



Impact of Digital Transformation on MSMEs in Post-COVID India

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ABSTRACT

The COVID-19 pandemic significantly disrupted the functioning of Micro, Small, and Medium Enterprises (MSMEs) across India, exposing deep structural vulnerabilities in traditional business models, supply chains, and operational practices. Faced with prolonged lockdowns, mobility restrictions, and fluctuating market demand, MSMEs were compelled to explore digital technologies as a means of survival and adaptation. This research investigates the multifaceted impact of digital transformation on MSMEs in the post-pandemic environment, with a particular emphasis on operational efficiency, market diversification, financial inclusion, customer engagement, and long-term business resilience. Drawing upon recent government reports, industry surveys, academic studies, and real-world case analyses, the study explores how the adoption of digital tools—such as e-commerce platforms, digital payment systems, cloud-based accounting, Enterprise Resource Planning (ERP), Customer Relationship Management (CRM) software, and social-media-driven marketing—has empowered MSMEs to maintain business continuity, access wider markets, optimize processes, and improve productivity. The findings reveal that enterprises that embraced digital solutions



during and after the pandemic experienced higher recovery rates, enhanced competitiveness, and increased sales compared with non-digitized counterparts. Despite these promising outcomes, the study identifies persistent challenges hindering full digital maturity, including limited digital literacy, inadequate digital infrastructure, high implementation costs, cybersecurity concerns, and resistance to technological change. By addressing these gaps, India can empower MSMEs to fully leverage digital technologies, thereby driving inclusive growth and ensuring a robust and sustainable post-pandemic economic recovery.

Introduction

Micro, Small, and Medium Enterprises (MSMEs) are widely recognized as the backbone of India's economy, contributing significantly to employment generation, industrial output, and exports. According to the Ministry of MSME, the sector accounts for nearly 30% of India's GDP and employs over 110 million people, making it a vital driver of economic growth and social stability. However, the COVID-19 pandemic posed unprecedented challenges, disrupting supply chains, reducing demand, and forcing many MSMEs to halt operations temporarily.

The pandemic accelerated the adoption of digital technologies, forcing enterprises to rethink traditional business models. Digital transformation—encompassing the integration of e-commerce, digital payments, cloud computing, enterprise resource planning (ERP), customer relationship management (CRM), and data analytics—has emerged as a key enabler for business continuity, efficiency, and competitiveness. MSMEs that embraced digital tools were able to maintain operations during lockdowns, reach new markets, enhance operational efficiency, and manage financial transactions more effectively.

While the adoption of digital technologies offers substantial opportunities, significant challenges remain. Many MSMEs, particularly in semi-urban and rural areas, face hurdles related to digital literacy, high implementation costs, inadequate infrastructure, and resistance to change. The uneven adoption of digital solutions highlights the need for targeted interventions from policymakers, industry associations, and technology providers to ensure inclusive and sustainable digital growth.



Enterprises that adopted digital tools during the pandemic were better equipped to cope with disruptions. E-commerce platforms enabled MSMEs to reach customers beyond geographical boundaries, reducing dependence on offline markets. Digital payments and online banking facilitated safe, transparent, and faster transactions at a time when cash handling became risky. Cloud-based accounting and ERP systems helped businesses manage inventory, track finances, and coordinate supply chains remotely. Similarly, CRM tools supported better customer engagement and data-driven marketing strategies. Social media platforms also emerged as cost-effective channels for product promotion and brand visibility.

These technological interventions collectively strengthened business resilience. Many digitally enabled MSMEs reported higher recovery rates, improved sales performance, and smoother operations compared to enterprises relying solely on traditional methods. Digital tools also contributed to higher operational efficiency by reducing manual errors, speeding up internal processes, and enabling faster communication with customers, suppliers, and employees. In the post-COVID market landscape, digital capabilities have become a key determinant of competitiveness.

