

Review On Impact of Ai on Green Banking Towards Sustainability with Special Reference to Indian Public and Private Bank

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Abstract

This paper studies and analysis the role of Artificial Intelligence(AI) in green banking practices adopted by the Indian banking structure as well as its importance in the current scenario. Not only has this but it also includes the banks' involvement and support to achieve UN SDGs and environmental sustainability. This research paper is categories as conceptual in nature, bases on regress review of literature, reviewing websites of financial institutions and published sources. Ample number of published research articles and journals has supplemented this work. This study tries to make a comparative analysis between one of the prominent Indian commercial bank SBI (State Bank of India) and one of the top private Indian banking institute HDFC bank and review to know about the application of AI in adopting green banking practices and their contribution towards sustainability. The paper concluded about the devastating and heart wrenching moments Indians and all round the globe has experienced in the form of landslide, drought and flooding, extreme temperatures have prompted us to think again about global warming and its repercussions and that we are facing and what our future generations are going to face in upcoming decade. The study is examined to be pioneer in the academic literature as it links three crucial elements of present era with future impact i.e. AI, green banking practices and sustainability. This research is the first of its kind in India to tie the banking sector to sustainability and the UN SDGs in addition to bank's green banking practices.

Keywords- Sustainability, AI, Green Banking.

Introduction

Green banking is quickly becoming the norm for conducting business in a socially and environmentally responsible manner. By halting environmental deterioration and improving the habitability of the earth, this banking is ecologically friendly. Green banking has significantly gained lot of popularity in the recent few decades as a relevant term for sustainable banking. In real world, sustainable banking is recognized as a synonymous for green

banking (Islam, Roy, Miah, & Das, 2020), which contributes in preventing environmental harm with the aim of ensuring long term economic development. Unregulated and uneven industrialization has lead to a direct impact leading to major cause for natural and industrial calamities (Rehman et al., 2021).

Green banking is considered as branch of banking working with the main objective of protection to environment and ensuring sustainable development while taking into account all social and

environmental aspects. As a result, the phrase "sustainable development" is increasingly used by international organisations, development planners, academics, and proponents of environmental and sustainable development policies. (Ukaga, Maser, & Reichenbach, 2011). Since 1992, sustainable is represented as a new growth model in accomplishing the underlying future goal. With an emphasis on "long-term," SD is described as "long-term cultural, socioeconomic, and environmental wellbeing," "along with the requirement of integrating our social, economical, and environmental well-being." (Rahman & Rahman, 2020). Green banking has a significant impact on how environmental sustainability, sustainable development, and climate change are managed in developing countries (Monirul Alam, Alam, & Mushtaq, 2018). Extensive amount of analysis and conclusions in a variety of ways has been done by academics, although overall focus has been on a complete banking system which ensures significant economic growth along with improved environmental-friendly methods. Effective use of green banking initiative by the Indian banks have helped them to address the climate change (Sarker, Khatun, & Alam, 2019; Stephens & Skinner, 2013). Green banking is not only defined as the synonymous to environment friendly banking but it is also recognised as a collective set of practices and responsibilities which

helps the business to pursue ecologically friendly and socially responsible banking activities (Bai, 2011; Goyal & Joshi, 2011; Sarker, Peng, Yiran, & Shouse, 2020). The recent upward trends in the environmental costs has intrude the business towards application of environmental consideration at all the levels of institutions. The companies are influence through the external forces in the form of stakeholders for the application of environmental integrity.

