capable of being sustained over the long term, and at the same time it will ensure social equity, environmental sustainability and efficient use of resources. Sustainable economic growth is a concept that expands on conventional notions of economic growth, which are based mainly on the growth of gross domestic product (GDP) and inclusive development that brings benefits to all components of society. The concept is in line with the mission and goal of the United Nations Sustainable Development Goals (SDGs) and in particular with poverty alleviation, decent work, economic growth, reduced inequalities and innovation. Policies and initiatives to support inclusive participation in economic activities and equitable access to opportunities and resources are needed to achieve sustainable economic growth.

In this context, Financial Technology has been a powerful enabler for improving financial inclusion and forging the path towards sustainable economic development. Financial Technology can help overcome many of the structural barriers to financial exclusion by lowering transaction costs, streamlining financial processes, and bringing finance services to those who don't have access to them. Digital payment systems enable safe and convenient payments, mobile banking provides people with financial services in remote locations and digital lending platforms offer financial services to individuals or businesses lacking a credit history. These innovations help to increase financial services' reach, and enable more economic inclusion for those who have previously been excluded.

The most noteworthy example of Financial Technology revolutionizing businesses is the evolution of digital payments in India. The unified Payment interface (UPI) has revolutionized the payment sector by providing a unified instant, low cost and interoperable payment option across banks. As UPI gains traction, it has also contributed to moving towards a less cash-based economy, and provided financial services to millions. Similarly, financial inclusion has been achieved for the rural

population, women, and low-income groups via digital wallet services and mobile banking apps. This is a glimpse into the opportunities that Financial Technology could offer for bridging gaps in provisioning of financial services and inclusive growth.

Plus, Financial Technology plays an important role in the progress of entrepreneurship and business. Small businesses might not readily be able to obtain traditional bank loans due to the conditions imposed on a loan, as well as the loan application process. The alternative data sources and cutting-edge analytics used in Financial Technology lending platforms facilitate quicker and more accessible financing opportunities. Access to and availability of capital, which is key for the formation of business, innovation and job growth, are all important elements in a sustainable economic growth. Entrepreneurship and investment is stimulated, which contributes to economic dynamism and productivity enhancement, through the impact of Financial Technology.

Over the last few years, the research and policy agendas, as well as practices, have turned to the relationship between Financial Technology, financial inclusion and sustainable economic growth. Previous studies have shown that the Financial inclusion can be significantly enhanced by the innovations of Financial Technology and by improving access, cost and efficiency of financial services. Studies also have shown a positive link between financial inclusion and economic growth, with financial access facilitating investment and consumption and thus facilitating productive economic activity. Despite the increasing literature, however, how Financial Technology works and how it affects sustainable economic growth is under-researched, particularly in emerging economies such as India.

In addition, although some studies have examined the influence of financial inclusion and economic performance individually and some have studied the financial inclusion and Financial Technology relationship, few studies have tried to analyze the interdependencies of the development of Financial Technology, financial inclusion and sustainable economic growth in one framework. The need is to

understand if financial inclusion is a mediating pathway to wider impacts of economic development of Financial Technology. This is an important research field which will be useful in developing strategies and policies to maximize the developmental impact of financial innovation.

The context of India is of special relevance to study these relationships because it combines technology, diversity and the ongoing financial inclusion efforts in a unique manner. The nation has made tremendous strides in the digital financial services area, bolstered by financial services sector reforms and public-private partnerships designed to increase financial access. There is progress in core areas of Financial Technology and inclusion, however, digital skills gaps, cyber security threats, infrastructure gaps and regulations will affect the success of inclusion. Therefore, the research on the role of Financial Technology in resolving these issues and the sustainable economic growth is both academic and practical significance.

In this context, the present study is geared towards an understanding of the role of Financial Technology in financial inclusion and sustainable economic growth in the context of India. The study will particularly focus on the link between the adoption of Financial Technology and financial inclusion, between financial inclusion and sustainable economic growth, and the mediating role of financial inclusion between Financial Technology and sustainable economic growth. The study will include financial innovation, inclusive finance and sustainability, which will help in understanding the role of Financial Technology in the emerging economies.

