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Digital Safety and Cyber Protection for Women Entrepreneurs in Emerging Economies

Dr. Navlata[1*] | Dr. Ratna Mitra[2]

[1]Assistant Professor, Department of Economics, R.D. College, Sheikhpura, Munger University, Munger.
[2]Head, Department of Economics, Jamshedpur Women's University, Jamshedpur.

[*]Corresponding Author: navlata.jsr@gmail.com

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ABSTRACT

The rapid growth of the digital economy has created new opportunities for women entrepreneurs in emerging economies by improving access to markets, financial services, and business networks. Digital tools such as e-commerce platforms, mobile banking, and social media have enabled women to start and expand businesses with relatively low investment. However, increased digital participation has also exposed women entrepreneurs to various cyber risks, making digital safety a critical concern. This study explores the challenges of digital safety and cyber protection faced by women entrepreneurs in emerging economies. It is based on secondary data collected from government reports, international organizations, and academic studies. The findings indicate a rising trend in cyber threats, including online harassment, phishing attacks, identity theft, financial fraud, and data breaches. Women are particularly vulnerable due to gender-based discrimination, lower digital literacy, and limited access to secure technologies. The study highlights that cyber insecurity has significant economic and social consequences. It can lead to financial losses, reduced trust in digital platforms, and limited business growth. In many cases, fear of cyber threats discourages women from fully participating in the digital economy. To address these issues, the paper emphasizes the importance of digital literacy, awareness programs, and the adoption of basic cybersecurity practices such as strong passwords, secure payment systems, and two-factor authentication. It also stresses the need for stronger legal frameworks, efficient cybercrime reporting systems, and collaboration between governments and technology companies. The study concludes that ensuring digital safety is essential for empowering women entrepreneurs and promoting inclusive and sustainable economic development in emerging economies.

***Keywords**: Digital Safety, Women Entrepreneurs, Emerging Economies, Cyber Threats, Phishing Attacks.*

Introduction

Digital technology has become one of the most powerful drivers of entrepreneurship in the 21st century. The rise of smartphones, affordable internet services, e-commerce platforms, digital banking, and social media marketing has transformed traditional business practices across the world. Women entrepreneurs, especially in emerging economies such as India, Bangladesh, Kenya, Indonesia, Brazil, and Nigeria, are increasingly using digital platforms to sell products, promote services, manage customer relationships, and access global markets.

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Digital entrepreneurship has empowered women by reducing dependence on physical marketplaces and enabling flexible working conditions. Social media platforms such as Facebook, Instagram, WhatsApp Business, and online marketplaces like Amazon, Flipkart, Etsy, and Meesho have created income opportunities for millions of women. According to the Global Entrepreneurship Monitor (GEM), women-owned businesses contribute significantly to employment generation and local economic development in developing economies.

However, the digital environment also exposes entrepreneurs to cyber threats. Women entrepreneurs often become targets of online scams, cyberstalking, phishing attacks, fake business profiles, ransomware attacks, and financial fraud. Cybercriminals exploit weak cybersecurity awareness and inadequate digital protection systems to steal financial information, customer data, passwords, and business identities.

Women face additional gender-specific online threats such as:

- Online harassment
- Trolling
- Deepfake exploitation
- Sexual blackmail
- Social media abuse
- Cyberbullying

A Reuters report revealed that approximately 57% of women entrepreneurs in developing countries experienced online harassment, while nearly 41% reduced their online visibility because of safety concerns. These threats negatively affect business confidence, digital participation, and psychological well-being.

In emerging economies, weak cyber infrastructure, limited digital literacy, and inadequate legal protections further increase vulnerability. Therefore, ensuring digital safety has become essential not only for business growth but also for women's empowerment and economic inclusion.

Objectives of the Study

The main objectives of this research paper are:

- To examine the importance of digital safety for women entrepreneurs.
- To identify major cyber threats affecting women-led businesses.
- To analyse challenges of cybersecurity in emerging economies.
- To study the economic, social, and psychological impact of cyber insecurity.
- To evaluate government and institutional initiatives related to cyber protection.
- To suggest recommendations for improving cybersecurity awareness and digital resilience.

Research Methodology

This study is based on secondary data collected from:

- Government publications
- Cybersecurity reports
- World Bank reports
- Research journals
- Reuters and international news sources
- Entrepreneurship and digital economy studies

The research uses descriptive and analytical methods to examine cybersecurity trends and women entrepreneurship patterns in emerging economies.

