

## AI-Driven Transformation in SME Investments: Strategies, Risks, and Opportunities for Skill Development

**Shubh Karan Pathak\***

Research Scholar SVU

MBA (Finance), LLB, B.Com

Email: [anoopathak30@yahoo.co.in](mailto:anoopathak30@yahoo.co.in)

**Dr. Mohani Shankar**

Assistant Professor

Department of Commerce

Swami Shukdevanand College

Shahjahanpur (U.P.)

Email: [msmshankar5@gmail.com](mailto:msmshankar5@gmail.com)

Reference to this paper should be made as follows:

**Received: 03.04.2025**  
**Accepted on: 15.06.2025**

**Shubh Karan Pathak**  
**Dr. Mohani Shankar**

AI-Driven Transformation in SME Investments: Strategies, Risks, and Opportunities for Skill Development

Vol. XVI, Sp.Issue July1 2025  
Article No.22, Pg. 157-166

Similarity Check: 03%

**Online available at** <https://anubooks.com/special-issues?url=-jgv-vol-xvi-special-issue-july-25>

**DOI:** <https://doi.org/10.31995/jgv.2025.v16iSI7.022>

### **Abstract**

*Small and Medium Enterprises (SMEs) are crucial players in the global economy, contributing over 50% of the world's GDP and accounting for 70% of jobs globally (World Bank, 2021). In developing countries, SMEs make up a staggering 90% of all businesses, highlighting their vital role in driving innovation, local growth, and economic stability. Yet, these enterprises often grapple with significant hurdles, such as limited financial resources, inadequate technological infrastructure, and a shortage of skilled workers. Enter Artificial Intelligence (AI), a game-changing force that can help SMEs break through these barriers by streamlining operations, improving decision-making, and opening up new avenues for investment. McKinsey (2022) suggests that adopting AI could boost productivity by 15-20% and cut operational costs by 30% for SMEs. However, the OECD (2021) points out that only 15% of SMEs have embraced AI in their operations, in stark contrast to 56% of larger companies.*

*Bringing AI into SME investments is more than just a tech upgrade; it represents a fundamental shift in how these businesses plan, allocate resources, and chase growth. This research delves into the strategic integration of AI in SMEs, examining the associated risks, the potential for skill development, and the long-term effects on investment choices. By exploring these aspects, the study aims to create a thorough framework that guides SMEs in making the leap toward AI-driven investments.*

### **Keywords**

*AI adoption, SME investments, digital transformation, skill development, risk management, operational efficiency.*

## **2. Background**

Small and Medium Enterprises (SMEs) are vital to global economic progress. The International Trade Centre (2023) reports that SMEs account for 90% of businesses worldwide and contribute to 50% of employment and GDP. Despite their importance, SMEs continue to face ongoing challenges, including limited access to funding, a lack of advanced technology, and a shortage of skilled personnel. These barriers often prevent them from scaling operations and improving productivity.

Artificial Intelligence (AI) has emerged as a game-changer for businesses, with the potential to revolutionize SME investments by enhancing decision-making, automating processes, and enabling predictive insights. A **PwC (2022)** report estimates that AI could contribute **\$15.7 trillion** to the global economy by **2030**, with a significant portion of this growth driven by SMEs adopting AI technologies. However, the adoption rate remains low among SMEs due to a lack of awareness, perceived high costs, and the absence of a clear roadmap for AI integration.

A recent study by **Statista (2023)** revealed that **only 20% of SMEs** globally have incorporated AI into their investment strategies, compared to **64% of large enterprises**. This disparity underscores the need for targeted strategies that address SMEs' unique constraints and enable them to leverage AI effectively. Furthermore, **Deloitte (2021)** highlights that SMEs implementing AI-driven solutions reported **35% faster market entry**, **28% lower operational costs**, and **42% improved customer engagement** compared to non-adopters.

This background sets the stage for exploring how SMEs can harness AI to unlock new investment opportunities, mitigate risks, and foster skill development — ultimately driving sustainable growth and competitiveness in an increasingly digital economy.

## **3. Motivation**

The motivation behind this study arises from the pressing need to empower SMEs with the tools and knowledge required to harness AI's full potential. Key motivators include:

- **Economic Contribution:** SMEs are the backbone of many economies, making their growth vital for overall economic development.
- **Technological Evolution:** The fast-paced AI advancements necessitate SMEs to adapt or risk becoming obsolete.

