DIGITAL FINANCIAL INCLUSION: EXPLORING THE IMPACT OF TECHNOLOGY ON WOMEN'S EMPOWERMENT AND FINANCIAL EDUCATION IN EMERGING ECONOMIES

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Abstract:

This paper explores the impact of digital financial services on women's financial inclusion in India, recognizing the potential of technology to break down traditional barriers. The research objectives include examining the extent of digital financial inclusion, analyzing its influence on women's economic independence, and exploring the effectiveness of digital platforms in delivering financial education. By bridging existing research gaps and considering the unique socio-cultural fabric of India, this study aims to contribute targeted insights to policymakers and financial institutions. The research methodology employs a quantitative approach, utilizing a cross-sectional design and a structured survey to investigate variables such as education, income level, mobile banking usage, access to digital payment platforms, entrepreneurial engagement, and control over financial resources. The study's findings show the average age of respondents is 25–31 and their income ranges from 2–4 Lacks. A large percentage uses mobile banking on a weekly or monthly basis, and most people have access to various digital payment channels. However, the vast majority of respondents aren't exactly running a business. The results show that digital financial services have the ability to change traditional gender relations and that there are differences in how people engage in entrepreneurship. The article discusses the implications for policymakers and financial institutions, highlighting the importance of developing culturally relevant programmes to help women in emerging economies become more financially independent.

Keywords: Digital financial inclusion, Women's empowerment, Economic independence, Financial education, Financial decision-making, Skill development

INTRODUCTION:

In the tapestry of societal structures in India, women often find themselves ensnared in historical gender roles and discriminatory practices, relegating them to a vulnerable position. Rooted in traditional norms, women face limited access to education and encounter economic restrictions, perpetuated by familial and societal norms. This paper embarks on an exploration of the challenges faced by women in the Indian context, with a particular focus on their constrained financial agency.

In India, women grapple with multifaceted challenges, including limited property rights and entrenched gender discrimination, which hinder their ability to access financial services independently. Existing studies underscore the disparities faced by women, reflecting a scenario where financial institutions often bypass women as individual customers. Instead, these institutions commonly expect women to obtain permission from male family members, reinforcing traditional norms and restricting women's financial autonomy within households.

Within this intricate backdrop, a pivotal transformation is underway in the Indian financial landscape — the burgeoning influence of digital financial services. As India witnesses a rapid shift toward a digitized economy, the rise of mobile banking and digital financial tools presents a unique opportunity to redefine traditional gender dynamics. The advent of digital financial services offers accessibility and outreach on an unprecedented scale, potentially breaking down barriers that have long restricted women's financial independence.

The Indian context is witnessing a surge in digital financial inclusion, and as of [insert current year], a significant percentage of the population is actively engaging with digital financial platforms. This technological transformation presents a compelling narrative that extends beyond mere convenience; it holds the promise of dismantling barriers that have historically impeded women's financial agency.

This paper seeks to unravel the transformative impact of digital financial services on women's financial inclusion in the Indian context. By delving into the nuances of this technological wave, the study aims to analyze how digital advancements are reshaping traditional gender dynamics within the financial sphere. By scrutinizing case studies and leveraging insights from existing literature, the research endeavors to offer a comprehensive understanding of the challenges, opportunities, and the overall impact of digital financial services on women's empowerment and financial education in India.

Digital Financial Inclusion: Bridging Gaps through Technology

Digital Financial Inclusion (DFI) is a transformative concept that leverages digital technologies to broaden access to financial services, catering to individuals who have traditionally been excluded from the formal financial sector. The primary goal of DFI is to bridge the gap between the unbanked or underbanked populations and mainstream financial services, promoting financial stability, economic empowerment, and overall socio-economic development.

Advantages of Digital Financial Inclusion:

1. Enhanced Efficiency: Digital channels streamline financial transactions, offering users the ability to conduct various operations quickly and conveniently. This efficiency is particularly beneficial for those in remote or underserved areas.
2. Inclusivity: DFI extends financial services to populations that have limited or no access to traditional banking infrastructure. This inclusivity is vital for empowering marginalized communities and reducing financial inequality.

