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# THE IMPACT OF DIGITAL AND TECHNOLOGICAL ADVANCEMENTS ON WOMEN ENTREPRENEURSHIP

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## ABSTRACT :

Since the beginning of the 21st century, women's status in India has been undergoing significant changes due to advancements in industrialization, urbanization, mobility, and social reforms. Women step into the business world for various reasons, including the aspiration to gain personal dignity and societal recognition. Motivating factors such as self-reliance, career ambitions, and self-respect encourage many women to view entrepreneurship as a rewarding challenge these are known as pull factors. Empowering women should be a fundamental goal for any society. They must be provided with equality, decision-making authority, respect, and opportunities to attain economic independence. This study examines the impact of digital and technological advancements on women entrepreneurship in Delhi NCR. It explores how innovation, digital tools, and technology-driven opportunities shape business growth and empowerment for women entrepreneurs.

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**Keywords:** Women, Empowering, Women Entrepreneurship, digital, Technology-driven opportunity

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## Introduction :

Over time, a growing number of women have pursued higher education, technical skills, and professional training, resulting in a greater presence in the workforce. Increased awareness and education have enabled women to move beyond traditional roles in domestic work, handicrafts, and cottage industries, allowing them to participate in non-traditional fields, engage in higher-level professions, and establish small to medium-sized businesses and enterprises. Acknowledging this transformation, the government has prioritized specialized entrepreneurial training programs to assist women in launching their own businesses. Furthermore, financial institutions and banks have set up dedicated units to support women entrepreneurs in recent years. Women constitute nearly half of the country's population, offering immense potential for contributing to national development. However, a significant number remain primarily occupied with household duties and family responsibilities. Innovative initiatives focused on women's empowerment are fostering their confidence in attaining financial independence, which, in turn, is positively impacting the nation's economic growth.

Startups play a crucial role in driving economic expansion and have become a fundamental pillar of modern economies Akkaya (2019). They act as key drivers for attracting foreign investments, generating wealth, and creating employment opportunities. By fostering innovation and encouraging competition, startups significantly enhance the overall dynamism of an economy. Over time, the strong connection between entrepreneurship, startups, and economic development has been well recognized. Startups not only bridge market gaps with innovative solutions but also contribute to technological advancements and industry transformation. By generating jobs across various sectors, they help reduce unemployment and improve livelihoods. Furthermore, successful startups cultivate a culture of innovation and risk-taking, inspiring others to embark on entrepreneurial ventures and fueling continuous economic growth. In an increasingly globalized world, startups also serve as conduits for foreign capital and international networking, further reinforcing a nation's economic foundation; Norris (2014).

Entrepreneurship is the process of identifying, developing, and managing a business venture to generate profit while taking on financial risks. It involves innovation, problem-solving, and the ability to recognize market opportunities. Entrepreneurs play a crucial role in economic development by introducing new products, services, and business models, fostering competition, and creating employment opportunities. Successful entrepreneurship requires a combination of creativity, strategic thinking, leadership, and resilience. In today's rapidly evolving economy, entrepreneurship extends beyond traditional business ventures to include social enterprises, tech startups, and sustainable business models that address global challenges.

Women entrepreneurs are individuals or groups of women who establish and operate their own businesses. In other words, they are self-employed professionals who initiate and manage enterprises, actively participating in economic activities. Traditionally, women were confined to domestic responsibilities and had limited socio-economic independence. However, in the present day, they are making significant strides across various industries, generating employment opportunities for both themselves and others.

Women step into the business world for various reasons, including the aspiration to gain personal dignity and societal recognition. Motivating factors such as self-reliance, career ambitions, and self-respect encourage many women to view entrepreneurship as a rewarding challenge these are known as pull factors. On the other hand, some women are driven to start businesses due to family circumstances, taking on entrepreneurial responsibilities out of

necessity, which are referred to as push factors. Both pull and push factors influence women's decisions to launch new ventures or manage existing ones, ultimately helping them achieve financial independence.