The results of this study will have significant implications for policy-makers, financial institutions, Financial Technology companies and development agencies. The study will help to inform policy measures to improve financial inclusion and support sustainable development based on evidence. Understanding what influences uptake and impact of digital financial services could be helpful for financial institutions and Financial Technology firms. Moreover, this study gives new academic perspectives on digital finance and sustainable

development, offering a conceptual and empirical basis for further research.

Finally, the Financial Technology revolution has the potential to transform financial systems in ways that are unmatched to the financial inclusion and sustainable economic growth. Understanding the dynamics of innovation in Financial Technology, financial services availability and economic growth are vital in an age of digital transformation in India's economy. This study aims to fill this gap by exploring how Financial Technology can contribute to making the economic landscape more inclusive and sustainable for India.

Over the last several years, there has been a significant increase in the interest around the connection between Financial Technology and financial inclusion. Demirgüç-Kunt et al. (2018) made the case for the transformative potential of digital financial services to increase access to formal financial systems in their Global Findex research. The study revealed that both mobile banking and digital payment platforms significantly contributed to the study's finding of an increase in account ownership.

II. REVIEW OF LITERATURE

Ozili (2018) in the study titled "Impact of Digital Finance on Financial Inclusion and Stability" noted that Financial Technology innovations provide relatively low transaction fee, financial services effectiveness and reach financial services to the unbanked population. Similarly, Gabor and Brooks (2017) indicates that digital finance can help overcome geographical and infrastructure constraints to access financial services, hence everyone can access it.

The financial inclusion among the rural households has been significantly improved with the adoption of Financial Technology measures such as mobile banking, digital payment wallets and UPI in India as pointed out by Dahiya and Kumar (2020). In summary, the findings suggest that Financial Technology has a critical role to play in promoting

financial inclusion by improving financial access, cost and convenience.

Financial inclusion has been acknowledged as an important enabler of sustainable economic growth. In a seminal paper, titled "Finance, Inequality and the Poor" (2007), Beck et al. showed that financial services have a negative welfare impact on the poor and a positive one on economic opportunities.

Kim et al. (2018) studied the financial inclusion and economic growth correlation over the OIC countries and found that the level of financial inclusion was positively correlated with economic development in OIC countries. Their results suggest financial inclusion is conducive to financial investment, entrepreneurship and income generation.

Similarly, Park and Mercado (2018) demonstrated the relationship between financial inclusion and poverty alleviation and towards the sustainable development goals. In India, Sethi and Acharya (2018) found that the improvement of financial inclusion positively affected economic productivity and economic growth in general. All these studies have indicated that financial inclusion is an important instrument for sustainable and inclusive economic development.

Innovation and technology has played a key role in the evolution of Financial Technology and its impact on the economic development. Lee and Shin (2018) noted that Financial Technology has the potential to provide value to a financial service firm by improving its efficiency, reducing its operating expenses, and providing better financial services.

Gomber et al. (2018) called Financial Technology a disruptive factor that will boost financial sector competition and stimulate economic growth. Similarly, Thakor (2020) proposed that Financial Technology has large contribution in creating innovation, entrepreneurship and the financial access for sustainable economic development.

Financial Technology services can help improve financial efficiency and customer engagement, which can enhance economic productivity, as mentioned by Jünger and Mietzner (2020). Together, these studies

prove that Financial Technology can act as a driver for sustainable economic growth based on innovation, efficiency gains and economic participation.

III. RESEARCH METHODOLOGY

3.1 Research Design

The design of this study is conceptual with a research approach that involves examining the relationship between Financial Technology (Financial Technology), Financial Inclusion, and Sustainable Economic Growth in India. Conceptual research involves a systematic review, synthesis and interpretation of the literature to gain theoretical understanding and framework, as opposed to empirical research which involves primary data collection and statistical analysis.

The study aims to examine the role of Financial Technology innovations in financial inclusion and the impact of better financial inclusion to sustainable economic growth. The conceptual approach allows the incorporation of the knowledge already acquired in different fields of academic research such as finance, economics, technology management and sustainable development.

3.2 Nature of the Study

The research method used in the study is descriptive, analytical and exploratory. It gives an overview of the evolution of Financial Technology and its implications on the financial services industry, explores the link between financial inclusion and Financial Technology, and explores how these can help in attaining sustainable economic development. This research aims to get a comprehensive understanding of how the study variables are related to each other and to propose a conceptual model for the next empirical study.