3. Data-Driven Insights: The data generated by DFI transactions provides valuable insights for service providers, regulators, and policymakers. These insights enable a better understanding of user needs, preferences, and financial behaviors.

Women's Economic Empowerment (WEE)

Women's Economic Empowerment (WEE) is a multifaceted concept encapsulating the transformation of a woman's economic agency and influence within societal and household frameworks. A woman achieves economic empowerment when she possesses the following attributes:

1. Access to Skills, Resources, and Institutions:

- Skills: WEE acknowledges that economic empowerment begins with the acquisition of skills. A woman is considered economically empowered when she has access to educational and vocational training that equips her with the competencies necessary to actively participate in various markets.
- Resources: Beyond skills, access to resources is critical. Economic empowerment is realized when a woman can tap into financial, technological, and infrastructural resources that facilitate her engagement in economic activities.
- Institutions: WEE recognizes the importance of supportive structures. When a woman has access to institutions such as legal frameworks, mentorship programs, and business networks, she gains a solid foundation for effective participation in markets.

2. **Power and Agency in Economic Decision-Making:**

- Personal Preferences: Economic empowerment extends beyond mere participation; it grants women the autonomy to align economic decisions with their personal preferences. This aspect emphasizes that true empowerment is achieved when a woman can shape her economic activities in alignment with her values and aspirations.
- Control of Resources: Central to WEE is the woman's ability to exert control over personal and household resources. This involves not only earning an income but also having decision-making power regarding the allocation and utilization of financial and material resources within the household.

Impact of Technology on Women's Empowerment: A Paradigm Shift in Progress

In the contemporary era, technology is playing a transformative role in reshaping societies, and one of its most profound impacts is witnessed in the realm of women's empowerment. The integration of technology has ushered in significant changes, offering women new avenues for economic, social, and personal development. This paradigm shift is marked by several key aspects that collectively contribute to advancing the cause of women's empowerment.

Economic Empowerment: Technology breaks entry barriers, fostering women entrepreneurship and providing access to global markets. Additionally, it promotes digital skill development, enhancing employability and economic independence.

Educational Empowerment: Technology democratizes education, allowing women worldwide to access learning resources. Online platforms offer skill enhancement opportunities, enabling diverse career paths and breaking occupational stereotypes.

Healthcare Access and Awareness: Telemedicine and health awareness apps facilitated by technology overcome geographical barriers, providing remote healthcare solutions and empowering women to make informed health decisions.

Social Empowerment: Digital platforms create spaces for women to connect, share experiences, and build supportive communities, fostering social empowerment. Technology is leveraged for advocacy, amplifying women's voices in social and political spheres.

Financial Inclusion: Technology revolutionizes the financial landscape, providing women with access to digital banking and microfinance services. This enhances economic autonomy and independent financial management.

The Impact of Technology on Financial Education in Emerging Economies: Navigating the Digital Frontier

- **Wider Reach and Accessibility:**

The integration of technology into financial education is expanding its reach, particularly in emerging economies. Online platforms and mobile applications deliver financial education content, ensuring accessibility even in remote or underserved areas.

- **Cost-Effective and Scalable Solutions:**

Technology-driven financial education programs offer cost-effective solutions by eliminating the need for extensive physical infrastructure. Digital platforms enhance scalability, accommodating larger participant numbers without proportional increases in costs, thus making financial education initiatives more efficient and accessible.

- **Interactive and Personalized Learning:**

The introduction of technology introduces gamified elements into financial education, making learning more engaging and interactive, especially for younger audiences. AI-driven tools enable the customization of financial education content based on individual learning styles and preferences, catering to diverse needs and enhancing the overall learning experience.

- **Enhanced Data Analytics:**

Technology facilitates robust data analytics in financial education, allowing for real-time tracking of participants' progress and the assessment of program effectiveness. Digital platforms also enable instant feedback mechanisms, empowering educators to refine content and delivery methods based on user responses and performance.

- **Digital Financial Tools:**

In the realm of financial education, technology enables the creation of practical, hands-on experiences. Simulations and budgeting applications provide individuals with tangible experiences in managing personal finances, while online investment platforms empower them to explore investment opportunities and learn about various financial instruments in a digital environment.