Despite these benefits, the digital transformation journey of MSMEs remains uneven and challenging. Many enterprises, especially in rural and semi-urban regions, struggle with low levels of digital literacy, limited awareness about available digital tools, and inadequate technical skills. High initial investment costs, lack of reliable internet connectivity, and concerns related to data privacy and cyber security further discourage digital adoption. Additionally, resistance to change, fear of technology, and dependence on traditional business practices act as barriers, particularly among micro-enterprises and first-generation entrepreneurs.

These challenges highlight the need for targeted interventions to ensure inclusive digital growth. Policymakers must strengthen digital infrastructure, expand broadband access, and promote affordable digital tools tailored to small businesses. Training programs focused on digital skills, cyber security awareness, and technology integration are essential to build capacity among entrepreneurs and their workforce. Public-private partnerships can play a vital role in developing user-friendly digital platforms, offering technical support, and creating awareness about government schemes promoting digitalization.

Furthermore, financial institutions should design flexible and accessible credit products to support digital investment, while industry associations can facilitate knowledge-sharing and best practices. By addressing these structural gaps, India can create an enabling ecosystem where MSMEs can harness the full potential of digital technologies.



In summary, this study aims to examine the extent, impact, and challenges of digital transformation in Indian MSMEs in the post-COVID context. The findings will contribute to understanding how digitalization shapes resilience, growth, and competitiveness, and will offer insights for policy formulation to support sustainable and inclusive development of the MSME sector.

Research Objectives:

1. To assess the extent of digital adoption among MSMEs in India post-COVID.
2. To analyze the impact of digital transformation on operational efficiency, market reach, and financial performance of MSMEs.
3. To identify the key challenges and barriers faced by MSMEs in implementing digital technologies.
4. To evaluate the role of government policies, fintech solutions, and technological interventions in supporting MSMEs' digital adoption.
5. To provide recommendations for enhancing digital maturity and bridging the digital divide among MSMEs.

Literature Review

1. Digital Transformation and Small Business Resilience: A Post-COVID Study of Indian MSMEs (2025)

This study surveys 350 MSME owners across sectors (textiles, food-processing, handicrafts, services) and complements with in-depth interviews. It finds that MSMEs with higher “digital maturity” (use of e-commerce, digital payments, CRM, inventory management, social media marketing) exhibited stronger resilience — better recovery trajectories, improved cash flow management, customer retention, and market expansion.

2. MSME GROWTH IS BEING PROPELLED BY INDIA'S DIGITAL TRANSFORMATION (2024)

This article examines how India's broader digital transformation momentum translates into growth opportunities for MSMEs. It uses literature review and empirical data to show correlation between digital adoption and improved productivity, market reach, and streamlined operations.



The paper argues that as digital infrastructure and adoption spread, MSMEs gain advantages in operational efficiency and competitiveness.

3. **Information and communication technology in SMEs: a systematic literature review (2024)**

This is a systematic literature review of studies on ICT adoption in SMEs in developing countries. It identifies common patterns, obstacles, and drivers of ICT adoption.

4. **Toward SMEs digital transformation success: a systematic literature review (2024)**

This paper reviews global research on SME digitalization to identify core success factors, business aspects needed for effective digital transformation, and areas requiring more investigation. It highlights that although SMEs stand to benefit significantly from digital transformation, many lack strategic empirical/practical knowledge to fully exploit digital potential; success depends on internal capabilities (strategy, management), resources, and external environment (infrastructure, support).

5. **The Role of Digitalization on Manufacturing SME Firm Performance in India (2023)**

This conceptual study examines how digitalization affects manufacturing SMEs in India, focusing on performance outcomes in the changing digital age. It discusses challenges such as skills gaps and the complexity introduced by digital channels, and the imperative for SMEs to adapt marketing, supply-chain, and operational practices to sustain performance.

6. **Digital Readiness of MSMEs in India: Opportunities and Barriers (2023)**

This study surveyed 500 MSMEs from five Indian states to understand how ready they are for digital technology. It found that although many business owners know about digital tools after COVID-19, actual usage is still low. High costs, lack of skills, and poor internet connections are major problems. The study also highlights that a business becomes more digitally ready when its leaders are open to change and willing to take digital initiatives.