AI and banking sector

The application of AI is at its budding stage in India. The upward trends in the growth of Artificial Intelligence (AI) in the banking sector is revolutionizing and reforming the industry at the global level (Abdulla, Y., Ebrahim, R., & Kumaraswamy, S. 2020). Giving machines the ability to emulate human behaviour, particularly cognitive skills, is the goal of artificial intelligence. It can be characterized as a discipline created to support people in their everyday activities. The best way to define artificial intelligence (AI) is as computerized systems that use communication, reasoning and knowledge to support intelligent decision-making by mimicked machines. In a layman's language, artificial intelligence (AI) is the process of giving robots a human-like level of intelligence. For ease of understanding AI, can be easily categorized into two categories. One, the weak AI which is designed to

perform some specific task like printing, motion lights, deposit and withdrawal of cash etc., While the other category is termed as the strong AI which can experience emotions and even consciousness. AI, data mining and machine learning are frequently used interchangeably. Machine learning is one of the AI subset tools that endows machines with the ability to learn from experience, despite the fact that all three of these technologies are connected and yet unique from one another. Data mining locates and examines datasets to detect hidden patterns, producing pertinent information for the learning experience of gadgets. Most prominent examples of AI in banking are ATMs, Kiosk deposit and withdrawal machines, currency counting machine, and fake currency detection machines has reduced the labor to a considerable large extent. AI's are customer oriented in the form of real time identification and prevention of fraud in online banking. AI is also been applied to pursue the task of e-KYC in order to verify the clients Chatbots are another area where AI is being invested into. Over the past ten years, banks have observed a convergence in end-customer banking interactions due to IT-enabled services and solutions like Core Banking, Internet Banking, Mobile Banking, Wallet, Wallets, and Kiosk Banking. Technology development in the banking sector benefits both institutions and their customers. The current focus of bank

business models is on providing IT-enabled products and services that make customers happy. The movement of banking in this way as not only reduced the load on labor but also on the environment. The increased usage of Cloud technology has reduced the consumption of paper and hence promoting green. On the other hand, use of e-banking or m-banking has reduced the travelling and transaction for the clients of the bank making one small step towards sustainable development.

Review of Literature

Hossain, Karim, Rahman, and Hossain (2020) introduced the term "green banking" which refers to a type of banking activity where both internal and external environmental sustainability taken into account and banks also make an effort to conduct their daily business as responsible members of society. In the current banking competition, every bank needs to step up and create a new green product with greater stakeholder participation and SD, according to Choudhury, Salim, Bashir, and Saha (2013). Van Wynsberghe, has given definition to artificial intelligence and its impact in the banking sector(2021). Abdulla, Y., Ebrahim, R., & Kumaraswamy, S. (2020) has expressed about application of Artificial intelligence and also concluded that the two most important elements of Artificial Intelligence applied in the banking sector of

Bahrain are robotic process automation and chatbots. Moşteanu, N.R. (2020) has made correlation between the digital era and green sustainable regional development.

Dharwal and Agarwal (2013) in contrast claims that “green banking” is essential in reducing variety of risks, including legal risk, credit risk, and image risk. They also advocated for a number of green practices including green mortgages, credit carbon companies, carbon emissions reduction, promoting energy consciousness, green financial products, using green building practices and making society contributions of a sense of social responsibility. Zayed, Harun, and Ahmad (2013) the Bangladesh Bank has specified that maintaining financial viability in Bangladesh is one of the most crucial elements of green banking. Green banking has four advantages, according to Meena (2013): it decreases deforestation, increases customer and employee environmental awareness, benefits from reduced interest rates, and modifies corporate activities in a way that is more environmentally friendly. Ullah (2013) explains least developed nation like Bangladesh, is the major victims of the environmental pollution brought on by the industrialization of western developed nations. According to Jaggi (2014) looked into the green finance initiatives and practises of ICICI and SBI banks. The Green Channel Counter, a stronger

dedication to achieving wind farms, online money transfers, carbon neutrality and other initiatives have all been put into place by SBI in this regard. Home financing, anywhere banking, auto financing, and internet banking for anytime are all part of ICICI Bank's green product and service plan. Additionally, these financial organisations have implemented energy-saving measures, including recycling, using compact fluorescent lighting (CFLs), and two-sided printing.