- **Innovations in Inclusive Finance:**

As digital banking becomes more prevalent, financial education initiatives leverage technology to educate individuals on navigating digital financial services and understanding their benefits.

SYSTEMATIC REVIEW OF LITERATURE

Pal, M., Gupta, H., & Joshi, Y. C. (2022) - Social and Economic Empowerment of Women through Financial Inclusion: Empirical Evidence from India. Within the framework of financial inclusion in rural India, Pal, Gupta, and Joshi's paper explores the vital topic of women's empowerment. The research uses a primary survey method in Gujarat, India, to examine how social and economic variables affect women's empowerment. Through the use of logistic regression, the study establishes connections between the necessity of a bank account and important factors including income level, involvement in financial decision-making, beneficiary of social welfare programmes, and attitude towards the security of saving. With this empirical information, policymakers and practitioners may better understand the role that women's earning status, financial decision-making, and social assistance schemes play in empowering them.

Kim, K. (2022) - Assessing the Impact of Mobile Money on Improving the Financial Inclusion of Nairobi Women. The impact of mobile money on women's financial inclusion in Nairobi, Kenya is the subject of Kim's research. The study examines how mobile money has reduced financial exclusion, acknowledging the challenges women confront due to their lack of property rights and reliance on male family members. Using survey data collected from eight different districts in Nairobi, the research deduces that mobile money has significantly decreased the percentage of women who are excluded from financial services. In particular, the study highlights the empowering impacts of mobile money in enabling rapid payment and remittance services and a safe way to store money, which enhances financial inclusion for varied demographics.

Andriamahery, A., & Qamruzzaman, M. (2022) - Access to Finance, Technical Know-How, and Financial Literacy for Women's Entrepreneurial Development. Within the framework of women's entrepreneurial development, this study by Andriamahery and Qamruzzaman investigates the interplay between technical know-how, financial literacy, and access to capital. Using structural equation modelling and multivariate regression analysis, the research surveys 950 SMEs owned by women. It then measures the direct and indirect effects on the sustainability and empowerment of women entrepreneurs. The results show that there are positive and statistically significant correlations, which highlights the need for policies that make it easier for women to obtain funding, increase their technical skills, and gain financial literacy in order to empower and support women entrepreneurs.

Bhatia, S., & Singh, S. (2019) - Empowering Women through Financial Inclusion: A Study of Urban Slum. The study by Bhatia and Singh delves into the various aspects of women's empowerment in the realms of social, political, and economics. It focuses on the effects of financial inclusion in urban slums. Using structured questionnaires, 737 women in Ludhiana, Punjab, were studied in relation to the Pradhan Mantri Jan Dhan Yojana (PMJDY) programme. According to the findings, the programme was effective in advancing women's empowerment in the political, social, and economic spheres. By drawing attention to the necessity of formal financial systems to improve financial inclusion, the study makes a substantial contribution to the conversation surrounding women in urban slums.

Mehmood, Rizvi, & Ajaz (2013) - Efficiency of Women Financing Banks in South Asia. Mehmood, Rizvi, and Ajaz use Data Envelopment Analysis to evaluate four banks in South Asia that specialise in women's financing. From 2004 to 2011, the research considered the following financial institutions: First Women's Bank Limited of Pakistan, Grameen Bank of Bangladesh, Friends of Women's World Banking of India, and Mann Deshi Mahila Sahakari Limited Bank of India. With the greatest change in Total Factor Productivity, shown by Grameen Bank, the results show that changes to information technology are necessary to increase efficiency. This research fills a gap in our understanding of the inner workings of South Asian financial institutions that focus on women.

Brussevich, Dabla-Norris, & Khalid (2019) - Technology and the Gender Gap in Employment. Brussevich, Dabla-Norris, and Khalid turn their attention to the role of technology in gender employment and analyse the effects of automation on female workers and the structure of their tasks. The research shows that, on average, women carry out more mundane chores that could be automated using data from 30 economies. Eleven percent of women in the workforce are at high risk of automation, which is a higher possibility overall. The likelihood of automation is affected by age and managerial positions; this underscores the critical need for policies that tackle gender inequality in light of rapidly developing technology.