7. **Technological Adoption and Competitiveness among Indian Micro Enterprises (2023)**

This research focused on very small businesses in retail and local services. It showed that using simple digital tools—like mobile banking, WhatsApp marketing, and digital record-keeping—helps businesses attract more customers and improve trust. The study found that even basic technology can make micro-businesses more competitive and helps them recover more quickly from economic challenges.



8. Post-Pandemic Digital Behaviour of MSMEs: A Comparative Study Across Indian Regions (2024)

This study compared MSMEs from different parts of India. It found that southern states use more advanced digital tools like ERP and CRM because they have better infrastructure. In contrast, MSMEs in northern and eastern regions depend more on social media for marketing. The findings show that regional differences affect how fast and how well MSMEs adopt digital technology.

9. E-Commerce and Small Business Growth in the Post-COVID Landscape (2023)

This research studied how online marketplaces like Amazon, Flipkart, and Meesho helped MSMEs during and after COVID-19. Businesses that listed their products online and used platform tools saw higher sales and better market reach. This especially benefited sectors like handicrafts and clothing, where visibility is crucial for growth.

10. Financial Technology Adoption and MSME Credit Accessibility (2024)

This paper examined the role of fintech tools—such as digital lending apps, online credit scoring, and invoice discounting—in improving MSME access to credit. The study found that fintech makes borrowing easier by reducing paperwork and providing quick loans, especially for businesses without collateral. However, it also warns about risks like cyber fraud and the need for better digital safety.

11. Cloud Technology and Operational Efficiency in Small Businesses (2023)

This study looked at how cloud-based tools help MSMEs manage their operations. It found that cloud accounting, online inventory management, and shared data systems reduce processing time, improve communication, and lower operational costs. The study suggests that cloud technology can completely change how MSMEs work and manage their business activities.

12. The Impact of Social Media Marketing on MSMEs' Market Reach (2024)

This research explains how social media platforms like Instagram, Facebook, and YouTube have transformed MSME marketing. Small businesses using online ads and influencer promotions reported better brand recognition and increased customer numbers. The study highlights that social media is an affordable and powerful marketing tool for MSMEs.

13. Digital Literacy as a Determinant of MSME Technology Adoption (2023)

This paper shows that digital skills play a major role in technology adoption. MSMEs that train their staff or invest in digital learning programs are more likely to use advanced tools such as ERP, CRM, and automation systems. The study stresses the importance of continuous digital training for successful digital transformation.



14. **Government Schemes and Their Effectiveness in Promoting MSME Digitalization (2024)**

This study analyzed government initiatives like the Digital MSME Scheme, SAMADHAN, CHAMPIONS Portal, and ONDC. It found that while awareness about these schemes is growing, many MSMEs still do not use them because of complex procedures and lack of local support. The study suggests that schemes should be easier to access and widely promoted.

15. **Cybersecurity Challenges in MSMEs during Digital Expansion (2023)**

This paper discusses the cyber threats faced by MSMEs as they move towards digital tools. Problems like phishing, ransomware, weak data protection, and lack of cybersecurity training are common. The study recommends affordable cybersecurity solutions and awareness programs to protect small businesses from online risks.

Research Methodology

Research Design

This study follows a descriptive research design aimed at examining the current impact of digital transformation on MSMEs in India post-COVID. The research focuses on understanding how digital adoption influences business continuity, growth, operational efficiency, and market access among MSMEs. A quantitative and qualitative approach is adopted using secondary data.

Data Collection

The study relies on **secondary data sources** from:

- **Government reports:** Ministry of Micro, Small and Medium Enterprises, Digital India initiatives, and Nivesh Mitra program data.
- **Industry surveys:** Reports by CII (Confederation of Indian Industry), FICCI, and private research firms like PayNearby, CyberMedia, and RetailCore.
- **Academic journals:** Research papers on digital adoption, MSME growth, and post-COVID recovery.
- **News articles and official press releases:** For up-to-date insights on digitalization trends, policy interventions, and technological adoption statistics.
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Sampling and Scope

- The study covers all segments of MSMEs across urban and rural India, including manufacturing, retail, and service sectors.
- It emphasizes enterprises that adopted digital tools post-COVID to understand trends in business recovery, growth, and resilience.