Researchers advise banks to adopt greener lending practises and incorporate economic and environmental considerations into their funding principles. Chaurasia (2014) found in India that there haven't been many initiatives related to green banking services, for the benefit of society industries should force to make mandated investments in SD. Ortiz-de-Mandojana, Aguilera-Caracuel, & Morales-Raya, (2016) investigated how banking sectors are using green transparency and adopting green rules to increase their respectability in public as a result of institutional pressures. Managers are urged to use institutional factors to accomplish environmental

sustainability. According to Zhixia, Hossen, Muzafary, and Begum (2018), the effective development of sustainable lending in Bangladeshi banks would result from the Bangladesh Bank's enforcement of specific criteria. The study also

revealed that the minimum growth in technological innovation, products financially innovative in nature and widespread lack of ecological and social consciousness among banking sector could be obstacles to green development. In order to meet sustainability criteria, Volz, (2018) discovered sustainable banking, where insurance services that address both climatic and environmental risk and also lending decisions and investment are based on risk assessment and environmental monitoring, which are the major elements of green finance. Bukhari, Hashim, and Amran (2020) focuses on green banking adoptions model which is based on social, environmental and governance considered every factor influencing the affinity of variables affected environmental sustainability. This research discovered that a number of environmental factors have an impact on the process, banks can implement using specific operations in a analogous and sequential way. The concept of sustainable banking, according to Alsayegh, Abdul Rahman, and Homayoun (2020), involves use green banking strategies to take environmental, ethical and social factors into consideration. Bangladeshi banks play a significant role in the country's economic sustainability by funding a variety of environmentally friendly initiatives, which helps to mitigate the adverse effects of climate change. Banking institutions also play a big part in

funding a lot of industrial initiatives that might have negative environmental or social effects explained by Khairunnessa, Vazquez-Brust, and Yakovleva (2021). The green financing as viewed by Zheng, Siddik, Masukujjaman, Fatema, and Alam (2021) as an essential part of sustainable finance and has a big impact on the development of an industry and environmentally friendly economy more broadly. In order to strengthen banks' competitiveness, improvement of existing assets, reduce invested capital, increase earnings and other costs, it can be said that the banking sector should concentrate on ensuring the financing for environmentally aware projects through financially viable banking. Up until lately, green banking seemed to be just a concept, and environmental issues didn't seem to have much bearing on a bank's day-to-day business.

At first, it would have been considered intrusive for a bank to assess a client's environmental fitness. However, the consensus right now is that their company is at risk because of this. Even though environmental degradation has no direct effects on financial groups, they still have indirect costs. Legal, credit, and reputational issues will stays to plague these banks unless such steps are taken. The conceptualization has not yet been adopted by the developing countries. According to Amir (2021), there is a pressing need to fully understand the idea because there are few studies on green banking in developing

nations. Similar to Sharma and Choubey (2022), these researchers were concerned about the paucity of research in the field of green finance. Additionally, Chandran and Sathiyabama (2020) noted that Indian banks in particular and developing nations in general have not embraced green banking practises. However, (Weber, 2016; Jeucken, 2010; Khan et al., 2015; Roca & Searcy, 2012) in their studies concluded that the underdeveloped nations have largely ignored green banking, while in comparison to developed nations who have given a lot of attention and countries like India, study on green banking is essentially nonexistent as found by Prakash, Kumar, & Srivastava (2018). Additionally, studies have concluded that Indian industry and banks are not the best candidates to implement green banking practices (Rajput, Kaura, & Khanna 2013). Environmental norms are significantly advanced by the Reserve Bank of India. A developing country like India needs to emphasize the social component of finance more and connect it to economic growth (UNEP FI, 2016). Contrarily, in India, the majority of study focuses on CSR, environmental management, green banking strategies, and green practises used by both private and public sector banks (Narwal, 2007; Biswas, 2016; Rajput et al., 2013; Sharma & Mani, 2013; Sahoo & Nayak, 2007 & Bahl, 2012; Bihari, 2010). When it comes to green banking, there is a big difference between what banks want to push and what the public thinks they are doing (Jayadatta & Nitin, 2017). As a result, there is a paucity of writing in India about green banking (Sharma & Choubey, 2022) The major responsibility of green banking in SD