Research Gap;

Even though a substantial amount of research has been conducted on the relationship between financial inclusion and women's empowerment, there is still a research gap concerning the subtle dynamics that exist within certain cultural contexts, especially in developing nations such as India. Studies that have already been conducted tend to focus on general aspects of financial inclusion rather than delving deeply into the cultural nuances and socioeconomic elements that may have a varied impact on women's experiences and outcomes. To close this gap and gain a more thorough understanding of the variables influencing women's empowerment through financial inclusion initiatives, focused research is needed that places financial inclusion within the distinctive socio-cultural fabric of certain regions.

Research Objectives;

1. Examine the extent of digital financial inclusion among women in emerging economies.
2. Analyze the influence of digital financial inclusion on women's economic independence.
3. Explore the effectiveness of digital platforms in delivering financial education to women.

Research Significance;

With a focus on women's empowerment in emerging economies like India, this research has important implications for financial institutions, policymakers, and development practitioners who want to improve the efficacy of financial inclusion programmes. Through an exploration of the cultural subtleties and socioeconomic determinants influencing women's experiences with financial inclusion, the research seeks to offer focused insights that can guide the development and execution of more specialised and situation-specific programmes. The research's conclusions may be used to inform the development of more inclusive and culturally aware financial inclusion initiatives that truly empower women and advance socioeconomic advancement as a whole.

Research Methodology;

The research employs a quantitative methodology and a cross-sectional design to examine women's financial literacy, economic autonomy, and digital financial inclusion in developing nations. A representative sample of women will be given a structured survey instrument with a focus on factors like using mobile banking, having access to digital payment platforms, being involved in entrepreneurship, having control over financial resources, taking online financial courses, and honing budgeting skills. Face-to-face interviews or online methods will be used to conduct the survey, guaranteeing a representation of different geographical areas.

Variables;

- Education
- Income level
- Mobile Banking Usage Frequency
- Access to Digital Payment Platforms
- Entrepreneurial Engagement
- Control over Financial Resources

DATA ANALYSIS;

Table 1: Frequency table of Age groups

Age Group					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	29	15.26	15.26	15.3
	25-31	68	35.79	35.79	51.1
	32-38	44	23.16	23.16	74.2
	39-45	26	13.68	13.68	87.9
	Above than 45 Years	23	12.11	12.11	100.0
	Total	190	100	100	

