

Fintech and Digital Innovation for Financial Inclusion: With reference to Indian Women Entrepreneurs

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Abstract - This study examines how the Indian government, financial institutions, and organizations are using Fintech and digital innovations to support women entrepreneurs in the MSME sector after the pandemic. It emphasizes the significance of funding and digital awareness for the social and financial inclusion of women entrepreneurs. The research relies on secondary data from sources like the Reserve Bank of India and the Ministry of MSME. The study shows that various initiatives have been introduced to provide financial support to women entrepreneurs, and there is a strong correlation between financial inclusion, GDP, and digital innovation. The number of female entrepreneurs has increased due to digital inclusion efforts. The research addresses credit and financing concerns and highlights schemes offering low or no-cost financing options. It emphasizes the need for user-friendly fintech programs to enhance financial inclusion for women entrepreneurs. Overall, the study provides insights into post-pandemic support measures and the role of fintech in promoting financial inclusion for women entrepreneurs.

Keywords: Digitization, Women Entrepreneurs, Fintech, RBI, SEWA, MSME.

I. INTRODUCTION

Fintech and digital innovation have played a crucial role in promoting financial inclusion, especially among women entrepreneurs in India. India has seen remarkable advances in fintech and digital solutions over the past decade that have revolutionized the economy and opened up new opportunities for women entrepreneurs and professionals.

Here are some of the ways fintech and digital innovation have advanced the financial inclusion of Indian women entrepreneurs:

Access to financial services: Fintech has made it easier for women to access financial services such as banking and loan services through digital platforms and mobile applications. These platforms allow women to conveniently open bank accounts, apply for loans and manage their finances from their smartphones, eliminating the need for a physical bank visit and reducing barriers to entry.

Digital Payments: Fintech solutions have enabled digital payments, which have become the norm in India. Digital wallets and payment apps enable secure and convenient transactions, benefiting women entrepreneurs who can accept payments digitally and expand their customer base. It also reduced reliance on cash payments, making it more secure and transparent.

Online Lending: Fintech platforms have introduced innovative lending models that use technology for faster loan

processing and decision making. Female entrepreneurs, who often have trouble getting traditional loans due to lack of collateral or credit history, can now use alternative loan options. Online lending platforms use alternative data sources and analytics to assess creditworthiness, providing a more comprehensive lending environment.

Crowdfunding and P2P Lending: Digital platforms have facilitated crowdfunding and peer-to-peer (P2P) lending, empowering women entrepreneurs to raise funds for their business ideas. These platforms connect borrowers directly to lenders, bypassing traditional intermediaries. Crowdfunding campaigns have given women the opportunity to showcase their projects, gain exposure and receive financial support from the larger community.

Financial education and awareness: Fintech solutions often provide educational resources and tools to improve users' financial literacy. These resources help women understand financial concepts, develop money management skills and make informed decisions. By empowering women with financial knowledge, fintech promotes their financial independence and improves their ability to use financial services effectively.

E-commerce and market access: Fintech innovations have supported the growth of e-commerce platforms, enabling women entrepreneurs to sell their products or services online. This approach to digital markets has reduced geographic barriers, expanded customer reach and leveled

the playing field for women-owned businesses.

Digital Identity and KYC: Fintech has also been involved in developing digital identity solutions that make it easier for women to strengthen their identity and access financial services. Digital Know Your Customer (KYC) processes allow people to verify their identity digitally, which eliminates the need for physical documentation and shortens the time it takes to open an account. These are just a few examples of how fintech and digital innovation have advanced the financial inclusion of Indian businesswomen. However, it is important to note that there are still challenges such as limited internet access, digital literacy and gender bias. Continued work is needed to ensure that all women, especially those living in marginalized communities, can fully benefit from the opportunities offered by fintech and digital solutions.

Digitization of SMEs can add \$158-216 billion to India's GDP by 2024. In India, 20.37 percent of MSME owners are women. According to Ruth Bader Ginsburg "when women gain power, barriers fall. When society sees what women can do, when women see what women can do, there will be more women doing things and we will all be better off. The Aayog under NITI The government of India launched the Women's Entrepreneurship platform, an initiative that aims to support the journey of female entrepreneurs by organizing sponsors.

