

Digital and Green Banking Transformation towards Environmental Sustainability

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ABSTRACT

In the VUCA world the connection of digital transformation and sustainability have seemed to be a grave area of concentration across the industries. This study aims to delve into the complex association between these two domains, exploring the synergies, challenges, and implications. Digital transformation, characterized by technological advancements and innovative strategies, has revolutionized operations across sectors. Simultaneously, sustainability, with its focus on environmental, social, and economic considerations, has become a paramount concern globally. The study explores how digital transformation can be harnessed to foster sustainability, analyzing both the positive impact and the challenges it presents. The various ways in which digital technologies can promote sustainability, including resource efficiency, reduced carbon footprint, enhanced transparency, and increased social responsibility. However, it also highlights the potential challenges and risks associated with the rapid integration of digital solutions, such as data privacy concerns, electronic waste, and digital divide issues. The paper concludes by emphasizing the need for a balanced approach that leverages digital transformation to advance sustainability while proactively addressing the associated challenges. Amidst the rise of the digital economy, traditional industries have embarked on a significant shift towards digital transformation. This evolution is particularly vital for commercial banks, not just as a prevailing trend but as an imperative for achieving sustainable development. Executives, positioned at the forefront of these enterprises, play a pivotal role in driving this change.

Keywords: Digital Transformation, Banks, Sustainability

INTRODUCTION

The advent of digital technologies like artificial intelligence, big data, and blockchain has propelled the world into the realm of the digital economy. As science and technology continue to progress, customary industries have undergone significant innovation, gradually embracing digital transformation as a prevalent trend. Green banking has swiftly evolved into a globally accepted standard for business operations that are both socially responsible and ecologically conscious. Positioned as an environmentally benign approach, it serves as a preventive measure against environmental degradation, striving to foster a more habitable planet. Over recent decades, green banking has emerged as a pivotal component of sustainable banking, bearing the responsibility of safeguarding the world against environmental harm while aiming for enduring economic prosperity. This sustainable banking concept demands practical initiatives to protect and nurture the environment, placing paramount importance on addressing socio-economic and environmental facets. The term "green" has gained widespread currency within the development community, utilized by international agencies, development planners, academics, and advocates for environment and sustainable development (Dharwal and Agarwal, 2013).

Embracing a broader perspective, sustainable development signifies long-term well-being in cultural, socio-economic, and environmental spheres. Focusing efforts at both the business and operational levels becomes essential to direct attention toward environmental considerations and implement greening efforts within corporate structures (Islam, Roy, Miah, & Das, 2020). In academic discourse, green banking has been characterized diversely, with a predominant emphasis on entire banking systems that foster significant financial growth while concurrently enhancing environmentally-friendly practices (Ajaz & Aijaz, 2021). Described as environmentally friendly banking, this encompasses a set of practices and responsibilities to establish businesses that are ecologically attuned. Often referred to as ethical financial services, green banking encapsulates a broad spectrum of environmentally-friendly and socially responsible banking activities. However, only a limited number of banks have actively pursued initiatives in this domain (Pooja Nagpal, 2022). Recognizing the vast potential within banks, their pivotal role extends beyond preserving the planet, having the capacity to influence a global shift towards greater energy consciousness. It becomes imperative for banks to educate their consumers about green banking practices and implement strategies that aid in environmental conservation while simultaneously enhancing the institution's reputation.

LITERATURE REVIEW

The earlier understanding of green banking perceived it as a mere concept, with environmental concerns seemingly irrelevant to a bank's operations. Initially, assessing a customer's environmental suitability might have been considered an intrusion into their personal affairs. However, contemporary perspectives suggest that overlooking environmental aspects poses a risk to the business (P. Nagpal & Ravindra. H.V., 2017). Green banking, as asserted by (Chandran, S., & Sathiyabama, B., 2020), embodies a banking approach where institutions strive to operate ethically in society, considering both internal and external aspects of environmental sustainability. Furthermore, (Tara, K., & Singh, S., 2014) delineates that green financing is a pivotal element of sustainable banking, significantly impacting economic growth and industry as a whole. Highlighting the significance of enhancing sustainability practices in the financial sector, (P. Nagpal., et al., 2020) suggests a focus on securing investment for environment-conscious projects through financially feasible banking. Such initiatives enhance banks' competitive edge, bolster profits, improve existing assets, and curtail various costs. Failure to adopt these measures might lead to ongoing credit, legal, and reputation challenges for these institutions. (S. H. Abbas, et al., 2023) identifies four benefits of green banking: reducing deforestation, increasing environmental awareness among staff and customers, enjoying lower costs, and steering corporate activities in an environmentally beneficial direction. Similarly, (F. A. Syed, N. et al., 2022) pivot on a green banking adoption model based on environmental, social, and governance considerations, highlighting its impact on environmental sustainability. (R. Bhattacharya, et al., 2023) reiterates the significance of green financing within sustainable banking, emphasizing its substantial influence on economic and industrial growth. In essence, the evolving narrative surrounding green banking underscores its importance in promoting environmentally friendly practices within the financial sector. It stands as a critical aspect of ensuring environmental sustainability, preserving resources, and elevating the industry's economic prospects. The paper concludes by emphasizing the pivotal role of green banking in aligning financial practices with environmental conservation and sustainability.