Graph 1: Frequency graph of Age groups

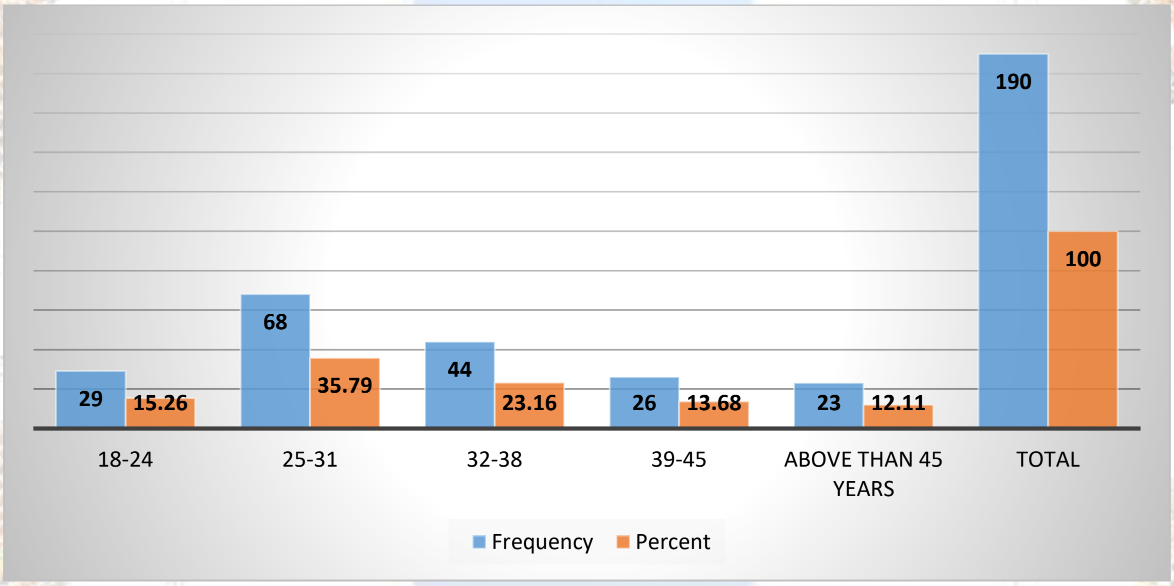

Table 1 shows the frequency distribution of responses grouped up by age group. The following age ranges are classified: 18–24, 25–31, 32–38, 39–45, and over 45. The age group of 25–31 accounts for the greatest percentage of respondents (35.79% of the sample as a whole). The next age group is 32–38, which makes up 23.16%, followed by 18–24 and 39–45, which make up 15.26% and 13.68%, respectively. Respondents above 45 years old make up 12.11% of the total sample.

Table 2: Frequency table of Income Yearly

Income Yearly					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lessthan 2 lacks	45	23.68	23.68	23.7
	2-4 Lacks	56	29.47	29.47	53.2
	4-6 Lacks	62	32.63	32.63	85.8
	6-8 Lacks	13	6.84	6.84	92.6
	Above than 8 Lacks	14	7.37	7.37	100.0
	Total	190	100	100	

Graph 2: Frequency graph of Income Yearly

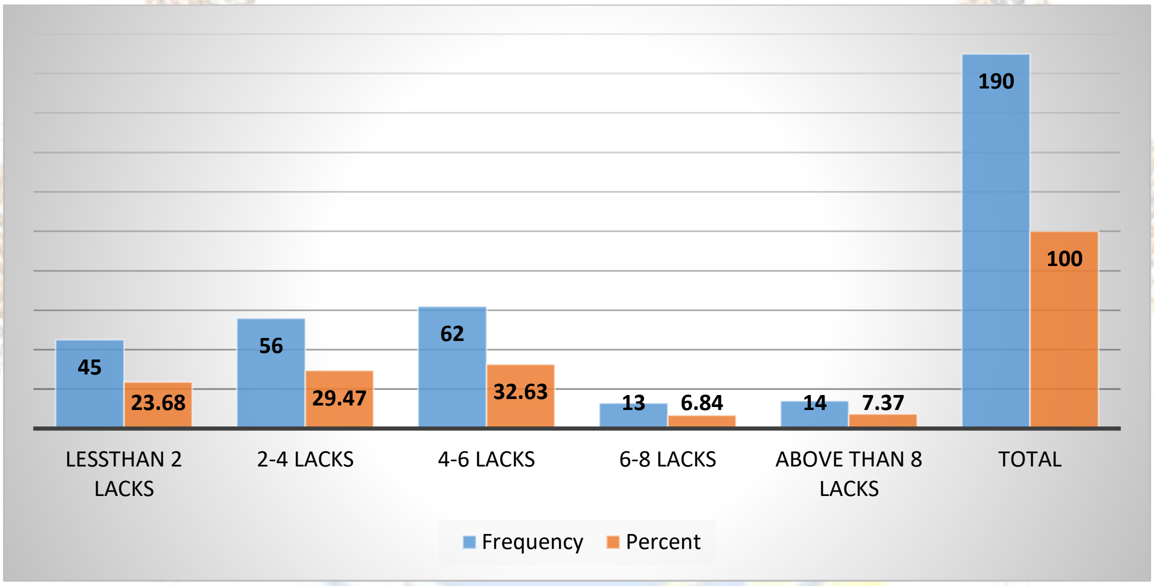

Table 2 displays a frequency distribution of respondents based on their yearly income categories. The highest number of respondents report an annual income "2-4 Lacks," constituting 29.47% of the total sample. The income category "Lessthan 2 Lacks" accounts for 23.68%, and the "4-6 Lacks" category follows closely with 32.63%. 6.84% and 7.37% of respondents reported having an income of "6-8 Lacks" and "Above than 8 Lacks," respectively.