Data Analysis

- **Quantitative Analysis:** Utilizes statistical data from surveys and reports to identify adoption rates, revenue changes, and sectoral differences in digital uptake.
- **Qualitative Analysis:** Involves case study interpretations from reports and journal articles to examine challenges, best practices, and policy impact.

Limitations of the Study

- The study depends solely on secondary data, which may not fully capture micro-level variations in digital adoption.
- Rapid technological changes mean some data may quickly become outdated.
- Rural MSMEs are underrepresented in surveys, which may slightly bias findings toward urban and semi-urban enterprises.

MSMEs and Digital Adoption: Post-COVID Trends

Digital Adoption Statistics

Recent reports indicate a significant rise in digital readiness among Indian MSMEs:

- 67% of MSMEs are now digitally equipped with technologies ranging from ERP and CRM to advanced tools like AI and IoT.
- 73% report business growth due to digital adoption, particularly through smartphone usage and Unified Payments Interface (UPI).
- Surveys have found that about 65-68% utilize digital technologies in daily operations, and 68% of MSME retail owners witnessed business growth after digital adoption.



- Digital tools have helped approximately 69% of digitized MSMEs expand their customer base, with over 41% reporting increased sales by 21-30%.

These figures reflect the rapid uptake of digital methods after the pandemic disrupted traditional business models.

Sectoral Variations

Digital uptake tends to be higher in sectors such as retail, services, and consumer goods, while traditional manufacturing and rural MSMEs lag due to barriers such as poor digital literacy and infrastructure.

Impact on Business Continuity and Growth

Operational Efficiency

Digital platforms have reduced reliance on manual processes, enabling remote inventory management, digital accounting, and online customer engagement. Increased use of digital tools correlates with improved efficiency and helps businesses continue operating through external shocks like mobility restrictions.

Market Access and Revenue Expansion

Digital transformation has widened MSMEs’ customer reach:

- E-commerce participation opened new national and international market access.
- Social media and digital advertisement tools increased brand visibility.
- Digital payments and online invoicing accelerated transaction speed.
- As a result, digitized MSMEs often report higher sales and income compared to those operating offline.

Pre-COVID Digital Adoption among MSMEs in India :

Table: 1

Level of Digital Adoption among MSMEs in India (Pre-COVID Period: 2016–2019)