- Incubation and support of businesses such as marketing, fulfillment, and finance etc.
- Skills training and mentoring through a community network of like-minded people.

Every woman has to overcome obstacles in the house (family) and society (people around) to start something new and continue it. These barriers are social, psychological, financial etc. and in all business phases. The number of women entrepreneurs in India is increasing (Figure 1) and will increase rapidly after 2021 in India. Government of India has also realized the same and taken initiatives, programs to help aspiring women entrepreneurs to start their own businesses. The article tries to discuss and reiterate important government initiatives, private initiatives to develop and support women entrepreneurs.

Digital adoption is an important issue if women entrepreneurs want to use all the new financial and other online services. Digital inclusion and digital skills are necessary to improve and accelerate the financial inclusion of women entrepreneurs. This digital training to use new future financial services and other online services so that the cost of the service is reduced and it is available everywhere is digital inclusion (Lauer and Lyman 2015). In rural areas, women entrepreneurs still prefer to go to the bank and use services, now women using the service can help them develop and use the services via mobile phone or bank transfer. Banking and other financial services are available digitally after the ICT revolution (digital banking). During

the Covid situation, the number of digital transactions (both mobile and online transactions) grew from 18% (2019) to 99% (2019) thanks to the "no touch" precaution. According to RBI's Payment Infrastructure Report, the total number of digital payments will grow to 216% between 2019 and 2022.

These figures confirm the economic shift towards the acceptance and convenience of digital payments during and after the pandemic. The JAM trinity, 5G network and the pandemic have increased the need for digital inclusion and the economy is becoming cashless. It also reduced the burden on physical banking infrastructure. Services provided to women entrepreneurs are also delivered digitally, i.e., Government to People (G2P) or Direct Benefit Transfer (DBT), which requires digital engagement to avail all the benefits. Bank correspondents (BC) also contribute to digital inclusion in some way by educating women entrepreneurs (SHG members) about financial systems and the benefits of digital platforms.

Indian authorities are trying to reduce the digital divide between urban and rural areas and between men and women to achieve a wider reach. Geocoding of payment transaction touch points takes place in different parts of the country. The spread of the digital system across India was done to reduce fraud and hence the importance of geocoding. This PPI is made as a payment method so that the customer can make a good choice about cash security and digital business. Many payment gateway systems are also being tried and tested as RBI tries to address the issue of uniformity in implementation and transparency in operations. Regulatory issues related to payment systems also continue to be debated. RBI launched eBAAT (e-Banking Awareness and Training) program to inform users about digital payment channels and methods in their language, commonly used icons, text-to-speech features etc.

The purpose of the study is to understand if the government's work for digital inclusion reaches women entrepreneurs and if they use the services provided.

Will the number of female entrepreneurs increase with the introduction of digital services after the pandemic?

II. LITERATURE REVIEW

The objective of the literature review was to understand the current state of digital innovation to improve financial inclusion of women entrepreneurs in India and identify a gap for further research. The review is done sequentially

(i) Understanding the Status of Women Entrepreneurs by 2021: This phase reviews the literature on the status of women entrepreneurs in India, particularly their access to financial services and the challenges they face in terms of financial inclusion. This provides a basis for understanding the pre-pandemic landscape.

(ii) Exploring Challenges Faced by Women Entrepreneurs Post Pandemic (2018-2022): In this phase,

we examine the literature that examines the impact of the pandemic on women entrepreneurs in India. It aims to identify possible new challenges that have emerged during this period, such as changes in market dynamics, financial constraints or changes in consumer behavior.

(iii) Researching New Digital Innovations to Improve Financial Inclusion: In this phase, the literature review focuses on identifying recent digital innovations or initiatives that specifically target financial inclusion for women entrepreneurs in India. This requires the development of fintech, digital banking, payment systems and other relevant technologies that can improve women entrepreneurs' access to financial services.

Overall, this sequential approach provides an in-depth understanding of the current state of digital innovation in improving the financial inclusion of women entrepreneurs in India. The review examines the position of female entrepreneurs before and after the pandemic and the latest digital innovations. The goal is to identify known gaps or areas where further research is needed.