- **Competitive Pressure:** Larger corporations increasingly leverage AI, widening the competitive gap between them and SMEs.
- **Skill Development:** AI adoption demands a workforce equipped with new skills, providing an opportunity for human capital development.

#### 4. Research Gap

Existing literature extensively covers AI adoption in large corporations but lacks a focused analysis on SMEs' unique challenges and opportunities. The research gaps identified include:

- **Lack of SME-Specific AI Strategies:** Most frameworks are tailored to large enterprises.
- **Limited Exploration of Skill Development Needs:** Few studies address the evolving skill requirements for SME employees.
- **Insufficient Risk Analysis:** Current research underexplores the financial, operational, and ethical risks associated with AI adoption in SMEs.

#### 5. My Work to Fill the Research Gap

This study contributes to the existing body of knowledge by:

- **Developing an SME-Specific AI Strategy Framework:** A tailored approach addressing the unique needs and constraints of SMEs.
- **Identifying Critical Skill Sets:** A detailed analysis of skill requirements and practical recommendations for skill development programs.
- **Comprehensive Risk Assessment:** A risk matrix evaluating financial, operational, technological, and ethical risks.
- **Practical Implementation Roadmap:** A step-by-step guide for SMEs to transition to AI-driven investments effectively.

#### 6. Research Methodology

The research adopts a **mixed-methods approach**, integrating **quantitative** data analysis with **qualitative** insights.

##### 6.1 Data Collection

- **Primary Data:** Surveys and interviews were conducted with **120 SME owners** and **25 AI technology experts** across diverse sectors such as **manufacturing, retail, finance, and logistics in India, specifically the Delhi NCR region.**
- **Secondary Data:** Industry reports, government publications, academic journals, and case studies from sources like **OECD, McKinsey, and World Economic Forum.**

### Data Source Breakdown:

Source	Respondents/Records	Sector	Region
SME Owners Surveys	120	Retail, Finance	Delhi NCR, India
AI Technology Expert Interviews	25	Tech, Manufacturing	Delhi NCR, India
OECD Reports (2023)	300 SME cases	Multi-sector	Global
McKinsey Industry Reports	150 performance studies	Retail, Finance	US, Europe, Asia

## 7. Results and Data Analysis

### 7.1 Results Overview

#### Primary Data

The survey and interview data revealed that **68% of SMEs** reported improved operational efficiency after AI adoption. Additionally, **54%** experienced enhanced investment decision-making, while **39%** saw increased revenue within the first year.

Metric	Pre-AI Adoption (%)	Post-AI Adoption (%)	Change (%)
Operational Efficiency	45	68	+23
Investment Decision Accuracy	34	54	+20
Revenue Growth	21	39	+18

### 7.2 Primary Data Analysis

The data suggests that AI adoption significantly enhances SME performance. The **23%** rise in operational efficiency can be attributed to process automation and real-time analytics. Improved investment decisions (+20%) stem from AI-driven predictive modeling, enabling better market forecasting. Revenue growth (+18%) highlights the competitive advantage gained through personalized marketing and dynamic pricing strategies.

### 7.3 Comparative Analysis of Traditional vs. AI-Driven Investments in SMEs Secondary Data Analysis Based on Different Data Sources

Aspect	Traditional SME Investments	AI-Driven SME Investments	Performance Increase (%)	Data Source
Decision Making	Based on historical data and intuition	Real-time data analysis and predictive insights	50	Brynjolfsson & McAfee (2017); OECD (2021)
Risk Assessment	Manual risk evaluation.	Automated risk prediction and mitigation.	60	Xu et al. (2018); World Economic Forum (2020)
Cost Efficiency	Higher operational costs due to manual processes.	Reduced costs via automation and optimization.	45	Davenport & Ronanki (2018); OECD (2021)
Market Reach	Limited to local or regional markets	Global reach supported by AI-powered marketing	70	World Economic Forum (2020); Xu et al. (2018)
Skill Requirements	Basic operational and managerial skills.	Advanced data analysis, AI, and digital skills.	65	Brynjolfsson & McAfee (2017); Xu et al. (2018)
Investment Speed	Slower due to manual analysis.	Faster, agile decision-making powered by AI	55	Davenport & Ronanki (2018); World Economic Forum (2020)

### 8. Implications

The implications of AI-driven transformation are multi-dimensional:

- **Business Strategy:** SMEs can develop more agile and adaptive strategies by integrating AI insights.
- **Market Competitiveness:** AI empowers SMEs to compete with larger corporations through innovation and efficiency.
- **Job Roles and Skill Demand:** A shift towards AI-centric roles necessitates upskilling in data analysis, machine learning, and digital marketing.
- **Policy and Regulation:** Policymakers need to create supportive frameworks to facilitate AI adoption while ensuring ethical considerations and data privacy.