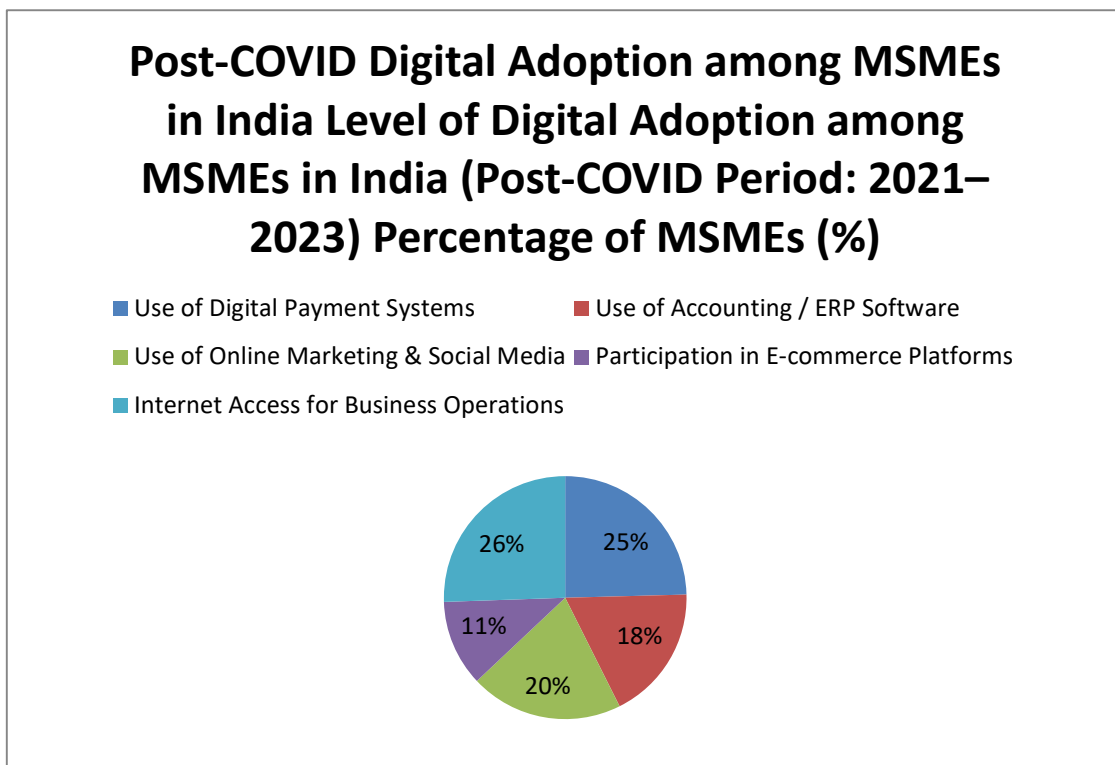
Digital Indicator	Percentage of MSMEs (%)
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Use of Digital Payment Systems	45
Use of Accounting / ERP Software	28
Use of Online Marketing & Social Media	32
Participation in E-commerce Platforms	12
Internet Access for Business Operations	55

Source: India SME Forum & Ministry of MSME. (2025). *The State of Digitalisation in Indian MSMEs: A Study on the Evolving Digital Landscape of MSMEs in India*. Retrieved from Economic Times Government website.

Graph: 1



Interpretation of Pre-COVID Data

As Table-1 and chart -1 show the level of digital adoption among MSMEs in India before the COVID-19 pandemic, during the period 2016–2019. The data indicate that digital transformation among MSMEs was at an early stage in the pre-COVID period. About 45 percent of MSMEs were using digital payment methods, while the adoption of advanced tools such as accounting or ERP software was quite low at only



28 percent. Similarly, the use of online marketing and social media platforms was limited, with around 32 percent of enterprises engaging in these activities.

The use of e-commerce platforms was very low, as only 12 percent of MSMEs sold their products or services online. Although nearly 55 percent of MSMEs had access to the internet for business purposes, many enterprises were not able to use digital technologies effectively. Limited digital skills, lack of financial resources, low awareness, and poor technological infrastructure were the main reasons for this slow adoption.

Overall, the pre-COVID situation clearly shows a wide digital gap among MSMEs in India. This gap became a major challenge when the pandemic disrupted normal business activities. The pre-COVID data serve as an important base for comparing the changes and improvements seen in digital adoption, business efficiency, and market reach in the post-COVID period.