To improve the literature review, it would be useful to include specific studies, reports or academic articles that were evaluated at each stage. This would provide a stronger foundation and give readers access to sources for further research. In addition, it can be useful to highlight common themes or trends emerging from the literature review, such as ongoing challenges or promising digital solutions that can guide future research directions.

Jasmine Jaim (Jaim, 2020) conducted a study on women entrepreneurs in Bangladesh during the pandemic and finds that there are differences between male and female business owners in post-pandemic business continuity due to a number of social and economic reasons. This study clarified that in India and many other countries, the behavior of family members is biased in support of male and female owned business enterprises. Research exposes patriarchal practices of abortion or termination of life for women due to the COVID-19 crisis. This is similar to women entrepreneurs in India, as Madhavi **Latha Sangem** (Sangem, 2020) researched, women entrepreneurship in developing countries is at risk and vulnerable during the pandemic. and private institutions. **Sonal Sharma 2018** (Sharma, 2018) states in her research that women entrepreneurs can make a strong contribution to the economic and financial status of the family and community and help achieve the Millennium Development Goals. The research paper also talks about the different incentive systems, incentives and promotion activities of women entrepreneurs in organizations.

Sukhjeet Kaur Matharu, Divya Juneja (Sukhjeet Kaur Matharu, 2021) based her research on measuring the relationship between various factors and how these factors can influence women's decisions to start, continue or close a business. Nearly 400 women entrepreneurs from different

regions of India participated in the study to understand the impact on decision making. The results of the study show that the influence of factors is significant and positive when deciding on the behavior of female entrepreneurs in certain circumstances or situations. Another study by **Suresh Chandra Akula Pritpal Singh 2021** (Singh, 2021) suggested that; loans, savings and insurance from microcredit institutions can facilitate women's decisions in times of crisis.

India has many government agencies like MSME department, NGOs and private organizations. **Kumari Amrita, Chandra Prakash Garg, Saumya Singh 2018** (Kumari Amrita, 2018) introduced measures to promote women's entrepreneurship. (Hao Jiao, 2022) analyzed in a study whether learning about new innovations and digitization has any effect on technological entrepreneurship. **Suyo, Andrea Milagros Carrasco; Verma, Suhagini** (Suyo, 2022) suggests that the promotion of idea spaces, business process and innovation training, courses or workshops on management and soft skills for women entrepreneurs, and financial credit from banks and fintech is a great opportunity for the digital business journey of women entrepreneurs.

Self-employment or entrepreneurship is one of the main sources of employment for women across India, and according to a report by the ministry's MSME department, nearly three-quarters of women in India still depend on their own businesses. Women-led businesses in India are informal, small and concentrated in traditional sectors. These entrepreneurs still struggle with technical issues to start something new. This is mainly because these women do not have easy access to formal sources of funding. These women do not receive financial assistance from institutions because they do not have land, bank accounts, houses, etc. In many cities and states, the government has launched initiatives to help these women gain skills and learn about digital or technology opportunities for women. . Women-led SHGs can be organized under the National Rural Livelihood Mission (NRLM) to facilitate digital adoption by small businesses. Government schemes like BharatNet and PM WANI can be used to accelerate the delivery of digital infrastructure and expand Wi-Fi connectivity.

Fintech startups should do something for women entrepreneurs, because according to a global report by Nikore Associates they are a more profitable, scalable and loyal segment, it also recommends measures to attract women entrepreneurs to participate in fintech: low-interest loans or guarantees. Free loans offered by Lendingkart etc. Alternative credit scoring methods like AyeFinance or Tala, digital lending community like Mahila Money understand the needs and offer customized products for women entrepreneurs. The right mix of public-private partnerships can help women entrepreneurs work for economic development and self-employment. According to the IBEF

2021 report, there are more than 63 million micro, small and medium enterprises in India, of which 20 percent are owned by rural women. These women only dealt with the cash pandemic, but they had to embrace digital solutions to better survive the crisis. Connectivity has been a problem in rural areas as well as in many urban areas. Women needed a good mobile phone and basic digital skills to use and manage applications running on mobile devices. Nokia and many others have already provided them with usable small portable devices - mobile phones and the reach or penetration of these devices in rural areas is good. This has helped women adopt new digital banking services faster.