Table 3: Frequency table of Mobile Banking Usage

Mobile Banking Usage Frequency					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rarely	23	12.11	12.11	12.1
	Monthly	28	14.74	14.74	26.8
	Weekly	35	18.42	18.42	45.3
	Several times a week	62	32.63	32.63	77.9
	Daily	42	22.11	22.11	100.0
	Total	190	100	100	

Graph 3: Frequency graph of Mobile Banking Usage

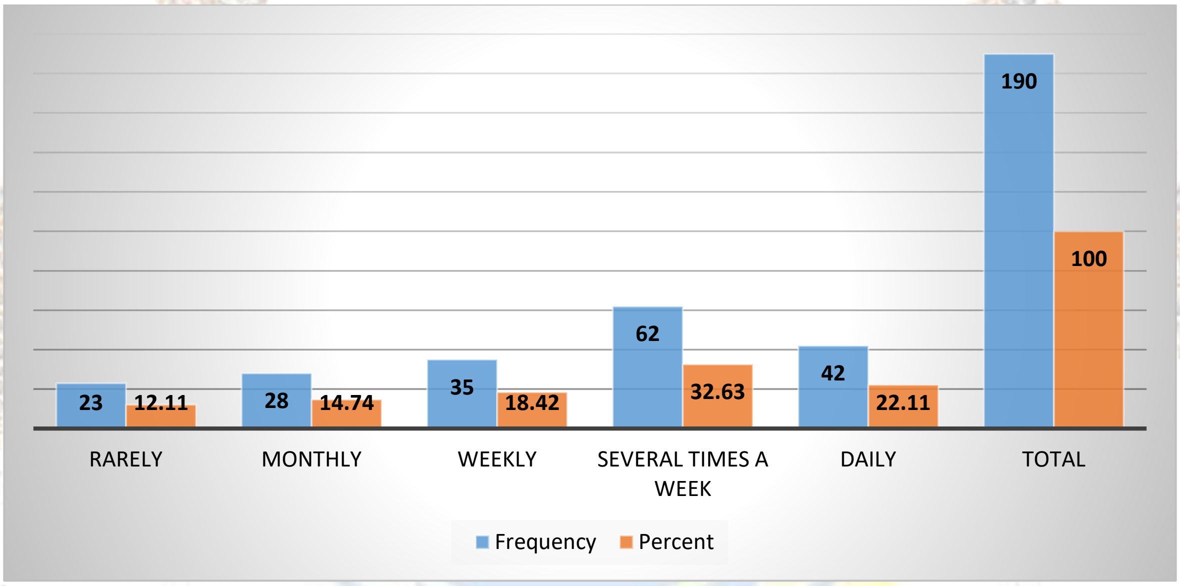

Table 3 presents a frequency distribution of participants according to their mobile banking usage behaviours. The bulk of responders (32.63% of the sample as a whole) fit into the "Several times a week" category. The "Weekly" and "Monthly" users make up 18.42% and 14.74% of the total, respectively, with the "Daily" users following closely behind at 22.11%. Of the respondents, 12.11% "Rarely" use mobile banking.

Table 4: Frequency table of Access to Digital Payment Platforms

Access to Digital Payment Platforms					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Limited access	21	11.05	11.05	11.05
	Access to one platform	51	26.84	26.84	37.89
	Access to multiple platforms	41	21.58	21.58	59.47
	Extensive access	49	25.79	25.79	85.26
	Access to all major platforms	28	14.74	14.74	100.00
	Total	190	100	100	