generally, the green banking practices of SBI (India) and Maybank (Malaysia), and the contribution to the country's achievement of UN SDGs have not received much attention. Its because of prominent social, environmental and commercial activities in Malaysia, MayBank of Malaysia was chosen as the study's primary participant, and State Bank of India was chosen because it was the primarily bank to concentrate on green banking efforts. Kaur and Sandhu (2019) noted that the majority of research on green banking focused primarily on green banking practices or on how bankers or customers perceived green banking. This discrepancy explains the need to look into the mentioned issue. As a result, the current study is an effort and a try to close this research gap.

Importance of green banking

After extensive amount of study it can crystal clearly be said that One method for ensuring sustainability, in which company activities have no negative impact on the environment, is considered to be green banking. Moreover, risk management and environment management are the same. Since it prevents several risks in the banking sector, it is crucial for banks as well as the economy. The banking system is regarded as the backbone for any economy, which clearly has a positive and direct impact on the growth of the economy. By demonstrating and supporting the bank's environmental commitment, green banking significantly improves the bank's reputation but also lowers the operational costs by using less

office supplies, water and energy, boosts employees efficiency and effectiveness through expert and optimal use of technology, and lowers the risks by putting in eco-friendly machinery. It helps to increase customers' environmental consciousness by organising awareness programmes, saves a lot of trees by reducing the paper consumption, minimizing the greenhouse gas emissions via teleconferencing and setting up car pool concepts for staffs, and lessens the amount of NPA's by investing in risk averse projects. Green banking includes technical advancement along with operational improvements and a slight change in the client's behaviour towards the banking business. Green banking program basically not only includes effective and efficient energy consumption but also includes factors like ride sharing and environmentally responsible borrowing and lending.

Enforcement of severe environmental regulations by the competent authorities all round the globe have lead the industries observe and apply particular set of standards or protocols in order to conduct the business activities. It has directly effected in mental capabilities of management and customers to reflect green sensibilities. Green banking has shown a direct correlation between the running cost of the business and country's GDP. It has saved money by minimizing the energy cost. Industries would need to adhere to specific standards in order to

conduct business as a result of strict environmental restrictions that are enforced by competent authorities across all nations. It enhances both employees' and customers' mental capacities to reflect environmental concerns. By reducing expenses and increasing the nation's GDP, green banking reduces costs and conserves resources.

Role of Banking Institutes

There are various steps at the initial level which could be adopted not only by the banking institution but also the customers of banking institutions in achieving the sustainable development goals. Comparing just a one decade paying of bills is a significant change is lifestyle. Increase in the usage of online UPI payment application for regular need like purchasing groceries, communication bill or any other utility bills has made a comparatively a positive change towards greener environment. It has also lead to drastic decrease in usage of paper cheques in favor of online payments. A lot of customer base support has started to use net banking which make banking accessible with being physically present. Opening of online savings account or paperless banking all lead us one step closer to sustainable development by reduction in green house emission, deforestation and ultimately reduction in natural calamities happening all around the globe. The institutions have given more emphasis on concepts like green deposit and green loans. A the term

“green credit loan” or “green finance” is referred to the projects which are beneficial to the environment and nature, such as financing for water conservation, industrial energy conservation, pollution prevention, energy protection and conservation and renewable energy and clean energy projects. It also includes projects line green transport and green agriculture development. In addition to having offices, ATMs and branches, banks may decide to build green structures to help the environment for units in the residential area. As part of their green banking programme, Indian banks could start a variety of social responsibility initiatives, such as camps for tree planting, park maintenance, and pollutant check-ups.