Concept of Digital Safety

Digital safety refers to the protection of users, businesses, and digital systems from cyber threats, unauthorized access, fraud, identity theft, and online abuse. It includes safe internet practices, secure online transactions, data privacy protection, and responsible digital behavior.

For women entrepreneurs, digital safety is important because businesses increasingly depend on:

- Online payment systems
- Cloud storage
- E-commerce websites
- Social media marketing
- Digital customer databases
- Remote communication platforms

Without proper digital protection, businesses can suffer financial losses, data theft, reputational damage, and operational disruptions.

Components of Digital Safety

Components	Description
Data Privacy	Protection of personal and business data
Cyber Hygiene	Safe digital practices such as password management
Online Safety	Protection from cyberbullying and harassment
Secure Transactions	Safe digital payments and banking
Network Security	Protection from hacking and malware
Digital Awareness	Understanding cyber risks and prevention

Women Entrepreneurship in Emerging Economies

Women entrepreneurship in emerging economies has become a powerful driver of economic growth, social development, and poverty reduction. Across countries in Asia, Africa, and Latin America, women are increasingly starting businesses in sectors such as retail, agriculture, technology, handicrafts, education, and digital services. Their participation in entrepreneurship not only creates employment opportunities but also improves family income, education, and healthcare standards. However, women entrepreneurs in emerging economies continue to face several challenges, including limited access to finance, lack of digital literacy, gender discrimination, inadequate training, and restricted market access. Social and cultural barriers often discourage women from taking leadership and business roles. Despite these obstacles, government schemes, microfinance institutions, self-help groups, and digital platforms have significantly encouraged women's entrepreneurial activities. The rise of social media and e-commerce has also enabled women to promote products, connect with customers, and operate businesses from home. Women entrepreneurship therefore plays a crucial role in achieving sustainable development, gender equality, and inclusive economic progress in emerging economies.

Importance of Women Entrepreneurship

Women entrepreneurship plays a vital role in economic growth, employment generation, and social development. It empowers women with financial independence, improves family welfare, and promotes gender equality. Women entrepreneurs bring innovation, creativity, and leadership to business and society. Their participation in entrepreneurship also inspires other women, strengthens communities, and contributes significantly to national development and sustainable economic progress.Women-led businesses contribute to:

- **Economic Growth** – Women entrepreneurs contribute to national income and economic development.
- **Employment Generation** – They create job opportunities for others in society.
- **Women Empowerment** – Entrepreneurship gives women financial independence and self-confidence.
- **Poverty Reduction** – Increased family income helps in reducing poverty levels.
- **Gender Equality** – Encourages equal participation of women in economic activities.
- **Innovation and Creativity** – Women bring new ideas, products, and business strategies.
- **Improved Living Standards** – Better income improves education, healthcare, and nutrition of families.

- **Social Development** – Women entrepreneurs contribute to community welfare and social progress.
- **Skill Development** – Entrepreneurship develops leadership, management, and decision-making skills.
- **Rural Development** – Women-led small businesses support rural industries and local markets.
- **Digital and Global Participation** – Online platforms help women connect with wider markets.
- **Sustainable Development** – Women entrepreneurship supports inclusive and balanced economic growth.

According to the World Bank, women entrepreneurs improve household income and community development significantly in low-income economies.

Digital Platforms Supporting Women Entrepreneurs

Women increasingly use:

- WhatsApp Business
- Instagram stores
- Facebook Marketplace
- Amazon
- Flipkart
- Meesho
- YouTube marketing

These platforms allow women to operate businesses from home while balancing family responsibilities.

Major Cyber Threats Faced by Women Entrepreneurs

- **Phishing Attacks**

Phishing is a cybercrime where fraudsters send fake emails, messages, or links to steal passwords, banking details, or personal information. Small businesses are common targets because they often lack advanced cybersecurity systems.

Women entrepreneurs may receive:

  - Fake payment confirmations
  - Fraudulent bank alerts
  - Fake customer orders
  - Malicious links

Effects of Phishing

  - Financial loss
  - Account hacking
  - Identity theft
  - Business disruption

- **Online Harassment and Cyberbullying**

Women entrepreneurs frequently experience online abuse and harassment. Cybercriminals and anonymous users may send threatening or offensive messages through social media and business platforms.

Forms of Harassment

  - Trolling
  - Cyberstalking
  - Sexual comments
  - Fake reviews
  - Threatening messages

Reuters reported that 57% of women entrepreneurs experienced online harassment in digital business environments.