Graph 4: Frequency graph of Access to Digital Payment Platforms

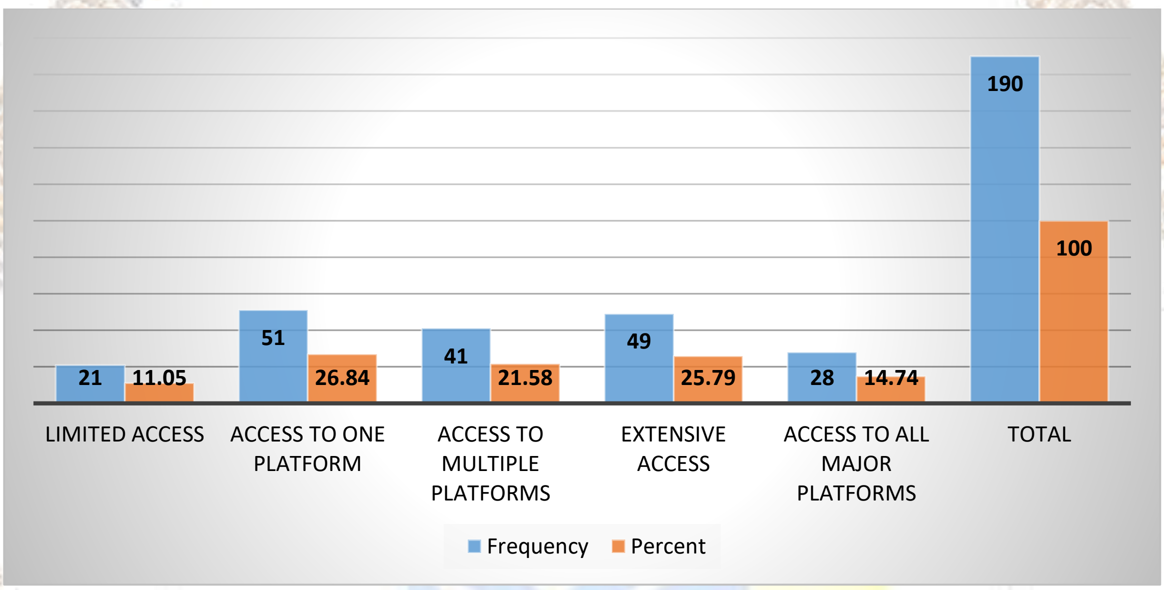

Table 4 presents a frequency distribution of respondents based on their access to digital payment platforms. The category "Access to multiple platforms" accounts for 21.58% of the sample total, which is the majority of respondents. Nearly behind, with corresponding percentages of 25.79% and 26.84%, are "extensive access" and "access to one platform". 14.74% of respondents said they have "access to all major platforms," while 11.05% said they had "limited access."

Table 5: Frequency table of Entrepreneurial Engagement

Entrepreneurial Engagement					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not engaged in entrepreneurial activities	78	41.05	41.05	41.05
	Exploring entrepreneurial opportunities	45	23.68	23.68	64.74
	Part-time entrepreneurship	23	12.11	12.11	76.84
	Full-time entrepreneurship	31	16.32	16.32	93.16
	Established business owner	13	6.84	6.84	100.00
	Total	190	100	100	