GREEN BANKING INITIATIVES BY PUBLIC AND PRIVATE BANKING INSTITUTIONS

HDFC (Housing Development Finance Corporation Limited)

HDFC recognized as India’s largest bank in the category of private sector banks, which has stayed strong in commitment towards its positive impact on the environment along with its customers, employees and the community at large. They are working towards their prime objective of becoming “AI – enabled bank of the future”. Some of the major milestone achieved includes social commerce chat bot on Facebook Messenger – HDFC Bank on Chat, Recruit Bot, and

Robotic Assistant (IRA) – a humanoid robot and Electronic Virtual Assistant (EVA). HDFC Bank is recognised as the pioneer bank in India to launch IRA – a humanoid robot for branch assistance. IRA is capable of servicing 60 customers on a daily basis. Since the fiscal year 2014–15, sustainability has been formally included as the fifth value, alongside product leadership, operational excellence, customer focus and people as stated in ESG (Environmental Social and Governance) policy framework released in 2020.

ESG committee: As boost the focus on SD goals, HDFC has formed ESG committee which acts a head to three other committee namely: - Environment Sub-Committee targeting on opportunities for improvement in areas of water and waste, energy and emission; social and governance sub-committee majorly dealing with corporate governance policies and code of conduct; while the third product and responsibility sub-committee dealing with climate risk and new opportunities in this area.

Reduction in paper usage: Financial transactions made through ATMs and mobile banking result in less paper being used in trade, which is a step towards sustainable economic growth. HDFC nearly has 16.5 million credit card holders and 40 million debit card holder. As a initiative towards sustainability the bank instead of sending PIN are opting for Green PIN which is shared on their registered

contact number. Use of M-banking apps has considerably reduced the consumption of paper for pass book printing, fund transfer and other banking services. This is again a classical example for fusion of AI and sustainability.

Energy and emissions: HDFC has been continuously monitoring its greenhouse gas emission annually with the motive to curb and control the carbon emission. HDFC is adopting various measures like use of automated energy management solutions, incorporating energy efficient building designs, solar energy in offices. It also includes implementation of automated energy management solutions by replacing high energy consuming devices and equipment with its greener and better alternative and so on.

E-waste: the bank is making reasonable efforts in manage its e-waste in the most responsible manner through the authorized personnel. Since the FY 2019-20, the bank has curtailed to minimum.

SBI (State Bank of India)

Green housing: SBI launched a green house program a step towards achieving a low carbon society. Construction and renovation of green building has been initiated through improvement in design and operations which lead reduction in adverse influence on the environment. SBI is among the pioneering bank of India to launch the “SBI Green Home Loan”

product to the Indian market. Under which the bank offers a complete relaxation in processing charge, with reduction by 0.25% in the interest rate and a 5% margin concession (Jaggi, 2014).SBI is taking the help of SHG members of local communities and the Kiosk Banking Operators as the custodian of the restorative process of protecting the environment from degradation.

Rooftop Solar Project Financing (RSPF):

SBI has started to support environmental causes by providing huge credit to solar roof installation projects.

It would finance solar panels with the collective capacity of 100 MW for a worth of 400 crores. The State Bank of India will carry out this development initiative with the assistance of the World Bank

Green financing and environmental-friendly projects:

SBI has paced the investment level in various eco environmental projects and renewable energy projects. It is recognized the pioneers of creating green electricity through the construction of ten windmills with a combined capacity of 15 Mw across three different states of India namely Gujarat, Maharashtra and Tamil Nadu. Not only this the bank has invested in various other projects like Hydro Projects (INR 1.65 Billion), Wind Energy (INR 20.93 Billion), Solar Roof (INR 91.37 Billion) and some biomass (INR 940 Million) as part of sustainable Banking as for FY 2021.

These projects were finance through the issue of Green Bonds regulated by a dedicated green bond committee constituting qualified people.