Women entrepreneurs play a pivotal role in the economic development of developing nations, acting as key drivers of growth. They create job opportunities not only for themselves but also for others, strengthening the financial stability of families and communities, promoting women's empowerment, and contributing to poverty reduction. Their significance in economic progress is widely recognized, prompting governments and various non-governmental organizations (NGOs) worldwide to support their initiatives through a range of schemes, incentives, and programs.

According to the Government of India, a woman-owned business is defined as an enterprise in which a woman holds a minimum of 51% financial ownership and ensures that at least 51% of the jobs generated by the business are held by women. Schumpeter characterizes an entrepreneur as an innovator who introduces new ideas into the economy. Therefore, a woman or a group of women who initiate, innovate, or adopt an economic activity qualifies as a woman entrepreneur.

Empowering women should be a fundamental goal for any society. They must be provided with equality, decision-making authority, respect, and opportunities to attain economic independence. A key aspect of this empowerment is increasing awareness among women themselves. Advancing women's development requires enhancements in health, education, and financial independence. Acknowledging the importance of women entrepreneurs, the Government of India has introduced various initiatives to support and uplift them.

In recent years, there has been a notable surge in women-owned start-ups across diverse sectors, showcasing their resilience and effectiveness in the business arena. While the potential of women in business has always been evident, societal barriers have often hindered their progress. However, with the emergence of initiatives supporting women entrepreneurs, there is hope for fostering a stronger, more inclusive economy. Programs like Start-up Schemes for Women play a crucial role by providing a platform for women to connect with both public and private enterprises, offering financial assistance to kickstart their ventures. Recognizing women's entrepreneurship as a vital driver of economic advancement, these efforts aim to empower women and fuel overall growth.

The rise of women entrepreneurs in Delhi NCR highlights the transformative impact of digital and technological advancements on business growth, financial independence, and economic development. Technology has enabled women to overcome traditional barriers, access new markets, and enhance operational efficiency through digital tools and online platforms. Government initiatives, financial support programs, and startup ecosystems have further bolstered their entrepreneurial journey, fostering innovation and competitiveness. While challenges persist, the increasing participation of women in diverse industries signifies a shift towards a more inclusive economy. Strengthening digital literacy, financial accessibility, and policy support will be crucial in sustaining this momentum, ensuring that women entrepreneurs continue to thrive and contribute to economic progress.

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## Review of Literature :

Bowen & Hisrich (1986) integrated previously scattered research to create a model that explains the factors influencing women's entrepreneurial behavior. Their study remains a cornerstone in the field, highlighting how elements like education, professional experience, and socio-cultural influences shape women's entrepreneurial decisions and capabilities.

Birley (1989) explored the differences in market entry decisions between male and female entrepreneurs, emphasizing the impact of gender on entrepreneurial behavior. The study underscored the importance of considering cultural conditioning and situational experiences when analyzing entrepreneurial choices. Birley suggested that the availability of entrepreneurs is significantly shaped by cultural and situational factors, providing a new perspective on the dynamics of entrepreneurship.

Brush et al. (2009) developed the 5M framework, which includes markets, money, management, motherhood, and the meso/macro environment, to offer a comprehensive perspective on women's entrepreneurship. By incorporating gender as a social construct, this framework provides a more holistic approach to understanding the unique challenges and opportunities faced by women entrepreneurs within various economic and social contexts.

Jennings & Brush (2013) in their extensive review traced the progression of research on women entrepreneurship over thirty years. They identified significant themes, such as the deep connection between entrepreneurship and family dynamics, as well as the pursuit of objectives that extend beyond financial success.

Kon et al. (2015) assert that startups play a crucial role in driving innovation within the software industry. Their study contributes to both theoretical and practical knowledge by developing a conceptual framework that identifies key factors supporting a thriving digital entrepreneurship ecosystem. The research, conducted in Israel—home to one of the world's most successful software startup ecosystems—relied on qualitative methods, including semi-structured interviews, observations, and surveys. It examined the social, institutional, technological, methodological, and pedagogical aspects of entrepreneurship and startup ecosystems. To ensure broader applicability, the study presents a generalized framework, omitting elements specific to Israel, making it adaptable for future research in other regions.

