

# Transforming Sustainable Finance with AI and Fintech: Insights from Indian Case Studies

Sadgi Agarwal

G.D Goenka University, Gurgaon, India

\*Corresponding author's email id: saadgiagarwal@gmail.com

## ABSTRACT

The integration of artificial intelligence (AI) and financial technologies (Fintech) is reshaping sustainable finance, creating opportunities while addressing environmental and social challenges. Fintech adoption and digital transformation (DT) significantly impact banks' sustainable performance, with green finance and competitiveness serving as key mediators. AI and Fintech enhance efficiency, improve decision-making, and promote sustainability by enabling better assessment of environmental, social, and governance (ESG) criteria for sustainable investment. These technologies allow for precise evaluation and tracking of sustainability efforts, thereby improving accountability. Innovations in this space facilitate the identification of green bonds, clean energy projects, and socially responsible companies. AI algorithms generate data-driven insights that help align investments with sustainability goals. Fintech is expected to drive innovation, reduce costs, and improve service quality, making sustainable investments more accessible and affordable for a broader range of investors. AI further enhances the efficiency of financial markets by optimizing portfolios and providing personalized advice, allowing investors to maximize returns while adhering to sustainability principles. Financial institutions that adopt AI and Fintech innovations are well-positioned to attract socially conscious investors who seek investments that positively impact the environment and society. This research will explore case studies of Indian Fintech companies such as Razorpay and MobiKwik, which have integrated AI into their sustainable finance strategies. These companies streamline transactions and support environmentally responsible businesses. The study will examine the practical applications, challenges, and outcomes of AI and Fintech adoption in the context of sustainable finance in India. Despite notable progress, challenges such as algorithmic bias, lack of standardized ESG metrics, and data discrepancies remain. Technologies like AI, blockchain, and digital payments play a critical role in driving innovation and sustainability, helping financial institutions navigate environmental and regulatory challenges. This research will explore how AI and Fintech can address these obstacles and contribute to building a transparent, inclusive, and sustainable financial ecosystem worldwide.

**Keywords:** AI, Sustainable Finance, Fintech