3.3 Theoretical Foundation

- Financial Intermediation Theory

The financial intermediation theory is a theory explaining how financial institutions facilitate the process of resource allocation between an economy's savers and the economy's borrowers. The Financial Technology complements this process, providing a

significant reduction in transaction cost and improving the market efficiency. Thakor (2020) and Gomber et al., (2018) show that the efficiency of financial intermediation improves when Financial Technology is introduced.

- Diffusion of Innovation Theory

In "Diffusion of Innovations" Rogers (2003) suggested that the adoption of technology hinges on how useful, compatible, and easy to use it is. This viewpoint aligns with the quick adoption of Financial Technology services in India, displaying the way electronic innovations are diffusing throughout populations and reshaping financial actions.

- Inclusive Growth Theory

Theory of Inclusive Growth has been on the significance of 'Inclusive growth' of all the sections of the society. Financial inclusion is one of the crucial enablers to get equal opportunity in economic opportunities. This view is supported by the research done by Beck et al. (2007), and Kim et al. (2018).

- Sustainable Development Theory

The Sustainable Development Theory is an approach that requires balancing economic development, social equity and environmental sustainability. Here, Financial Technology will play a crucial role by enhancing the accessibility of finance and encouraging entrepreneurship and by facilitating smooth and effective financial transactions.

3.4 Research Gap

Existing literature suggests that there are some gap areas. First, most of the research has focused on the impact of the direct relationship between Financial Technology and financial inclusion, and not on the combined impact on sustainable economic growth. Secondly, most of the studies are carried out in the developed countries and are not applicable to developing countries such as India.

Third, while research has shown the positive outcomes of Financial Technology such as greater financial inclusion and financial inclusion that leads to economic growth, few studies have examined the mediation effect of financial inclusion between Financial Technology adoption and sustainable

economic growth. Fourth, the digital financial landscape in India has been rapidly evolving over the last few years and the new developments like the UPI, digital lending platforms, and mobile banking services have further emphasized the need for more empirical research.

Therefore, this study will aim to address these gaps by developing an integrated framework that will take into account the role played by financial inclusion as a mediating variable between the impact of Financial Technology on sustainable economic growth in India. The study aims at providing inputs for academic publication, policy formulation and policy implementation with a holistic understanding of the inter-relationships of these key variables.

3.5 Sources of Data

- The research is secondary data search from various books and journals.

Academic Sources such as Scopus-indexed journal article, The Journal has been indexed in the Web of Science, Peer-reviewed research papers, Conference proceedings and Doctoral theses, dissertations etc.

- Institutional Sources

Reserve Bank of India (RBI) reports, World Bank publications, Reports of International Monetary Fund (IMF), Reports of the United Nations Development Programme (UNDP) are available. The information contained in this document comes from the World Economic Forum publications and information mentioned here is taken from the Government of India reports and NITI Aayog publications

- Industry Sources
- Financial Technology industry reports
- Digital banking reports
- Financial inclusion reports

Reading reports from Deloitte, PwC, EY, KPMG, McKinsey etc.

3.6 Data Analysis Method

There is a literature analysis that is theoretically analyzed using themes analysis and content analysis.

- Thematic Analysis

Thematic analysis was performed to highlight the themes, ideas and trends within the literature. The following themes have been identified as the core themes:

The future of Financial Technology and Financial Inclusion. The future is Financial Technology and Financial Inclusion.

Initiatives aimed at building financial inclusion for sustainable economic growth. Efforts to promote financial inclusion for sustainable economic growth.

- Content Analysis

Content analysis technique was used to critically analyse the findings of the previous studies and the similarities, differences and trends were identified from the literature. It contributed to develop a comprehensive understanding of the importance of Financial Technology in the journey towards financial inclusion and sustainable economic growth.

3.7 Research Objectives

The overall aims of the investigation are:

1. To study the Financial inclusion in India and its effect of the use of Financial Technology.
2. To assess the linkages between financial inclusion and sustainable economic development.
3. To study the direct effect of the adoption of Financial Technology in sustainable economic growth.