Graph 5: Frequency graph of Entrepreneurial Engagement

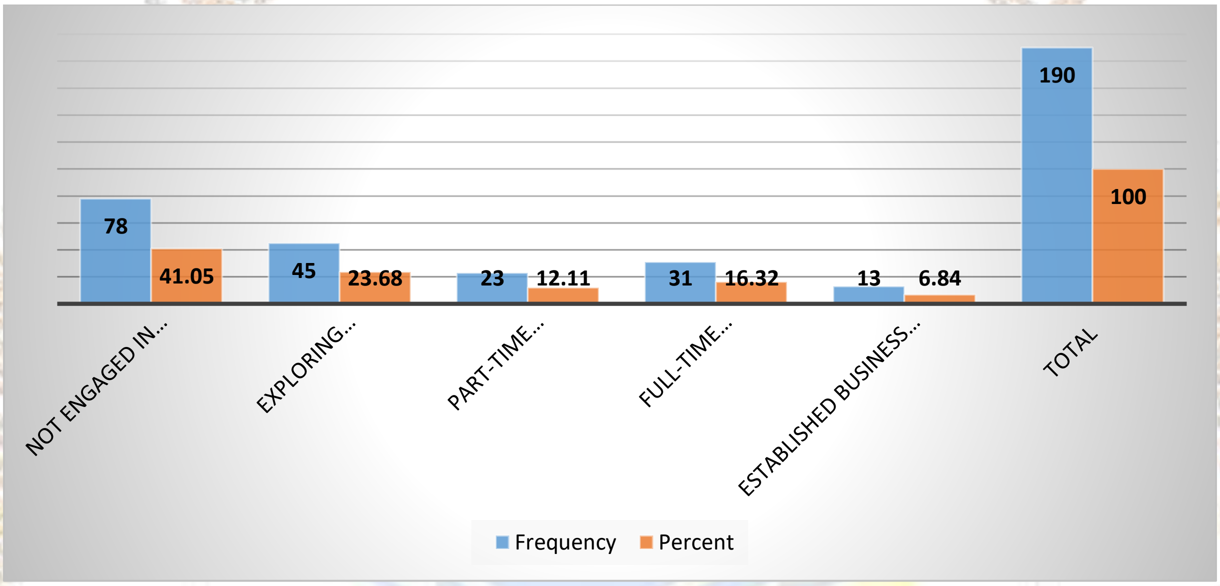

Table 5 outlines the frequency distribution of respondents based on their level of entrepreneurial engagement. 41.05% of the respondents, or the majority, are classified as "Not engaged in entrepreneurial activities." 23.68% of respondents are in the "Exploring entrepreneurial opportunities" category, while 12.11% are in the "Part-time entrepreneurship" category. 16.32% of respondents said they were "full-time entrepreneurs," while 6.84% said they were "established business owners."

CONCLUSION:

The study offers light on key insights regarding digital financial inclusion among women in emerging economies, particularly in India. The fact that women in the 25–31 age range are the ones who participate the most emphasises how crucial it is to design financial inclusion methods that appeal to their tastes. Furthermore, the majority of responders falling into the 2-4 Lacks income category highlights the necessity of individualised financial solutions that can accommodate a range of financial situations. The widespread utilisation of mobile banking, particularly many times per week, suggests a significant preference for digital financial services, which compels policymakers to improve accessibility and features that correspond with user behaviour.

The results indicate that a considerable number of digital payment systems are accessible, underscoring the need of guaranteeing compatibility and user-friendliness throughout diverse channels. The majority of respondents who do not already engage in entrepreneurial activities identify potential obstacles that should be investigated further in order to inform the creation of focused initiatives aimed at encouraging women to start their own businesses. In general, these perspectives play a crucial role in helping policymakers and financial institutions improve current programmes and create fresh approaches to promote digital financial inclusion, economic empowerment, and female entrepreneurs in developing nations.

Suggestions:

1. Tailored digital financial inclusion programs are needed to the preferences and needs of women.
2. Develop personalized financial solutions for diverse income levels, to enhance accessibility and effectiveness.
3. Address potential barriers hindering women's engagement in entrepreneurial activities by designing targeted programs that encourage and support entrepreneurship.

Limitations;

1. Because of the cross-sectional nature of the study, it is more difficult to determine causality, hence care should be taken when interpreting the observed relationships.
2. Reliance on self-reported data raises the possibility of response bias, which would skew participant answers about their financial behaviour.
3. Women's financial experiences may not be fully understood by the research because it mostly concentrates on quantitative data, thereby ignoring subtle qualitative insights.

REFERENCES:

Andriamahery, A., & Qamruzzaman, M. (2022). Do access to finance, technical know-how, and financial literacy offer women empowerment through women's entrepreneurial development?. Frontiers in Psychology, 12, 776844.

Kim, K. (2022). Assessing the impact of mobile money on improving the financial inclusion of Nairobi women. Journal of Gender Studies, 31(3), 306-322.

Pal, M., Gupta, H., & Joshi, Y. C. (2022). Social and economic empowerment of women through financial inclusion: empirical evidence from India. Equality, Diversity and Inclusion: An International Journal, 41(2), 294-305.

Bhatia, S., & Singh, S. (2019). Empowering women through financial inclusion: a study of urban slum. Vikalpa, 44(4), 182-197.

Mehmood, B., Rizvi, S. H. H., & Ajaz, F. (2013). Efficiency of women financing banks: An Intercountry comparative study of South Asia using data envelopment analysis. Asian Journal of Business and Economics, 3(3), 1-16.

Brussevich, M., Dabla-Norris, M. E., & Khalid, S. (2019). Is technology widening the gender gap? Automation and the future of female employment. International Monetary Fund.