Brown & Mason (2017) critically analyze and refine the concept of entrepreneurial ecosystems, exploring its underlying dynamics, theoretical constraints, and measurement approaches. They also assess its significance in shaping policy decisions. Their study introduces an initial classification of different ecosystem types, emphasizing the diverse nature of entrepreneurial ecosystems. The research highlights that these ecosystems comprise multiple stakeholders, function across different levels, and require customized policy measures to ensure effective support and sustainable growth.

Kane (2021) highlights the crucial role of entrepreneurs in driving job creation and economic growth. By establishing new businesses, they contribute to employment generation, tax revenue, and market expansion. Additionally, entrepreneurs foster innovation by developing unique products and services, which, in turn, enhance competition and stimulate improvements in existing industries. Their ability to adapt to changing consumer demands and technological advancements further strengthens economic resilience, making entrepreneurship a key factor in sustainable development and long-term prosperity.

Rai et al. (2022) explored the impact of digital transformation initiatives, including the Digital India program, on fostering women entrepreneurship in Delhi NCR. Their research revealed that improved access to digital technologies and e-commerce platforms helped women entrepreneurs address challenges related to market accessibility and business expansion, enabling greater operational growth and scalability.

**Objective of the Study :**

- To assess the influence of digital and technological advancements on women entrepreneurship in Delhi NCR.

**Primary Data**

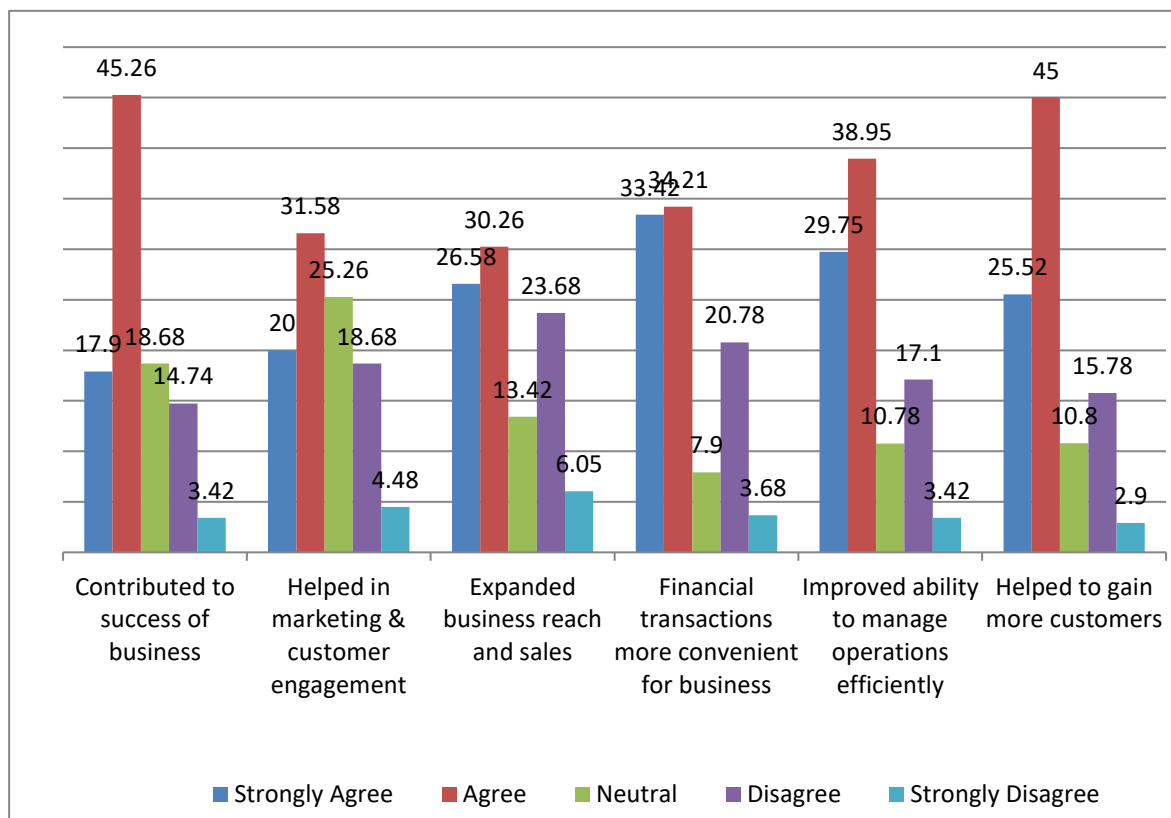
- In the present research study the primary data has been collected from women entrepreneurs selected from Delhi- NCR.