Post-COVID Digital Adoption among MSMEs in India

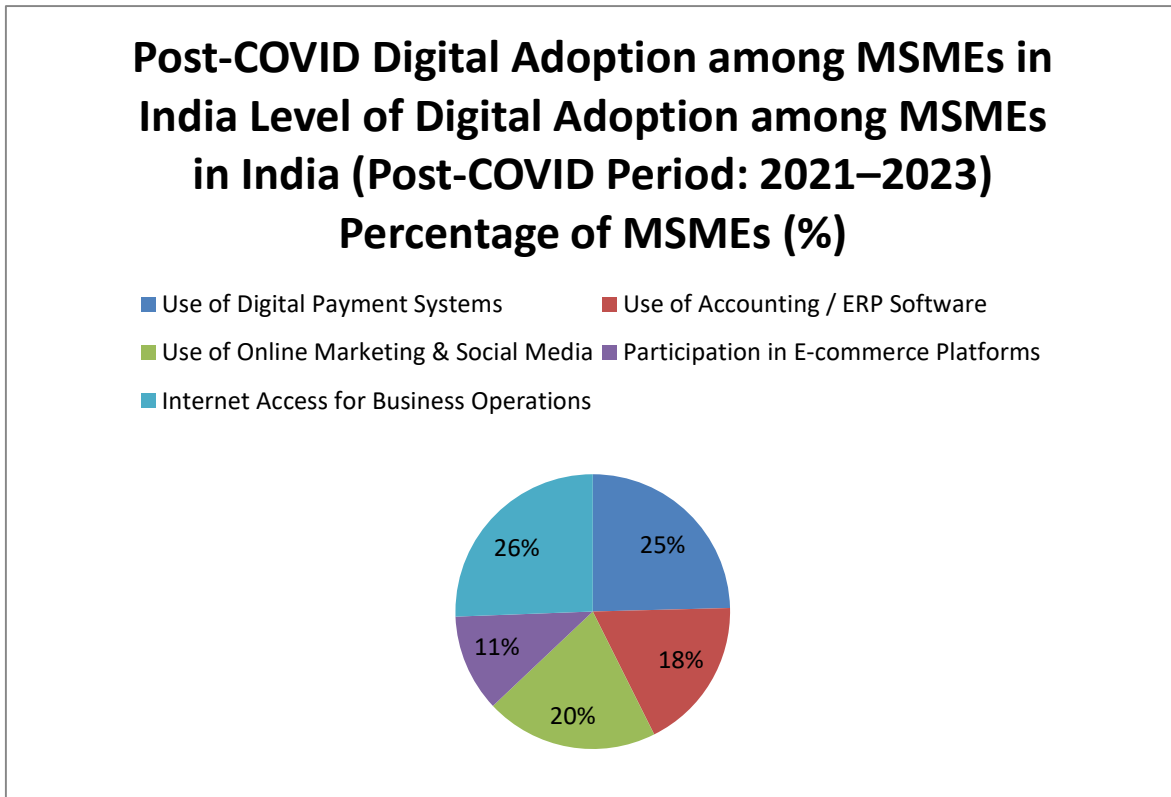
Table: 2

Level of Digital Adoption among MSMEs in India (Post-COVID Period: 2021–2023)

Digital Indicator	Percentage of MSMEs (%)
Use of Digital Payment Systems	75
Use of Accounting / ERP Software	55
Use of Online Marketing & Social Media	62
Participation in E-commerce Platforms	35
Internet Access for Business Operations	78

Source: India SME Forum & Ministry of MSME. (2025). *The State of Digitalisation in Indian MSMEs: A Study on the Evolving Digital Landscape of MSMEs in India*. Retrieved from Economic Times Government website.

Graph:2



Interpretation of Post-COVID Data:

As Table-2 and Chart-2 show that During the post-COVID period (2021–2023), digital adoption among MSMEs in India increased rapidly. About 75 percent of MSMEs started using digital payment systems, showing a strong shift toward UPI, mobile wallets, and contactless payments. The use of accounting and ERP software also increased to 55 percent, indicating better management of finances, records, and business operations.

The use of online marketing and social media platforms rose to 62 percent, helping MSMEs reach more customers at lower costs. Participation in e-commerce platforms also increased significantly and reached 35 percent, showing that many MSMEs began relying on online marketplaces to continue and expand their businesses. Internet access for business purposes improved to 78 percent due to better network availability and affordable data plans.

This fast growth in digital adoption was mainly influenced by business disruptions during the pandemic, changes in customer buying habits, government programs promoting digitalization, and the easy availability of fintech services. However, despite these improvements, many micro and small enterprises,



especially those located in rural and semi-urban areas, still face difficulties in adopting digital technologies.