Impact

- Mental stress
- Reduced online engagement
- Fear of digital participation
- Lower business confidence

- **Identity Theft**

Cybercriminals create fake business profiles or misuse stolen personal information to conduct fraud. Identity theft damages customer trust and business reputation.

Common Methods

- Fake social media accounts
- Stolen login credentials
- Cloned business websites

- **Financial Fraud**

Online payment fraud has increased significantly with digital banking expansion.

Examples

- Fake QR codes
- UPI fraud
- Fake refund scams
- Fraudulent online transactions

India reported increasing cyber financial crimes associated with digital payment systems.

- **Data Breaches**

Hackers may steal customer information, business records, and confidential data from poorly secured systems.

Consequences

- Customer trust loss
- Legal liabilities
- Financial penalties
- Competitive disadvantages

- **Deepfake Technology**

Deepfake technology uses artificial intelligence and machine learning to create realistic fake images, videos, or audio recordings. It can be useful in entertainment, education, and filmmaking, but it also poses serious risks such as misinformation, identity theft, fraud, and cybercrime. Deepfakes can damage reputations and spread false information, making digital awareness and cybersecurity increasingly important in modern society. Artificial Intelligence tools are increasingly used to create fake images, videos, and voice recordings. Women entrepreneurs may become victims of digital blackmail and reputational attacks.

Cybersecurity Challenges in Emerging Economies

Emerging economies face structural challenges in building secure digital ecosystems.

Table 1: Cybersecurity Challenges

Challenges	Impact
Low digital literacy	Poor awareness of cyber threats
Weak cyber laws	Limited legal protection
Inadequate infrastructure	Weak network security
Gender inequality	Reduced access to technology
High internet costs	Limited cybersecurity investments
Lack of awareness programs	Unsafe online practices

Statistical Analysis

The statistical data highlights the growing cybersecurity challenges faced by women entrepreneurs in emerging economies. Around 57% of women entrepreneurs experience online harassment, showing that more than half are affected by cyber threats such as cyberbullying, fraud, and identity misuse. Nearly 41% of women reduce their online visibility due to fear of digital attacks, which directly impacts their business promotion and growth opportunities. The 239% increase in cybercrimes against women in India reflects the alarming rise of online crimes and the urgent need for stronger cybersecurity measures. India recorded approximately 22.68 lakh cybersecurity incidents in 2024, indicating the expanding scale of cyber threats in the country. At the same time, women account for about 35–40% of internet users in India, demonstrating increasing female participation in the digital economy. These statistics clearly show that cybersecurity awareness, digital literacy, and stronger legal protections are essential for creating a safe online environment for women entrepreneurs.

Table 2: Women Entrepreneurship and Cybersecurity Statistics

Indicator	Statistics
Women entrepreneurs facing online harassment	57%
Women limiting online visibility	41%
Increase in cybercrimes against women in India	239%
Cybersecurity incidents in India (2024)	22.68 lakh
Women internet users in India	35–40%

Government and Institutional Initiatives

Government and institutional initiatives play an important role in promoting cybersecurity awareness and digital safety for women entrepreneurs. Major initiatives include:

India's Cybersecurity Efforts

- **National Cyber Crime Reporting Portal** – Helps citizens report cybercrimes, online fraud, and harassment cases quickly.
- **Cyber Swachhta Kendra** – Provides cybersecurity awareness, malware detection tools, and digital protection support.
- **Digital India Programme** – Promotes digital literacy, safe internet use, and online skill development.
- **Cyber Hygiene Campaigns** – Conducted by institutions and organizations to educate people about phishing, password security, and cyber threats.
- **Training and Workshops** – Universities, banks, and NGOs organize cybersecurity training programs for women entrepreneurs and students.
- **International Support** – Organizations like the World Bank and the United Nations support women's digital inclusion and cybersecurity awareness programs globally.

These initiatives help create a safer digital environment and encourage secure participation of women in entrepreneurship and online business activities.More than two lakh students and entrepreneurs have received cybersecurity awareness training through these initiatives.

International Initiatives

World Bank: International Initiatives

- World Bank – Supports women's digital inclusion and online business development programs.
- UN Women – Promotes safe digital participation and cybersecurity awareness for women.
- Cherie Blair Foundation for Women – Provides digital safety training and support for women entrepreneurs.

Importance of Cybersecurity Awareness

- **Protection from Cybercrime** – Cybersecurity awareness helps women entrepreneurs stay safe from hacking, phishing, fraud, and online scams.
- **Safe Online Transactions** – It ensures secure digital payments and protects financial information during online business activities.