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The latest Global Findex 2021 database showed an increase in the use of digital payments during the crisis, mainly for digital banking services. The survey also revealed that women use digital banking services to make payments etc. less than men. Many digital literacy programs and initiatives have been launched by the government and SEWA. The Sustainable Development Goal 2030 can be achieved faster with digital acceptance and use. Women who embrace this new shift in digital banking will benefit the economy in many ways through increased income and GDP.

Bharatiya Yuva Shakti Trust (BYST) conducted a study to find out whether women entrepreneurs can start a business in Chennai, Pune and Delhi NCR. The survey conducted between February 2019 and August 2022 revealed that almost 85% of women entrepreneurs faced difficulties in obtaining credit services and critical financial services. But after a few months of training at BYST, women's skills (banking and business) improve considerably. The aim of this study was to get 450 women entrepreneurs to start businesses in three cities and create jobs, which was duly achieved.

Digital Sakhi, a program launched by L&TFS, will help train rural women in Kerala with the necessary skills and knowledge to build trust and foster a digital financial inclusion ecosystem. It also focuses on the SDGs to train women entrepreneurs in management and technology. The women are called "**Digital Sakhis**" and each has a mobile tablet. The purpose of the program is to develop and train them to build their business and improve their livelihoods.

Mahila Money Prepaid Card was recently launched by **Mahila Money**, Visa and Transcorp as a service for women entrepreneurs to help them use digital payments more effectively. It is a new age product for female digital entrepreneurs and small business owners who want banking services that are equivalent to visiting a physical bank branch. But this digital bank provides greater flexibility, protection and convenience. This mutual partnership for digital and financial empowerment of women entrepreneurs is helping many start-up entrepreneurs.

The **IFundWomen** program trains women entrepreneurs across India in digital payments and empowers women small business owners by understanding the digital payment system. This program provides women entrepreneurs and fintech solution for financial independence for women in India and provides easy access to funding. This card helps them meet all their payment needs and get working capital loans easily. Transcorp - PPI licensee helps with online services and supports women's financial literacy to succeed in life.

III. OBJECTIVES

The objectives of the literature review are:

Exploring Digital Innovations Available to Women Entrepreneurs in India: This objective focuses on identifying and exploring the various digital innovations and technologies currently available to women entrepreneurs in India. It aims to provide an overview of digital tools, platforms and solutions that can support and strengthen the business, financial management and overall financial inclusion of women entrepreneurs.

Critically assess the role of fintech companies in improving financial inclusion: This objective aims to assess the impact and effectiveness of fintech companies in promoting financial inclusion, especially for women entrepreneurs in India. It critically analyzes the role of fintech companies, their products and services in addressing barriers and challenges to financial inclusion for women entrepreneurs. The evaluation may include, for example, access to credit, digital payment solutions, mobile banking, online markets and other fintech initiatives targeting women entrepreneurs.

IV. RESEARCH METHODOLOGY

The study uses secondary data from various public and private sources. The data is then analyzed using MS Excel to determine if digital platforms, services or innovations are helping women entrepreneurs promote their growth and financial inclusion. The Reserve Bank of India has a Financial Index (FI Index) that describes the extent of financial inclusion across the country.

Financial inclusion leads to economic growth and is essential to achieving the Sustainable Development Goals. National Financial Inclusion Strategies (NFIS) along with RBI has

initiated a Financial Inclusion Advisory Committee (FIAC) to calculate the Financial Inclusion Index every year from 2019-2020.

Year	Financial Inclusion Index	GDP
Mar-20	43.4	6.60%
Mar-21	53.9	8.95%
Mar-22	56.4	9.00%

Figure I: Data from RBI website

The FI index is calculated by taking data from banks, non-banks etc. and collecting data on various aspects of financial inclusion, mainly access (35%), utilization (45%), quality (20%), where each is recalculated. based on many factors. The quality parameter covers many factors such as financial literacy, consumer protection etc. in relation to digital inclusion. The study took data from MSME websites to understand the number of registered women entrepreneurs.