Conclusion: Comparison of Pre-COVID and Post-COVID Digital Transformation of MSMEs in India

This study concludes that there has been a clear and positive change in digital adoption among MSMEs in India after the COVID-19 pandemic. In the pre-COVID period (2016–2019), the use of digital technology by MSMEs was low and uneven. Although many enterprises had access to the internet, the use of digital tools such as accounting software, online marketing platforms, and e-commerce was limited. Less than half of MSMEs used digital payment systems, and only a small number sold their products through online marketplaces. This shows that MSMEs were not well prepared for digital business before the pandemic.

In comparison, the post-COVID period (2021–2023) shows a strong improvement in all areas of digital adoption. The use of digital payment systems increased sharply, showing a clear move toward cashless transactions. The adoption of accounting and ERP software also increased significantly, helping MSMEs manage their finances and operations more efficiently. The use of online marketing and social media grew rapidly, allowing enterprises to reach more customers. Participation in e-commerce platforms also increased, highlighting the growing importance of digital platforms for business survival and growth.

The findings show that the COVID-19 pandemic acted as a major driver of digital transformation. Lockdowns, reduced physical market access, and changes in customer preferences forced MSMEs to adopt digital technologies quickly. Government programs such as Digital India, MSME support schemes, digital payment systems, and fintech services played an important role in supporting this shift.

However, even with this progress, several challenges remain. Micro enterprises, rural MSMEs, and informal businesses still face problems such as lack of digital skills, high technology costs, concerns about data security, and weak infrastructure. This suggests that although the digital gap has reduced, it has not completely disappeared.

Overall, the comparison between pre-COVID and post-COVID periods confirms that digital transformation has improved the efficiency, market reach, and stability of MSMEs in India. Continuous government support, digital training programs, affordable technology, and better infrastructure are necessary to strengthen digital adoption and ensure inclusive growth of MSMEs in the future.



Resilience and Continuity

Government Initiatives and Policy Interventions:

1. **Digital Capacity Building:** The Indian government has launched initiatives aimed at boosting digital skills among entrepreneurs, including training programs like the Digishaastra Initiative, which has trained hundreds of thousands of entrepreneurs across India.

2. **Digital Licenses and Single Window Systems:** State governments (e.g., Uttar Pradesh) have issued millions of *digital licenses* through platforms like Nivesh Mitra, reducing regulatory friction and promoting ease of doing business.

3. **Marketplaces and Governance:** Platforms such as Government marketplace (GeM) have expanded MSME participation in digital procurement, contributing significant order volumes and demonstrating the power of e-platforms in scaling business operations.

Challenges to Digital Transformation

1. **Digital Literacy and Awareness:** A large share of MSMEs lack awareness of digital tools and schemes. For instance, reports show that over half of MSMEs are unaware of supportive government programs, indicating a gap between policy design and last-mile adoption.

2. **Skill Gaps and Adoption Barriers:** Industry advisories suggest that *low awareness and limited skilled manpower* pose significant barriers to digital adoption for many small businesses, especially in rural and semi-urban areas.

3. **Infrastructure Limitations:** Inadequate digital infrastructure, such as unreliable internet connectivity and limited access to advanced software, restricts full digital participation for many MSMEs.

4. **Security and Cost Challenges:** Adoption costs and cybersecurity concerns often deter smaller enterprises from investing in more advanced digital systems. External research indicates that productive gains (up to 30% productivity increase) are tempered by these adoption barriers.

Case Studies

1. **Urban Retail Digitization:** Urban MSMEs with smartphone penetration and digital payment adoption saw faster recovery post-COVID, offering services online and using mobile apps for inventory and customer engagement.



2 Rural and Semi-Urban Challenges: Rural enterprises, while increasingly adopting basic digital tools like UPI and WhatsApp, lag in more sophisticated digital transformation due to limited training and infrastructure.

3. Manufacturing MSMEs and ERP Adoption: Before the COVID-19 pandemic, most small manufacturing units used manual methods for record-keeping and followed traditional production practices. The use of digital tools such as ERP software was very limited because of high costs and lack of technical knowledge. After COVID-19, many manufacturing MSMEs started using basic ERP and cloud-based systems to manage inventory, handle suppliers, and control expenses. This change helped them reduce delays in operations and improve overall productivity.