3.8 The hypothesis/Conceptual framework.

The study suggests a concept of literature-based framework to link the three concepts of Financial Technology, Financial Inclusion, and Sustainable Economic Growth together. The framework suggests that the advancement of the Financial Technology industry in innovation could help to enhance financial services accessibility, which could expand financial inclusion and foster sustainable economic development.

- Proposed Hypothesis 1 (H1)

H1: This is to demonstrate the positive correlation between the use of Financial Technology and

financial inclusion and to illustrate the adoption of H1.

Justification

Financial services are more accessible and affordable due to mobile banking/finance, digital payments, digital lending and online financial platforms. Previous studies have shown that the adoption of technology in traditional banking has the potential to reduce traditional banking barriers and improve access to the formal banking system.

- Proposed Hypothesis 2 (H2)

H2: Economic growth can be sustained with financial inclusion.

Justification

The financial inclusion includes the ability of an individual or a business to make use of financial services including credit, savings and insurance. The increased access to these financial resources boosts entrepreneurship, investment, job creation, and income generation, which helps achieve sustainable economic development.

Proposed Hypothesis 3 (H3)

H3: Financial Technology adoption has positive impact on sustainable economic growth.

Justification

Financial Technology is boosting financial efficiency and fostering innovation, cutting transaction costs and assisting business growth. The latter contribute to increasing productivity and boosting economic activities, thus creating sustainable economic growth.

IV. RESULTS AND DISCUSSION

4.1 Introduction

Using available literature and policy reports, theoretical frameworks, the linkage between Financial Technology and financial inclusion, with special attention to sustainable economic growth is examined in a conceptual manner. The discussion brings together learning from earlier research to convey the benefits of Financial Technology innovations on the financial inclusion front and the impact of greater financial inclusion on sustainable

economic development. This finding is conceptual and does not appear to be derived from analysis of primary data, but rather from detailed analysis of literature.

4.2 Financial Technology as a driver of financial inclusion

Literature studies have shown that Financial Technology is a game-changing phenomenon in the financial sector. Due to high operating costs and requirements for infrastructure, traditional banking systems are challenging to address geographic accessibility and poor economic conditions. The challenges are addressed through the use of technology, such as mobile banking, digital wallets, online lending platforms, and digital payment systems in Financial Technology solutions.

With the advent of the smart phone and the internet, people can now obtain financial services from anywhere. India's formal financial institutions have been a key growth enabler with Unified Payments Interface (UPI), Aadhaar-based payment systems and digital banking platforms playing an important role. As per literature, the advantages of Financial Technology are reduced cost of transaction, ease and efficiency of services which helps in the participation in financial activities.

Furthermore, it is possible to imagine that Financial Technology can contribute to financial inclusion by offering tailored financial products to serve the needs of those that are not served. Alternative credit assessment techniques are used by digital lending platforms to provide credit to people and small businesses who lack the benefit of having a traditional credit history. Thus, Financial Technology is involved in financial inclusion and developing economic participation.

The theme of finance and financial inclusion as a driver for sustainable economic growth is discussed here. The fifth section emphasizes the role of financial inclusion as a driver for sustainable economic growth.

The literature has demonstrated that financial inclusion is one of the key elements that can

contribute to sustainable economic growth. The financial services offer people means of safely saving money, obtaining credit and investing in productive activities and of better managing financial risks. These skills can help boost income, entrepreneurship, employment and help alleviate poverty.

Financial inclusion extends the financial services to the unbanked, thus including them in the formal financial sector and economy. Banks that are accessible enable people to pursue entrepreneurial opportunities, to improve their financial security and invest in their education and health care. Similarly, SMEs can access better credit facilities that can enable them to grow and innovate.

Under sustainable development, financial inclusion can contribute to the attainment of some Sustainable Development Goals (SDGs) including the following: eradication of poverty, reduction of inequalities, provision of decent work and economic growth. Financial inclusion is a key to inclusive and sustainable economic development by providing equal opportunities to access financial resources.

The connection between Financial Technology and sustainable economic growth. The links between Financial Technology and sustainable economic growth.

Coordinated by the conceptual analysis, Financial Technology can be seen to have several direct impacts in the sustainable growth of the economy. The first to gain from the improvement in efficiency that Financial Technology provides to financial markets is efficient financial markets, by reducing transaction costs and allocating financial resources. There is efficient financial systems and it allows investment and productive activity to take place.

