

Impact of Fintech Adoption, Green Innovation, and Green Finance on Environmental Performance: Evidence From Pakistani Islamic Banks

Abstract

Guided by the resourced-based view (RBV) and the stakeholder theory, this study is motivated to examine the impact of fintech adoption (FA), green innovation (GI), and green finance (GF) on the environmental performance (EP) of Pakistani Islamic banks (IBs). A quantitative research methodology was adopted, employing a structured questionnaire to collect data from 209 bank managers, operations managers, and financial analysts. The respondents were selected using the stratified random sampling technique from the IBs operating in four major cities of Punjab, Pakistan, namely Lahore, Sialkot, Gujranwala, and Gujrat. SEM results confirmed that fintech adoption significantly enhanced environmental performance ($\beta = 0.372, p = 0.000$), implying that digital banking reduces resource consumption and improves operational efficiency. Green finance was also found to be a strong predictor of environmental performance ($\beta = 0.426, p = 0.000$), suggesting that financial institutions investing in green projects achieve better sustainability outcomes. Among the three independent variables, green innovation exhibited the highest impact on environmental performance ($\beta = 0.498, p = 0.000$), emphasizing the role of paperless banking, energy-efficient infrastructure, and sustainable financial practices. The findings underscore the critical role of fintech-driven financial solutions, green banking innovations, and environmentally responsible investments in enhancing sustainability in the Islamic banking sector. Policymakers should develop regulatory frameworks and provide incentives to encourage banks to promote green financial services and sustainability-driven fintech solutions. Future studies should conduct cross-country comparisons, adopt longitudinal designs, and explore moderating variables, such as government regulations and corporate governance structures. This study examines the combined impact of fintech adoption, green innovation, and green finance on the environmental performance of Pakistan IBs, an area with limited empirical evidence.

Keywords: environmental performance, green innovation, fintech adoption, Islamic banks, sustainability

JEL Codes: G21, O33, Q56, M14