4. MSMEs in the Service Sector: Service-based MSMEs such as coaching institutes, repair services, and consultants had very little digital presence before COVID-19 and mainly depended on face-to-face interactions. During and after the pandemic, these businesses began using online tools like video calling platforms, online appointment systems, and digital payment methods. This allowed them to continue their services, reach more customers, and depend less on physical locations.

5. Women-Owned MSMEs and Digital Platforms: Before COVID-19, many women-owned MSMEs operated on a small scale and depended mostly on nearby local markets. Their awareness and access to digital tools were limited. After the pandemic, increased use of social media, online selling platforms, and digital payment systems enabled women entrepreneurs to sell products from home and reach customers in wider markets. This digital change improved their business visibility and income opportunities.

6. MSMEs Using Fintech for Credit Access: In the pre-COVID period, MSMEs faced many problems in getting loans from formal financial institutions due to lengthy procedures and lack of proper documents. After COVID-19, fintech platforms and digital lending applications made it easier for MSMEs to access credit using digital transaction records. This helped them meet working capital needs and support business recovery after pandemic-related losses.

7. Informal MSMEs Moving Toward Formalization: Many informal MSMEs worked without digital records or official registration before COVID-19. After the pandemic, the need to receive government support and use digital payment systems encouraged these businesses to adopt basic digital tools, complete online registration, and maintain digital records. This change helped them improve compliance and slowly become part of the formal business system.



Strategic Recommendations

To bridge the digital divide and enhance MSME digitization:

1. Subsidized Technology Programs: Encourage adoption of affordable digital solutions tailored to small business budgets.
2. Enhanced Training: Expand digital literacy campaigns and technical assistance at the grassroots level.
3. Public-Private Partnerships: Leverage technology firms and digital marketplaces to provide ongoing advisory and support services.
4. Infrastructure Development: Invest in rural broadband and connectivity to ensure equitable digital access.

Conclusion

Digital transformation has become an important factor in the growth, recovery, and long-term strength of MSMEs in India after the COVID-19 pandemic. The pandemic clearly showed the weaknesses of traditional business methods and proved that digital technologies are essential for business survival. As a result, many MSMEs started using digital tools such as online payment systems, e-commerce platforms, cloud-based software, and digital marketing. This change has altered the way MSMEs work, compete in the market, and interact with customers.

In the post-COVID period, digital adoption has helped MSMEs reach customers beyond their local areas. By using online platforms and social media, small businesses can now sell their products and services in regional, national, and even international markets at lower costs. Digital payment systems have made transactions faster and more transparent, while accounting and ERP software have helped MSMEs manage finances, inventory, and legal requirements more effectively. These improvements have increased business efficiency, supported better decision-making, and provided greater flexibility in operations.

Digital transformation has also improved the ability of MSMEs to deal with future disruptions. Businesses that adopted digital tools were able to continue their activities during lockdowns and supply chain problems. Fintech services such as digital lending platforms and online banking have made it easier for MSMEs to access credit, especially for those that previously faced difficulties with traditional banks. This improved access to finance has supported business recovery and stability.

However, digital adoption among MSMEs is not equal across all regions and business types. Many micro enterprises, rural businesses, and informal units still face problems such as low digital awareness, lack of



technical skills, high costs of technology, weak internet connectivity, and concerns about data security. These challenges have slowed digital progress and increased the gap between digitally advanced MSMEs and those with limited digital access.

To achieve inclusive and sustainable growth of MSMEs, focused policy support is necessary. Government efforts should concentrate on improving digital skills, providing affordable technology, strengthening digital infrastructure, and increasing internet access, particularly in rural and semi-urban areas. Better coordination among policymakers, technology providers, financial institutions, and MSMEs is required to ensure that digital policies are effectively implemented. Training programs and awareness initiatives can further motivate MSMEs to adopt and use digital tools efficiently.

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