Secondly, Financial Technology is creating more access to finance, which is helping to sustain innovation and entrepreneurship. Most entrepreneurs and small businesses struggle to raise funds from a standard financial institution as the process takes a great deal of time, and they require collateral. The Financial Technology platforms offer alternative

means of financing that foster business growth and economic vitality.

Third, Financial Technology's contribution to economic resilience is to provide access to financial services at times of disruption. During the COVID-19 pandemic, Digital Financial Services (DFS) has become a key enabler to ensure economic activities continue despite physical distancing. Households and businesses were able to make financial transactions, even when they were not able to move, via digital payments, online banking and electronic commerce platforms.

Besides, Financial Technology's role in environmental sustainability is related to less paper and physical infrastructure in banking. The shift to digital financial services helps to be resource efficient and is aligned with SDG goals.

The connection between Financial Technology and sustainable economic development. The link between Financial Technology and sustainable economic development.

On the basis of the conceptual analysis, it can be seen that there are several points that can be directly supported by Financial Technology for sustainable economic growth. The first beneficiaries of the efficiency improvement which Financial Technology brings to financial markets are efficient financial markets, with transaction costs reduced and financial resources allocated. Financial systems are efficient and enable investment and productive activity.

Secondly, Financial Technology is helping to sustain innovation and entrepreneurship through increased access to finance. The reason it's difficult for many entrepreneurs and small businesses to access financing from a financial institution is that they require collateral and it's slow. Financial Technology platforms offer alternative financing that fosters innovation and activity in the economy through business formation.

Thirdly, Financial Technology's role in economic resilience is that it makes finance services available in times of disruption. The COVID-19 pandemic has

highlighted the need for digital financial services to continue economic activities when people are unable to meet in person. Digital payments, online banking and electronic commerce tools enabled households and businesses to make financial transactions despite being unable to move around freely.

Additionally, Financial Technology is part of the solution for environmental sustainability via its efforts to eliminate paper-based transactions and physical banking facilities. The shift to digital financial services helps to be resource efficient and is aligned with

4.3 Financial Inclusion: Mediating role.

The literature shows some signs that financial inclusion is an important mechanism that affects the sustainable economic growth due to Financial Technology. The development impact of Financial Technology is primarily financial accessibility and the financial efficiency and innovation it brings is direct.

The possibilities of banking, credit, saving and insurance access created by Financial Technology enable more participation in economic activities. Financial inclusion helps individuals and businesses access financial services and so have a greater influence on their economies. Hence financial inclusion is a mediator between technological innovation in finance and other economic development objectives.

Based on this study, a conceptual framework was developed that suggests that Financial Technology has a direct and indirect impact on sustainable economic growth via financial inclusion. This viewpoint underlines the significance of making sure that technological development results in genuine financial accessibility for everyone of society

4.4 Implications for India

Understanding Financial Technology contribution to Sustainable Development is an important perspective on the Indian financial system. The digital financial transformation is well on its way as a result of several initiatives undertaken by the government like Digital

India, Pradhan Mantri Jan Dhan Yojana (PMJDY), Aadhaar, and UPI.

The increasing digital payments and mobile banking have greatly improved urban–rural financial access. But there are still hurdles to overcome, such as digital literacy, cybersecurity, infrastructure gaps and consumer awareness. These challenges need to be addressed to reap the maximum possible benefits of financial inclusion enabled by Financial Technology. The policy implications are to enhance digital infrastructure, financial literacy, and the frameworks for consumer protection as well as between the traditional financial sector and Financial Technology. These are some of the measures that could facilitate sustainable digital financial services growth and help achieve long-term economic development.

4.5 Analysis of Hypotheses

H1: Financial Technology is positively impacting financial inclusion.

There is a clear connection between the financial inclusion and Financial Technology in developed and developing countries. In India, digital financial technologies including Unified Payments Interface (UPI), mobile banking, digital wallets, Aadhaar payment systems, and online lending platforms have revolutionized the way people access financial services. All of these innovations help to diminish geographical barriers and to lower transaction costs and allow to integrate underserved groups into the formal financial system.