Green marathon: SBI recently suggested holding marathons annually to advance environmental objectives. The marathon was held in six cities in February and March 2019: Chandigarh, Bangalore, Chennai, Ahemdabad, and Delhi. Each participant in the marathon, which had the theme "Run for Green," got a sapling to plant after completing the course in support of a greener city. Also, the majority of the materials used in the marathon's planning were eco-friendly. This marathon's main objective was to increase public awareness of the importance of adopting green practises (India CSR Network, 2018, <https://indiacsr.in>).

Counter for the green channel: By switching from paper-based banking operations to green channel counters in a number of its sites, SBI made another step towards green banking (SBI, 2010). Now, GCC is accessible in 7,052 SBI branches, with an average of more than 100,000 transactions each day. Due to the fact that paper makes up the majority of the bank's disposal, which produces a significant amount of waste, this is the most important activity the bank performs. As a result, trees are being felled at a rapid rate, wreaking havoc on the ecosystem.

Retail and digital banking development initiatives: SBI is

currently using an AI-based solution developed by Chapdex, which is dealing with customers like a regular employee. SBI has used AI as a online platform recognized as YONO application, is used as a platform to create awareness about the bank's omni- channel banking with a motive to promote green banking. SBI is amongst the largest user of solar panel in ATMs and office premises covering around 250 ATMs and roof top of 150 buildings branch and more (the pioneer, 2018). With reference to the number of solar ATM installation, SBI is among the largest. This effort has been successful in lowering CO2 emissions by 2000 tons annually since its start in 2008. The bank installed 1200 solar-powered ATMs up until September 2018 and more than 250 ATMs alongside lenders who covered the roofs of 150 buildings with solar panels. It anticipates building 10,000 ATMs during the following two years (businessstoday.in). This initiative's major objective is to cut carbon emissions and carbon footprints dramatically. In addition to ATMs, the bank has introduced effective lighting, automated systems, and time management tools to save energy.

Annual reports in electronic format:

The delivery of electronic annual reports to shareholders is another aspect that helps in saving the environment. The mailing of yearly statements on paper resulted in a significant reduction in paper waste. It was started at the shareholders' request

and for a little fee that is provided to a charitable organisation. The bank made Rs. 3.09 Cr. in 2014 merely by charging Rs. 100 per report, and then the sum was donated to the SBI Children's Welfare Fund.

Project on carbon disclosure: With the intention of creating and enforcing strict regulations to lessen carbon footprints and promote green banking practices, the bank has joined hands with the CDP along with 550 other organisations.

Other Initiatives: Along with the other steps SBI also gives schemes on environment friendly machines and equipments. Through vehicle finance schemes borrowers get the advantage of 50% waiver on processing fee in car models which use alternative mode traditional energy. They are also engaged in paper recycling, duplexing which basically means printing on both sides to minimize the paper usage, use of energy efficient sources of energy in the premises.

The UN Sustainable Development Goal

The UN Sustainable Development Goals 2030 mission is an revolutionary initiative needed to revolutionaries sustainability globally, equitable and irreversible path with a promise not to leave nothing behind by identifying 17 objectives, which include 169 targets and followed by 232 indicators to measure how effectively they are delivered. However, the Millennium Declaration that was finalized in 2015, which prior

to the global development framework, is established for addressing the intricate and urgent concerns of poverty, instability rising inequality, fragility and climate condition in 2030 Agenda having eight Millennium Development Goals (MDGs). The SDGs have greatly impacted and outperform the MDGs. Major goals of SDGs are based particularly on human rights and committed to ensure everyone is treated with dignity. All the 17 goals of SDGs apply worldwide which have to be adopted and followed by all across developing or developed nations in the world. The collaboration of regional and international understanding which expresses the idea of universality helps in dealing with similar problems. Asia and the Pacific are the crucial region which is given the disparate degrees of development. One of the motto "leave no one behind", is a distinctive aspect of 2030 Agenda which explain that unaccomplished goals will not be considered as accomplished for overall society and national averages elevation which is insufficient. Individually objectives needs goals that, in addition to outlining time-bound commitments, assurance to advance on significant essential elements and techniques for success, essential elements and techniques for success and new data which are needed to conclude favourable results. Two major goals have been thoroughly discussed along with steps, process and achievement of India and Malaysia, which the

researcher discovered to be extremely connected to green banking.