V. DISCUSSION

The researchers highlight their belief that financial inclusion and digital education are particularly important for women entrepreneurs in the MSME sector. They note that the government is taking steps to address these needs through various schemes aimed at promoting financial inclusion and providing digital education specifically for women

entrepreneurs.

Figure 2, which illustrates the number of women registered in the PMEGP system, reveals a significant decrease in the number of female entrepreneurs after the pandemic, specifically after 2020-2021. The study attributes this decline to two primary factors: a lack of financial support and a lack of awareness about the available financial support.

The findings underscore the importance of addressing the challenges faced by women entrepreneurs, particularly in terms of accessing adequate financial support and being aware of the resources and schemes available to them. The study suggests that improving financial support mechanisms and raising awareness about these opportunities can help mitigate the negative impact of the pandemic on female entrepreneurship.

Overall, the researchers emphasize the need for greater financial inclusion and digital education for women entrepreneurs in the MSME sector. They highlight the government's efforts to address these issues but also indicate the challenges faced, such as the drop in female entrepreneurs after the pandemic due to a lack of financial support and awareness. This discussion underscores the significance of implementing effective measures to provide support and increase awareness to promote the growth and success of women entrepreneurs in the post-pandemic period.

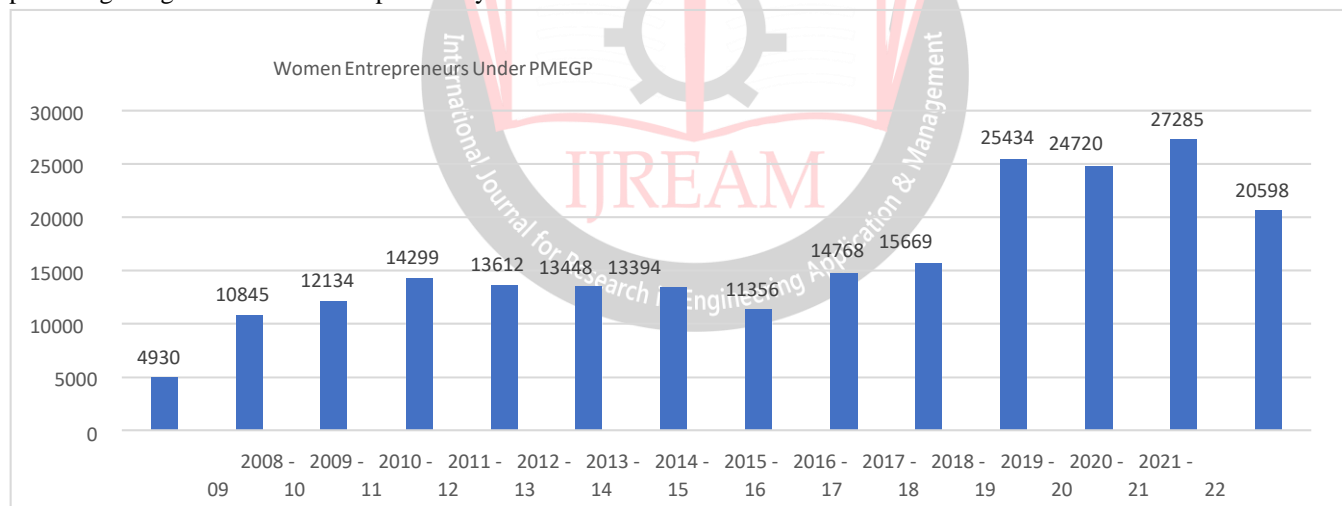


Figure II: Data based on MSME published report data from 2008 to 2022

The study suggests that the acceleration of growth in 2021-2022 can be attributed to the implementation of numerous new digital programs and initiatives aimed at improving financial inclusion for women entrepreneurs. Although the impact of digital inclusion is visible, the study acknowledges that it cannot be measured due to limitations in the data.

According to the published MSME 2021-22 reports, it is estimated that there are a total of 1,23,90,523 women-led MSMEs in the country. This indicates a significant presence of women entrepreneurs in the MSME sector.