The success of initiatives like Digital India, Jan Dhan Yojana, and the widespread penetration of smartphones and the Internet have also contributed to the acceptance of Financial Technology. The ability to access banking, payment, saving, and credit facilities with ease, has been especially advantageous for rural people, women, small businesses, and low-income earners through the use of Financial Technology solutions.

The literature already available is replete with examples of how Financial Technology contributes to financial inclusion by making financial services more accessible, affordable and efficient. Consequently,

there is conceptual evidence for the acceptance of H1.

H1 is accepted since conceptually. By offering access to financial services to those who were previously excluded, Financial Technology can make a huge difference in improving financial inclusion.

H2: Financial Inclusion has a positive impact on sustainable economic growth.

Financial inclusion allows individuals and businesses to have access to formal financial intermediation, like savings accounts, credit, insurance, and investment. Access to these services stimulates entrepreneurship, business growth, financial security of the households, and productive investments.

In the Indian context, financial inclusion has brought empowerment to the MSMEs, selfhelp groups, women entrepreneurs, and rural areas. Availability of affordable financial services enables income generation, poverty alleviation and employment generation. These results are directly linked to sustainable economic growth, inclusive development and economic inequalities reduction.

Financial inclusion is a key enabler for sustainable development and is highlighted in the Sustainable Development Goals (SDGs), with SDG 1 (No Poverty), SDG 8 (Decent Work and Economic Growth) and SDG 10 (Reduced Inequalities). Some existing research indicates that more financially included economies are associated with more and stronger growth patterns, and economically inclusive growth.

Explain that conceptually H2 is accepted. Financial inclusion has a positive impact on sustainable economic growth by improving economic participation, investment, employment creation and poverty alleviation.

4.6 Overall Hypothesis Summary

A hypothesis is a tentative explanation that is supported by evidence. A hypothesis is a provisional explanation based on evidence.

H3: Financial Technology has a positive impact on sustainable economic growth.

By enhancing the efficiency and effectiveness of the financial systems, Financial Technology directly contributes to sustainable economic growth. Digital technologies promote faster capital flows among economic sectors, improve transparency, lower costs of operation and streamline financial transactions.

Financial Technology has facilitated the growth of digital commerce, fostered innovation, nurtured startup ecosystems, and enhanced access to finance for MSMEs in India. Technologies like digital lending, block chain applications, artificial intelligence and digital payment systems have enhanced productivity and helped businesses to run more efficiently.

In addition, Financial Technology plays a role in sustainable development by enabling paperless transactions, lowering resource usage, and enabling green finance initiatives. These developments help to ensure the economic sustainability and resilience in the longer term.

The literature shows that Financial Technology has the potential to enhance the performance of the financial sector, while also driving wider economic development by fostering innovation, inclusion, and efficiency. Therefore, Financial Technology is a key enabler of sustainable economic growth.

The concepts of H3 are accepted. Financial Technology offers opportunities to improve the efficiency of finance, create new innovations, help start and grow businesses and increase economic participation. Financial Technology can have a positive influence on sustainable economic growth, by providing greater financial efficiency, innovative solutions, business development and inclusive economic participation.

H1 Financial Technology → Financial Inclusion Accepted

H2 Financial Inclusion → Sustainable Economic Growth Accepted

H3 Sustainable Economic Growth → Financial Technology Accepted

4.7 Overall Interpretation

The conceptual analysis reflects the fact that Financial Technology is a key enabler to financial inclusion, and financial inclusion is a key enabler for sustainable economic growth. The Indian context has fostered a robust ecosystem where Financial Technology, financial inclusion, and sustainable economic growth are connected and reinforcing each other, with digital transformation, enablers of the government, and growing digital financial services adoption. Hence, the conceptual framework proposed in this research does support all three hypotheses and creates a positive link between adopting Financial Technology and sustainable economic development.

V. FINDINGS

Through a comprehensive literature review, theoretical understanding and policy analysis, the study explored the conceptual linkages and relationships between Financial Technology, Financial Inclusion and Sustainable Economic Growth in the Indian context. The major findings are: The introduction of innovative technologies in the financial sector like mobile banking, digital payments, UPI, digital wallets and online lending platforms has enhanced the access to financial services in India.

2. Financial Technology has cut financial service barriers by cutting down on transaction costs, making financial services more accessible, and offering financial services to those who were less served, especially in rural and semi-urban areas.