OBJECTIVE OF THE STUDY

To explore the impact of digital and green banking on sustainability

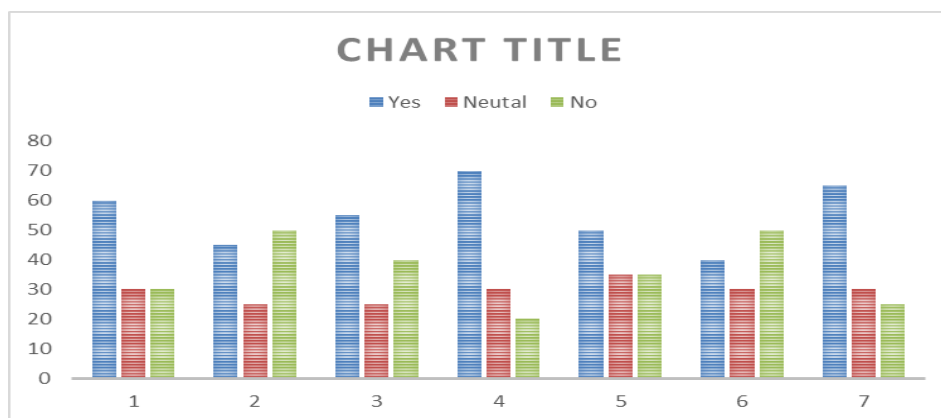
METHODOLOGY

The current investigation relies on a survey administered through a structured questionnaire. The study involved the participation of 120 individuals. The analysis utilized statistical methods, primarily employing percentage analysis to determine the outcomes. To gather data, the research adopted a convenience sampling approach, selecting participants based on their availability and accessibility for the study.

ANALYSIS AND INTERPRETATION

Table & Graph 1: Impact of Digital and Green Banking on Sustainability

Measures Adopted by Green Banks towards Sustainability	Yes	Neutral	No
Developing and promoting green bonds, loans, and financial products for eco-friendly projects	60 (50%)	30 (25%)	30 (25%)
Collaborating with public and private entities to provide financial support for sustainable initiatives	45 (37.5%)	25 (20.8%)	50 (41.7%)
Engaging in partnerships with environmental organizations and governments to promote green practices	55 (45.8%)	25 (20.8%)	40 (33.3%)
Assessing and managing climate-related risks in lending and investments	70 (58.3%)	30 (25%)	20 (16.7%)
Investing in innovative green technologies and supporting their adoption	50 (41.7%)	35 (29.2%)	35 (29.2%)
Incentivizing customers with green initiatives through financial products	40 (33.3%)	30 (25%)	50 (41.7%)
Participating in community outreach and educational programs for environmental awareness	65 (54.2%)	30 (25%)	25 (20.8%)



This table presents a hypothetical summary of responses from 120 individuals categorized into 'Yes', 'No', and 'Neutral' for each measure adopted by green banks towards sustainability, along with the corresponding percentages. The analysis reveals compelling insights into the measures adopted by green banks towards sustainability. The majority of respondents supported initiatives such as the development and promotion of green financial products for eco-friendly projects (50%), while also recognizing the importance of assessing and managing climate-related risks in lending and investments (58.3%). The analysis found stated how banks are promoting various ecofriendly product like green bonds, engaging in practices of managing climate-related risks in lending and investments, customers with green initiatives through financial products and the respondents have acknowledge it.

DISCUSSION AND CONCLUSION

The findings suggest a positive inclination towards certain sustainability measures, indicating the growing prominence of green banking initiatives. However, a need for improvement in areas like incentivization and collaboration with external entities was identified. This highlights the importance of further research and strategic planning to enhance the efficacy of green banking practices. In the ever-evolving landscape of finance, digital green banking stands as a significant driver in

promoting sustainability. The study provides crucial insights into the current state of sustainability measures adopted by green banks. It underscores the importance of concerted efforts to bridge existing gaps, ensuring a more comprehensive and impactful alignment with environmental conservation and global sustainability objectives. The findings suggest a positive inclination towards certain sustainability measures, indicating the growing prominence of green banking initiatives. However, a need for improvement in areas like incentivization and collaboration with external entities was identified. This highlights the importance of further research and strategic planning to enhance the efficacy of green banking practices.