Figure I illustrate the increase in the Financial Inclusion (FI) index and GDP, indicating positive trends in financial inclusion and economic growth. **Figure II** shows the increase in the number of women entrepreneurs after the pandemic, further supporting the notion that digital inclusion initiatives have had an impact on empowering women entrepreneurs. However, the study

acknowledges that the exact extent of this impact cannot be measured due to data limitations.

Additionally, **Figure III** provides insights into the presence and distribution of women-owned enterprises across different states in India. This information highlights the regional variations in women's entrepreneurship and emphasizes the need for targeted efforts to support and promote women entrepreneurs in specific regions.

Overall, the study suggests that the implementation of digital programs and initiatives has had a positive impact on financial inclusion and the number of women entrepreneurs in India. However, due to limitations in data measurement, the exact magnitude of this impact cannot be determined. The findings underscore the importance of continued support and further research to assess and enhance the effectiveness of digital inclusion initiatives for women entrepreneurs across different states in India.

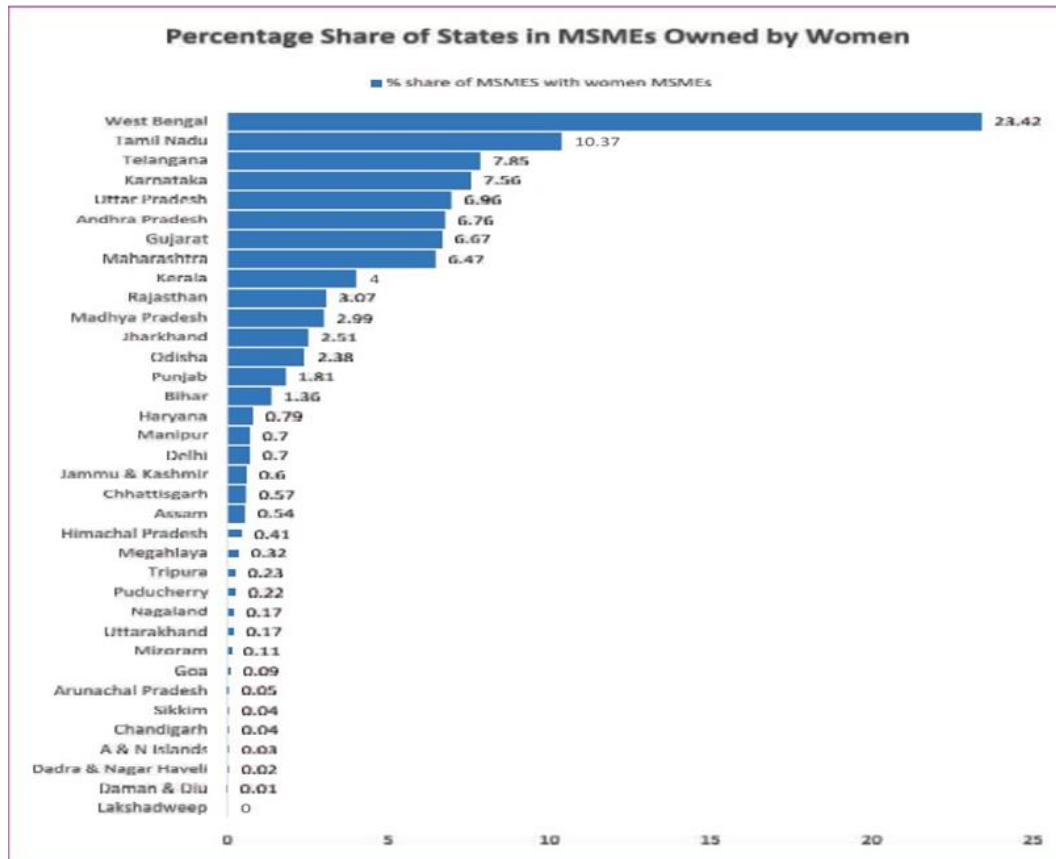


Figure III: Percentage of Women Owned MSMEs (Women Entrepreneurs) in Indian States

The measures taken by the Ministry (GOI) to promote the welfare of these women entrepreneurs are