Analysis Related to Influence of Digital and Technological Advancements on Women Entrepreneurship

**Table 1: Table showing the response related to influence of digital and technological advancements on women entrepreneurship**

S. No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Digital technology has significantly contributed to the success of your business.	68 (17.9%)	172 (45.26%)	71 (18.68%)	56 (14.74%)	13 (3.42%)
2	Social media platforms have helped you in marketing and customer engagement.	76 (20%)	120 (31.58%)	96 (25.26%)	71 (18.68%)	17 (4.48%)
3	E-commerce platforms have expanded your business reach and sales.	101 (26.58%)	115 (30.26%)	51 (13.42%)	90 (23.68%)	23 (6.05%)
4	Online payment solutions have made financial transactions more convenient for your business.	127 (33.42%)	130 (34.21%)	30 (7.9%)	79 (20.78%)	14 (3.68%)
5	Business management software has improved your ability to manage operations efficiently.	113 (29.75%)	148 (38.95%)	41 (10.78%)	65 (17.1%)	13 (3.42%)
6	The availability of digital marketing tools has helped you to gain more customers.	97 (25.52%)	171 (45%)	41 (10.8%)	60 (15.78%)	11 (2.9%)

**Figure 1: Figure showing the response related to influence of digital and technological advancements on women entrepreneurship**



Analysis: 1. The analysis of responses regarding the impact of digital technology on business success indicates that a majority of respondents recognize its positive contribution. A combined 63.16% of respondents either "Agree" (45.26%) or "Strongly Agree" (17.9%), highlighting that digital technology plays a crucial role in enhancing business operations, improving efficiency, and driving growth. However, 18.68% of respondents remain "Neutral," suggesting that while they acknowledge the presence of digital tools, they may not have experienced significant benefits or challenges from them. On the other hand, a notable portion of respondents, 14.74%, "Disagree," while 3.42% "Strongly Disagree," indicating that for some businesses, digital technology may not have met expectations, or they may be facing difficulties in adopting and leveraging it effectively.

2. The analysis of responses regarding the role of social media platforms in marketing and customer engagement reveals a generally positive outlook. A total of 51.58% of respondents either "Agree" (31.58%) or "Strongly Agree" (20%), indicating that social media has been an effective tool for reaching customers, building brand awareness, and driving engagement. However, 25.26% of respondents remain "Neutral," suggesting that while they may be using social media, its impact on their business is either limited or uncertain. On the other hand, 18.68% "Disagree," and 4.48% "Strongly Disagree," showing that for some businesses, social media may not have delivered the expected results, possibly due to industry differences, ineffective strategies, or challenges in audience targeting.

3. The analysis of responses regarding the impact of e-commerce platforms on business expansion and sales indicates a generally favorable perception, with a majority acknowledging their benefits. A combined 56.84% of respondents either "Agree" (30.26%) or "Strongly Agree" (26.58%), highlighting that e-commerce has played a significant role in increasing market reach and boosting sales. This suggests that businesses leveraging online platforms have experienced advantages such as broader customer access, streamlined transactions, and enhanced sales opportunities. However, 13.42% of respondents remain "Neutral," indicating that while they may be using e-commerce, its impact on their business is either minimal or uncertain. On the other hand, a notable 23.68% "Disagree" and 6.05% "Strongly Disagree," reflecting that for some businesses, e-commerce may not have met expectations, possibly due to challenges like competition, logistical complexities, or lack of digital expertise.

4. The analysis of responses regarding the impact of online payment solutions on financial transactions reveals a strong positive perception among businesses. A significant majority, totaling 67.63%, either "Agree" (34.21%) or "Strongly Agree" (33.42%), indicating that digital payment systems have enhanced convenience, improved transaction efficiency, and facilitated smoother financial operations. The relatively low percentage of "Neutral" responses (7.9%) suggests that most businesses have formed a clear opinion on the usefulness of these solutions. However, 20.78% "Disagree," and 3.68% "Strongly Disagree," highlighting that some businesses still face challenges such as transaction fees, security concerns, or difficulties in integrating digital payment systems.