Development initiatives like Digital India, Pradhan Mantri Jan Dhan Yojana (PMJDY), Aadhaar and UPI have contributed to the growth of adoption of Fin Tech and enhanced financial inclusion efforts.

5. Financial inclusion increases access to investment, credit and insurance, and promotes economic participation of people and businesses.

Greater financial inclusion is key to foster entrepreneurship, job creation, income growth and reduce poverty, all essential pillars of sustainable economic development.

6. Financial efficiency, lower costs, transparency and productivity are all direct benefits of 6. Financial Technology to sustainable economic growth.

7. Financial Technology plays a vital role in enhancing the growth of MSMEs and startups by offering alternative financing solutions and credit access.

8. Digital financial services enhance economic resilience during crises, such as during the COVID-19 pandemic when digital platforms facilitated continued financial activities.

The mediating role of financial inclusion between the adoption of Financial Technology and sustainable economic growth is that it enables the transfer of technological innovations to wider economic impact.

5.1 SUGGESTIONS

The following suggestions are made based on the results of the study:

For the general public.

- Improve digital infrastructure in rural and remote regions so that they can have access to digital financial services in a fair way.
- Increase Financial Literacy and Digital Literacy initiatives and raise awareness and usage of Financial Technology services among vulnerable groups.

- Establish strong cyber security policies to safeguard consumers against digital crime and cyber risks.
- Proactively foster regulatory environments that sustain financial stability and consumer protection while fostering innovations that will boost the growth of Financial Technology.
- Encourage public-private partnerships for expanding digital financial services and enhance financial inclusion

For Financial Institutions

- Work with Financial Technology firms to create financial products accessible and simple to use for underserved communities.
- 7. Scale up digital lending and microfinance services for MSMEs, women entrepreneurs and low-income households.
- Invest in advanced technologies like Artificial Intelligence, Blockchain, and Big Data Analytics to enhance service delivery and operational efficiency.

For Financial Technology Firms

- Produce inclusive financial products to target the needs of rural groups, small enterprises and financially excluded segments.
- Prioritize data transparency, security, and responsible handling to build consumer trust.
- Create digital platforms in multiple languages and simplified to better meet the needs of less technologically able users.

For Researchers

- Future studies could be conducted empirically by collecting the primary data and employing the advanced statistical analysis like SEM, AMOS and PLS-SEM to test the proposed conceptual framework.
- Comparative studies over the various States and the emerging economies can give more insights into the effectiveness of financial inclusion facilitated by Financial Technology.

5.2. CONCLUSION

In this conceptual study, the relationship between the terms Financial Technology, Financial Inclusion,

Sustainable Economic Growth is explored in the context of India. The study, based on literature review, theoretical underpinnings, and policy reviews, confirmed that Financial Technology has a transformative impact on the enhancement of financial inclusion and sustainable economic development.

The analysis found that digital financial innovations, including mobile banking, digital payments, digital lending, and online financial platforms have contributed to making financial services more accessible, affordable and efficient. These innovations have brought in a greater financial inclusion in India by including the people who earlier weren't in the formal financial system.

The study also revealed that financial inclusion makes significant and positive contributions to sustainable economic growth, which is achieved through enabling entrepreneurship, employment creation, poverty alleviation, income improvement, and investments. Formal finance services can enhance people and business's capacity to engage in economic activity and strengthen their financial health.

Furthermore, Financial Technology positively contributes to sustainable economic growth by contributing to the financial efficiency, innovation, lowering transaction costs, financial transparency, and efficient allocation of financial resources. The evolution of the digital financial ecosystem has presented new opportunities for MSMEs, startups and the unserved and provided a key enabler to inclusive growth and sustainable development.

The conceptual framework suggested in this study verifies the financial inclusion as a significant mediator between the effects of Financial Technology on sustainable economic growth. Conceptually, the findings confirm all three hypotheses and the interdependence of the three elements of Financial Technology adoption, financial inclusion and sustainable economic development.

In conclusion, Financial Technology has proven to be a game-changer, driving the financial inclusion agenda and promoting sustainable economic

development in India. To realize the developmental potential of Financial Technology and to realize its long-term inclusive and sustainable economic prosperity, continued investments in digital infrastructure and financial literacy, regulatory support and technological innovation will be crucial.

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