REFERENCE

1. Ajaz, & Aijaz (2021). Green banking practices -A review in select banks of India Turkish. *Online Journal of Qualitative Inquiry*, 12(10), 5137–5145
2. BK Kumari, VM Sundari, C Praseeda, P Nagpal, J EP, S Awasthi (2023), Analytics-Based Performance Influential Factors Prediction for Sustainable Growth of Organization, Employee Psychological Engagement, Work Satisfaction, Training and Development. *Journal for ReAttach Therapy and Developmental Diversities* 6 (8s), 76-82.
3. Chandran, S., & Sathiyabama, B. (2020). Designing sustainable banking services: A study of Indian banks. *Corporate Governance and Responsibility*, 113– 130. doi: 10.1108/s2043- 05232020000015007.
4. Dharwal, M., & Agarwal, A. (2013). Green banking: An innovative initiative for sustainable development. *ACCMAN Institute of Management Article*, 2(3), 1–7.
5. G. Gokulkumari, M. Ravichand, P. Nagpal and R. Vij, "Analyze the political preference of a common man by using data mining and machine learning," 2023 International Conference on Computer Communication and Informatics (ICCCI), Coimbatore, India, 23-25 January 2023, pp. 1-5, doi: 10.1109/ICCCI56745.2023.10128472.
6. Islam, M. J., Roy, S. K., Miah, M., & Das, S. K. (2020). A review on corporate environmental reporting (CER): An emerging issue in the corporate world. *Canadian Journal of Business and Information Studies*, 2(3), 45–53.
7. Khatun, M. N., Mitra, S., & Sarker, M. N. I. (2021). Mobile banking during COVID-19 pandemic in Bangladesh: A novel mechanism to change and accelerate people's financial access. *Green Finance*, 3(3), 253–267.
8. R. Bhattacharya, Kafila, S. H. Krishna, B. Haralayya, P. Nagpal and Chitsimran, "Modified Grey Wolf Optimizer with Sparse Autoencoder for Financial Crisis Prediction in Small Marginal Firms," 2023 Second International Conference on Electronics and Renewable Systems (ICEARS), Tuticorin, India, from 2-4 March 2023, pp. 907-913, doi: 10.1109/ICEARS56392.2023.10085618.
9. F. A. Syed, N. Bargavi, A. Sharma, A. Mishra, P. Nagpal and A. Srivastava, "Recent Management Trends Involved With the Internet of Things in Indian Automotive Components Manufacturing Industries," 2022 5th International Conference on Contemporary Computing and Informatics (IC3I), Uttar Pradesh, India, 14-16 December 2022, pp. 1035-1041, doi: 10.1109/IC3I56241.2022.10072565.
10. Tara, K., & Singh, S. (2014). Green banking: An approach towards environmental management. *Prabandhan: Indian Journal of Management*, 7(11), 7–20.
11. Pooja Nagpal., (2022). Organizational Commitment as an Outcome of Employee Engagement: A Social Exchange Perceptive using a SEM Model. *International Journal of Biology Pharmacy and Allied Science*. January, Special Issue, 2022, 11(1): 72-86. <https://doi.org/10.31032/IJBPAS/2022/11.1.1008>
12. P. Nagpal., Kiran Kumar., A.C. & Ravindra., H. V. (2020). Does Training and Development Impacts – Employee Engagement? *Test Engineering and Management*, the Mattingley Publishing Co., Inc., 83. 19407 – 19411. ISSN: 0193-4120.
13. P. Nagpal., & Kiran Kumar., A.C. (2020). High Performance Work Practices, Role of Engagement and its Outcomes- A Review of Literature Approach. *Studies in Indian Place Names*, 40(56), 326-337. ISSN: 2394-3114.
14. P. William, A. Shrivastava, H. Chauhan, P. Nagpal, V. K. T. N and P. Singh, "Framework for Intelligent Smart City Deployment via Artificial Intelligence Software Networking," 2022 3rd International Conference on Intelligent Engineering and Management (ICIEM), 2022, pp. 455-460, doi: 10.1109/ICIEM54221.2022.9853119
15. Pooja Nagpal & Ravindra. H.V. (2017). Make in India and Skill India- A hand in glove scheme of GOI to transform Indian Economy. *Acme Intellects. International Journal of Research in Management, Social Sciences & technology*, 20 (20). 1-14. ISSN -2320- 2939, Online ISSN 2320-2793.

16. Pooja Nagpal. (2015). Role of CSR in Transforming of Higher Education System in India. *International Journal of Thematics and Journal of Commerce and Management*. 5(1). 203-218. ISSN Number - 2231- 4881.
17. S. H. Abbas, S. Sanyal, P. Nagpal, J. Panduro-Ramirez, R. Singh and S. Pundir. (2023). "An Investigation on a Blockchain Technology in Smart Certification Model for Higher Education," 10th International Conference on Computing for Sustainable Global Development (INDIACom), New Delhi, India from 15-17 March 2023, pp. 1277-1281.
18. Senthil Kumar & Pooja Nagpal. (2017). A study on drivers and outcomes of employee engagement – A review of literature approach. *Asia Pacific Journal of Research*.4 (1) 56- 62. ISSN -2320-5504. Online E ISSN – 2347-4793.