5. The analysis of responses regarding the impact of business management software on operational efficiency shows a strong positive trend. A combined 68.7% of respondents either "Agree" (38.95%) or "Strongly Agree" (29.75%), indicating that such software has played a crucial role in streamlining operations, improving productivity, and enhancing decision-making. The relatively low percentage of "Neutral" responses (10.78%) suggests that most businesses have formed a clear stance on its effectiveness. However, 17.1% "Disagree" and 3.42% "Strongly Disagree," highlighting that some businesses may face challenges such as software complexity, high implementation costs, or lack of adequate training.

6. The analysis of responses regarding the impact of digital marketing tools on customer acquisition reflects a largely positive perception among businesses. A significant majority, totaling 70.52%, either "Agree" (45%) or "Strongly Agree" (25.52%), indicating that digital marketing tools have been instrumental in expanding customer reach, increasing brand visibility, and driving business growth. The relatively low percentage of "Neutral" responses (10.8%) suggests that most businesses have a definitive stance on their effectiveness. However, 15.78% "Disagree" and 2.9% "Strongly Disagree," implying that some businesses may not have seen substantial benefits, possibly due to ineffective strategies, limited expertise, or industry-specific challenges.

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## Conclusion :

Many women entrepreneurs recognize the importance of digital tools in improving efficiency, streamlining processes, and driving business growth. However, some face challenges in fully leveraging these technologies due to adoption difficulties or unmet expectations. Social media and e-commerce platforms have proven to be valuable for expanding market reach, increasing customer engagement, and boosting sales. While many entrepreneurs benefit from these tools, some struggle with industry-specific challenges, competition, or ineffective strategies. The adoption of digital payment solutions has significantly enhanced transaction efficiency and financial operations for most businesses. However, concerns such as transaction fees, security risks, and integration difficulties remain obstacles for some entrepreneurs. Business management software and digital marketing tools play a crucial role in optimizing operations, improving decision-making, and expanding brand visibility. Despite these advantages, some women entrepreneurs face barriers such as high implementation costs, lack of training or limited expertise. Digital advancements are widely seen as enablers of a more inclusive business environment, providing greater access to resources, networking opportunities and market expansion.

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## REFERENCES :

1. Akkaya, M. (2019). Startup Valuation, *IGI Global*, 137–156.
2. Birley, S. (1989). Female entrepreneurs: Are they really any different?. *Journal of Small Business Management*, 27(1), 32-37.
3. Bowen, D. D., & Hisrich, R. D. (1986). The female entrepreneur: A career development perspective. *Academy of Management Review*, 11(2), 393–407.
4. Brown, R.; Mason, C. (2017). Looking inside the spiky bits: A critical review and conceptualisation of entrepreneurial ecosystems, *Small Business Economics*, 49, 11–30.
5. Brush, C. G., de Bruin, A., & Welter, F. (2009). A gender-aware framework for women's entrepreneurship. *International Journal of Gender and Entrepreneurship*, 1(1), 8–24.

6. Jennings, J. E., & Brush, C. G. (2013). Research on women entrepreneurs: A status report and future directions. *The Academy of Management Annals*, 7(1), 661–713.
7. Kane, T. (2021). The Importance of Startups in Job Creation and Job Destruction, *Kauffman Foundation Research Series*.
8. Kon, F.; Cukier, D.; Melo, C.; Hazzan, O.; and Yuklea, H. (2015). A Conceptual Framework for Software Startup Ecosystems: the case of Israel, *Technical Report RT-MAC-2015-01*.
9. Norris, A. (2014). Startups and older firms: Which is more responsive to local economic changes? *Monthly Labor Review*, 114–128.
10. Rai, P., Kumar, S., & Gupta, N. (2022). Technology and women entrepreneurship in India: Insights from Digital India initiatives. *Asian Journal of Entrepreneurship and Innovation*.