## **9. Research Limitations**

While this study provides valuable insights, several limitations must be acknowledged:

- **Sample Size Constraints:** The sample, though diverse, primarily focuses on SMEs in the Delhi NCR region, which may limit the generalizability of findings to other regions or countries.
- **Industry-Specific Bias:** Data collection predominantly involved SMEs from manufacturing, retail, finance, and logistics, potentially overlooking trends in other emerging sectors.
- **Technological Readiness Variance:** The readiness and willingness to adopt AI technology may vary significantly among SMEs, influencing the reported results.
- **Evolving AI Landscape:** Given the rapid pace of AI advancements, the study's findings may require regular updates to reflect the latest technological developments.
- **Self-Reported Data:** Reliance on survey and interview responses may introduce subjective biases, affecting data accuracy.

Addressing these limitations in future research can enhance the robustness and applicability of AI strategies for SMEs across broader contexts

## **10. Future Benefits of AI-Driven Investments for SMEs**

AI adoption in SMEs offers a wide array of long-term benefits that extend beyond immediate financial gains. By leveraging AI technologies, SMEs can unlock sustained growth, enhance operational efficiency, and build resilient business models. Below are the key future benefits:

### ***10.1 Enhanced Operational Efficiency***

AI-driven automation can streamline repetitive tasks such as inventory management, data entry, and customer support. According to **Gartner (2024)**, AI-powered automation can reduce operational costs by **35-40%** over five years, allowing SMEs to allocate resources more strategically.

### ***10.2 Data-Driven Decision Making***

AI systems enable SMEs to analyze vast datasets in real time, generating actionable insights. This data-driven approach improves forecasting accuracy, enhances market responsiveness, and supports agile decision-making. **Forrester (2023)** predicts that AI-driven SMEs could see a **45% faster response rate to market changes**.

### ***10.3 Increased Revenue Growth***

AI-powered personalization strategies help SMEs target customers more effectively, increasing conversion rates. **Deloitte (2023)** found that SMEs implementing AI in marketing strategies experienced an average **25% revenue growth** compared to non-adopters.

### ***10.4 Skill Development and Workforce Transformation***

AI adoption fosters a culture of continuous learning and skill development. **LinkedIn's Workforce Report (2023)** indicates that SMEs adopting AI witnessed a **30% increase in upskilling programs**, leading to a more adaptable and innovative workforce.

### ***10.5 Improved Risk Management***

AI enables predictive analytics to anticipate potential risks such as supply chain disruptions or financial downturns. **PwC (2024)** reports that SMEs using AI for risk management reduced unexpected losses by **22%** on average.

### ***10.6 Sustainability and Environmental Impact***

AI helps SMEs optimize energy consumption, minimize waste, and improve resource utilization. **World Economic Forum (2023)** highlights that AI-driven SMEs reduced carbon emissions by **18%** through smarter logistics and production planning.

### ***10.7 Visual Representation: Future Benefits Overview***

The table below summarizes key future benefits of AI adoption in SMEs:

<b>Future Benefit</b>	<b>Projected Impact</b>	<b>Source</b>
Operational Efficiency	35-40% cost reduction	Gartner, 2024
Data-Driven Decisions	45% faster market response	Forrester, 2023
Revenue Growth	25% increase in revenue	Deloitte, 2023
Skill Development	30% rise in workforce upskilling	LinkedIn Workforce, 2023
Risk Management	22% fewer unexpected losses	PwC, 2024
Environmental Sustainability	18% reduction in carbon emissions	World Economic Forum, 2023

The insights above emphasize that AI-driven investments hold the potential to revolutionize SME operations, enabling sustainable, data-backed growth. This transformation equips SMEs to remain competitive, resilient, and adaptable in an ever-evolving global economy and other future benefits like :-

- **Personalized Customer Experience:** AI enables hyper-personalization, enhancing customer satisfaction and loyalty.
- **Real-Time Financial Monitoring:** SMEs can leverage AI for continuous monitoring of financial health, allowing proactive adjustments.
- **Global Market Access:** AI tools support language translation, digital marketing, and logistics optimization, enabling SMEs to expand internationally.
- **Sustainable Business Practices:** AI optimizes resource usage, reduces waste, and supports environmentally friendly operations.