- **Protection of Business Data** – Awareness helps in safeguarding important business and customer data from theft or misuse.
- **Confidence in Digital Business** – Women entrepreneurs become more confident in using e-commerce, social media, and digital platforms.
- **Prevention of Online Harassment** – Cybersecurity knowledge helps women deal with cyberbullying, identity theft, and online harassment.
- **Business Continuity** – Strong cybersecurity practices reduce the risk of business disruption caused by cyberattacks.
- **Customer Trust** – Secure online systems increase customer confidence and improve business reputation.
- **Digital Inclusion** – Cybersecurity awareness encourages more women to participate safely in the digital economy.
- **Financial Security** – It protects entrepreneurs from financial losses due to cyber fraud and scams.
- **Support for Economic Growth** – Safe digital entrepreneurship contributes to employment generation and economic development in emerging economies.

Recommendations for Improving Cybersecurity Awareness among Women Entrepreneurs

- **Increase Digital Literacy Programs** – Governments and institutions should provide regular digital and cybersecurity training for women entrepreneurs.
- **Affordable Cybersecurity Tools** – Low-cost security software and secure digital platforms should be made accessible to small businesses.
- **Awareness Campaigns** – Conduct workshops, seminars, and online campaigns on cyber safety and safe internet practices.
- **Strengthen Legal Protection** – Governments should enforce strict cybercrime laws to protect women from online fraud and harassment.
- **Promote Safe Digital Payments** – Encourage the use of secure payment systems and multi-factor authentication.
- **Support Rural Women Entrepreneurs** – Special programs should target rural and less educated women to improve digital awareness.
- **Partnership with NGOs and Institutions** – Collaboration with organizations can provide training, mentorship, and technical support.
- **Encourage Use of Strong Security Practices** – Women entrepreneurs should be trained to use strong passwords, antivirus software, and data backup systems.
- **Develop Cybersecurity Helplines** – Easy reporting and support systems should be available for cybercrime victims.
- **Promote Research and Innovation** – More research should be conducted on digital safety challenges faced by women entrepreneurs in emerging economies.

Future Prospects

The future of women entrepreneurship and cybersecurity in emerging economies is highly promising due to rapid digital growth, increasing internet access, and government support for digital inclusion. More women are expected to participate in online businesses, e-commerce, and digital platforms, creating new economic opportunities. Advances in artificial intelligence, cybersecurity tools, and digital education will help improve online safety and reduce cyber threats. Governments, educational institutions, and international organizations are likely to introduce stronger cybersecurity policies, awareness programs, and training initiatives. Increased digital literacy and secure technology adoption will empower women entrepreneurs to expand their businesses confidently and contribute more effectively to economic and social development in the future. Artificial Intelligence, blockchain, and biometric authentication may improve cybersecurity in the future. However, cybercriminals are also using advanced technologies. Continuous awareness and policy improvements will remain essential.The future digital economy must prioritise:

- Safe online environments
- Women's digital inclusion
- Strong cybersecurity systems
- Gender equality in technology access

Conclusion

Digital entrepreneurship has emerged as a transformative force for women in emerging economies. Online platforms enable women to achieve financial independence, business growth, and social empowerment. However, cyber threats such as phishing, online harassment, financial fraud, data breaches, and deepfake exploitation create serious barriers to safe digital participation.

Women entrepreneurs are especially vulnerable because of limited cybersecurity awareness, weak digital infrastructure, and gender-based online violence. Cyber insecurity affects not only economic growth but also mental health, confidence, and social participation.

Strengthening digital safety requires coordinated efforts from governments, educational institutions, technology companies, civil society organizations, and entrepreneurs themselves. Digital literacy programs, strong cyber laws, affordable cybersecurity tools, and awareness campaigns are essential for building resilient digital ecosystems.

Ensuring cyber protection for women entrepreneurs is not only a technological necessity but also an important step toward inclusive economic development, gender equality, and sustainable growth in emerging economies.

References

1. Reuters Report on Women Entrepreneurs and Online Safety
2. World Bank Digital Inclusion Reports
3. Global Entrepreneurship Monitor (GEM) Report
4. PIB India Cybersecurity Statistics
5. PRS India Cyber Crime Reports
6. Cherie Blair Foundation for Women Reports
7. UN Women Digital Empowerment Publications
8. National Cyber Security Policy Reports
9. Cyber Swachhta Kendra Publications
10. International Telecommunication Union (ITU) Reports
11. https://www.meity.gov.in
12. https://www.cert-in.org.in
13. https://cybercrime.gov.in
14. https://www.unwomen.org
15. https://www.worldbank.org.

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