1. Loan for upgradation of existing PMEGP/MUDRA units
2. Credit Guarantee System for Micro and Small Enterprises (CGTMSE)
3. Micro and Small Enterprise Cluster Development Program (MSE-CDP).
4. Fund for the Revival of Traditional Industries (SFURTI)
5. Program for the Promotion of Innovation, Rural Industry and Entrepreneurship.
6. National SC-ST Distribution System
7. System of Entrepreneurial Skills Development Program (ESDP).
8. Support Program for Educational Institutions (ATI).
9. Coconut Vikas Yojana - Umbrella Scheme
10. Procurement and Marketing Support System (PMS).
11. Modified Market Development Assistance (MMDA)
12. MSME – Innovative (Incubator, Intellectual Property, Design and Digital MSME)

Financial Empowerment	Women Entrepreneurship Platform (WEP)	A platform to bring together various resources to facilitate the ease of entrepreneurial journey for women. It motivates aspiring entrepreneurs to start their businesses, provides knowledge and ecosystem support to women entrepreneurs to foster entrepreneurship and also provides hands-on support to entrepreneurs in setting and scaling up businesses.
	Pradhan Mantri MUDRA Yojana (PMMY)	Provides access to institutional finance to micro/small businesses, under which aspiring female entrepreneurs can now avail funds of up to Rs. 10 lakhs to start a small or micro-enterprise.
	Rashtriya Mahila Kosh (RMK)	an apex micro-finance organisation that provides micro-credit at concessional terms to poor women for various livelihood and income generating activities.
	Sukanya Samriddhi Yojana (SSY)	has empowered many girls economically by opening their bank accounts.

Figure IV: Government Schemes for Financial Empowerment of Women MSMEs taken from MSME published report 2021 – 2022

Figure IV above shows various government programs launched for economic empowerment of women SMEs in India. They help women entrepreneurs get financial support at a cheaper price. Details of the schemes are provided on the website and most offer low-cost or interest-free loans for new or existing businesses with easy repayment terms. Some private public sector banks and NBFCs have also launched many business loan schemes for women entrepreneurs.

1. Reserve Bank of India's Cent Kalyani - Offers low-interest loans to women entrepreneurs to start a new business or expand an existing business, with no processing fee and no collateral.

2. ICICI Bank - Self Help Group Bank Linkage Program (SBLP) - offers a loan of up to ₹ 10 lakh to each SHG member for 3 years.

3. Bank of Baroda (BOB) Shakti Scheme - Supports women entrepreneurs involved in various activities like agriculture, handicrafts, retail, manufacturing, service and many other sectors.

4. KBL Mahila Udyog Loan from Karnataka Bank – The loan is offered only to women and the maximum loan amount offered is Rs. 10 lakhs with a maximum repayment period of 120 months.

5. PNB Mahila Udyami - Business Loan Scheme up to Rs. 10 lakhs for new and existing units with a loan tenure of 3-5 years (term loan) and 3 years (find) with a margin of up to 25%.

6. Dena Shakti Scheme provides low interest financing to women entrepreneurs engaged in various activities. The aim of the system is to increase the financial capabilities of women so that they can meet their working capital needs.

7. Karnataka State Women Development Corporation Udyogini Scheme was implemented to provide financial assistance to women whose family income is less than 1.5 lakhs per annum.

Private sector entities are also launching many programs to improve financial inclusion and increase digitization of women entrepreneurs.

1. On India's 75th Independence Day, Pay Nearby launched a zero-investment plan for rural women entrepreneurs, covering 20,000 PINs. The plan aims to reach more than 10,000,000 women entrepreneurs from rural areas of the country by 2024. The initiative tries to instill financial independence in all rural women by abolishing the fees for opening a business account. It also aims to develop the professional skills of all women so that they all contribute equally to the development of the economy. Another application of "zidd" is the empowerment of all women so that they contribute equally to economic growth.

2. Gujarat-based NGO SEWA has partnered with a fintech company to launch M-bachat, an app that helps women sell products on a digital platform. The program is in Gujarati and offers its registered women entrepreneurs a digital marketplace where artisans can sell their handmade products.

3. LXME is a financial platform focused on making money easier for women through communication and engagement. It is a women's app that provides women entrepreneurs with the right information and the right tools to use their funds effectively.