## **11. Ethical Considerations for Data Collection**

Ethical data collection is essential to ensure transparency, fairness, and reliability in research. This study adhered to strict ethical guidelines while collecting data from SME owners and AI technology experts in India's Delhi NCR region. The following principles guided the data collection process:

### ***11.1 Informed Consent***

Participants were fully informed about the research objectives, data usage, and their right to withdraw at any stage without consequences. A signed consent form was collected from each participant, ensuring voluntary participation.

### ***11.2 Privacy and Anonymity***

All data collected was anonymized to protect the identity of the respondents. Personal information was neither recorded nor shared, maintaining confidentiality throughout the research.

### ***11.3 Data Accuracy and Integrity***

The data was collected directly from verified sources — SME owners and AI experts — to ensure accuracy. Any conflicting or ambiguous data points were cross-verified through follow-up interviews.

### ***11.4 Bias Mitigation***

Special care was taken to ensure the data collection process remained unbiased. Questions were structured to avoid leading responses, and a diverse group of SMEs, varying in size, industry, and technological adoption, was included for balanced representation.

### ***11.5 Ethical Use of AI Data***

Considering the sensitivity of AI-driven investment strategies, the research prioritized responsible AI data usage. The analysis focused on ensuring that AI

implementations discussed were lawful, transparent, and aligned with the ethical frameworks proposed by organizations like **OECD (2021)** and **UNESCO (2023)**.

### ***11.6 Researcher's Ethical Responsibility***

The researcher maintained an open, respectful, and professional approach while conducting surveys and interviews. Participants' perspectives and insights were captured authentically, without distortion or manipulation. Any personal biases were consciously set aside to ensure that the analysis reflected genuine participant views. Moreover, the researcher ensured that participants felt comfortable and empowered to express both positive and critical opinions on AI adoption.

By integrating these ethical considerations, the study ensures that the insights derived from the data remain credible, unbiased, and respectful of participant rights.

## **12. Conclusion**

AI-driven investments mark a turning point for SMEs, redefining how they operate, compete, and grow in an evolving business environment. This study demonstrates that AI adoption brings tangible benefits, including operational cost reductions, enhanced decision-making capabilities, and new opportunities for workforce development. SMEs that integrate AI technologies are better positioned to adapt to market changes, mitigate risks, and pursue sustainable growth.

However, the transition to AI is not without challenges. Financial constraints, technological gaps, and workforce readiness remain critical barriers. Addressing these hurdles requires a strategic approach, combining targeted investments, skill-building initiatives, and supportive policy frameworks.

The long-term outlook remains optimistic: SMEs that embrace AI not only enhance their competitiveness but also contribute to broader economic resilience and environmental sustainability. This shift from traditional to AI-driven investments is no longer a choice — it is a strategic necessity for survival and success in the modern economy.

Future research should explore sector-specific AI applications and assess the evolving role of government policies, partnerships, and global trends in accelerating AI adoption among SMEs. Ultimately, AI represents not just a technological upgrade but a transformative force empowering SMEs to navigate uncertainties, unlock growth, and shape a more innovative, data-driven future.

### **13. References**

1. World Bank (2021). *Small and Medium Enterprises (SMEs) and Employment*. Retrieved from <https://www.worldbank.org>
2. McKinsey (2022). *AI Adoption in Small Businesses: A Productivity Revolution*. Retrieved from <https://www.mckinsey.com>
3. OECD (2021). *The Digital Transformation of SMEs*. Retrieved from <https://www.oecd.org>
4. Gartner (2024). *AI Automation and Cost Reduction in SMEs*.
5. Forrester (2023). *Market Responsiveness in AI-Adopting SMEs*.
6. Deloitte (2023). *Personalized Marketing and Revenue Growth in SMEs*.
7. LinkedIn Workforce Report (2023). *Upskilling in the Age of AI*.
8. PwC (2024). *Risk Management Strategies for SMEs*.
9. World Economic Forum (2023). *AI, Sustainability, and Carbon Reduction in SMEs*.