4. By 2027, Tide plans to support 500,000 female entrepreneurs to realize their dreams. The Women in Business initiative plans to create an incubator center for

women in India to help them start and grow their businesses. They created a mentoring panel so that women are supported by an internal panel in marketing, HR etc. as all management functions.

VI. FINDINGS

The findings of the study indicate the following:

Support systems for fintech and digital inclusion: India has established several systems and schemes to support fintech and digital inclusion, with a focus on improving financial inclusion for small and medium enterprises. Schemes like the Shakti scheme, Mahila Udyam scheme, and Udyogini scheme provide low-cost, interest-free, or even free loans to women entrepreneurs. Initiatives such as the Shakti system, M-bachas, and skill development programs aim to enhance the skills, training, and mentorship of women entrepreneurs in their business journey.

Positive development in the role of fintech companies: A critical assessment of fintech companies reveals a positive trend. The Financial Inclusion index, GDP, and the number of female entrepreneurs have all shown an increase from 2019 to 2022. This suggests that fintech companies are playing a vital role in driving digital innovation and improving financial inclusion for women entrepreneurs.

Growth in the share of companies owned by women: Data analysis indicates that the share of companies and firms owned by women is projected to grow by approximately 76% between 2008 and 2022. This highlights the increasing participation and impact of women entrepreneurs in the business landscape.

Increasing rate of financial inclusion: Over the past three years, the rate of financial inclusion has seen a positive increase, rising from 43% to 56%. This demonstrates progress in expanding access to financial services for women entrepreneurs.

In conclusion, the findings showcase the effectiveness of the support systems and schemes in India aimed at promoting fintech and digital inclusion for small and medium enterprises, particularly for women entrepreneurs. The positive development observed in the Financial Inclusion index, GDP, and the number of female entrepreneurs indicates the success of fintech companies in driving digital innovation and enhancing financial inclusion. The growth in the share of companies owned by women and the increasing rate of financial inclusion further emphasize the positive impact of these initiatives.

VII. LIMITATIONS

The available data on the Financial Inclusion (FI) index is limited to only 2.5 years (2019-2022) and the sample size is only 12 women entrepreneurs, it can indeed cause problems in the statistical measurement of the results and the application of data. analysis techniques Due to the small

sample size and limited time frame, it may be difficult to draw firm and generalizable conclusions.

In such cases, it is important to acknowledge the limitations of the study due to data availability and volume. It may be necessary to approach the analysis with caution and view the results as preliminary or preliminary rather than definitive. The small sample size may limit the generalizability of the findings to the larger population of women entrepreneurs in India. It can be useful to complement quantitative data analysis with qualitative research methods such as interviews, surveys or case studies to better understand the experiences and challenges of women entrepreneurs in relation to digital innovation and economic inclusion. Qualitative methods can provide valuable information even with limited sample sizes, capturing rich contextual information and personal stories.

In addition, to overcome the limitations imposed by a small data set, it may be useful to examine other data sources or conduct a broader literature review. By combining a wider range of research, reports and academic literature, a more comprehensive understanding of the current state of digital innovation and the role of fintech companies in improving the financial inclusion of women entrepreneurs in India can be gained.

VIII. CONCLUSION

The study notes that the Indian government, financial institutions and organizations have introduced many digital innovations, systems and programs post-pandemic to financially support MSME women entrepreneurs. Due to certain limitations, the study used secondary data to confirm the financial inclusion of women entrepreneurs in India. The data collected from most of the government websites like RBI and MSME shows that the Financial Inclusion Index and the Gross Domestic Product showed a positive relationship between the two as both show a growth trend from 2019 to 2022. The number of registered women entrepreneurs in MSME will also increase in 2021-2022. There are many gaps in the research that researchers can exploit in further research. the literature review provides an overview of the digital innovations available to women entrepreneurs in India and assesses the contribution of fintech companies to promote financial inclusion. It is recommended to review relevant research articles, reports, case studies and industry publications to gather in-depth information on each objective. In addition, the review must critically analyze the strengths, limitations and potential development areas of digital innovations and the role of fintech companies in meeting the financial inclusion needs of female entrepreneurs in India. There is also scope for policy instruments to understand the landscape of digital inclusion with financial inclusion and drive innovation where necessary.

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