Green banking has significant contribution toward sustainability

A novel concept called "green banking" unites environmental management with banking activities in an effort to transform the financial sector and develop fresh, long-term business strategies (Yadav & Pathak, 2013). Mumtaz and Smith's (2019) analysis of the green finance system for sustainable development in Pakistan revealed that the potential for green finance is enormous because it not only improves businesses' commitment to environmental responsibility and competitiveness, but also helps to address environmental problems. Jeucken & Bouma, (1999) investigated the relationship between sustainability and banks and discovered that banks have been adopting a more dynamic approach over the past 20 years to achieve sustainability globally (Bhardwaj & Malhotra, 2013) described green banking as a bank initiative that supports the growth of environmentally friendly businesses and aids in the restoring the natural environment process. Though, green banking is considered as standardised banking system that considers everything I.e environmental and social factors which help to encourage environmental sustainability and natural resources maximum utilization, according to the Indian Banks Association (Sahi & Pahuja, 2020). Green banking is an environmentally friendly financial system that aids in preventing environmental losses to make this world more beautiful and livable (Masukujjaman & Aktar, 2013). According to (Khatun, Mitra, & Sarker,

2021), financial institutions like banks can greatly advance a sustainable economy. Participating in sustainable banking initiatives helps banks create value and furthers their business strategies. (2015) Tyl, Vallet, Nancy, Bocken, and Marion. Given how crucial green banking is to achieving the sustainable objectives set by the UN, the Central Bank of Bangladesh has made implementing green banking its top priority (Akter, Siddik, & Mondal, 2018). According to a survey by GB practises (green policy, energy-efficient operations, general green initiatives and environmental training of employees) in the Indian city of Coimbatore, banks' environmental performance improved (Vidyakala, 2020). According to Brundtland (1987), the green banking objectives are: to attain growth, and eco-friendly sustainable development, sustainable banking system and social sustainability. (Hossen, Uddin, & Hossain, 2014) explains sustainability can be achieved through practising the 3D strategy (de-materialization, de-carbonization, de-mobilization) in banking routine working, e-banking and online banking. Following a review of the aforementioned literature, it is simple to conclude that sustainability and application AI in green banking has a substantial and favourable impact on development and sustainable growth in all parts of the globe. The conclusion is that green banking cannot be disregarded in order to achieve sustainability because prior literature reinforce the concept that, despite being vulnerable in nature, the banking segment fully supported the sustainability problem as being the median segment in the economy.

We presently face significant challenges in the form of natural and manmade calamities like pollution, heavy electrical waste, and global warming. Fighting all these issues can be done with the effective and efficient fusion of AI in green banking. It is one of the key foundations in the pursuit of sustainability. One of the most important professional groups that interacts with the public is banking, which has the potential to contribute to the long-term development of the nation by educating and increasing public knowledge. There are two methods to look at how banks affect the environment: internally and externally. Internal activities like how much paper, water, electricity, and other resources are used during banking processes. Despite being low compared to other regions, it should still be taken into consideration. On the other hand, external activities indirectly affect the environment by being a part of other activities like financing, risk management, investing, and so forth. External activities do not directly harm the environment. Banks may support greening if certain internal and external driving factors are present. Directors, upper management, stakeholders, investors and employees, are internal motivators that can be used to promote sustainability by incentivizing the development of eco-friendly goods and services as well as ecologically sound business practices. Customers and competitors are examples of external factors, and increasing knowledge of and exhibiting favourable attitudes towards green financing can lead to sustainable development. Banks are now using the term "green marketing strategy" to denote a responsible corporate marketing

initiative which checks environmental issues as opportunities for growth and development and validates them across all systems.

Conclusion

The heart wrenching and devastating moments Indians and all round the globe have experienced in the form of landslide, drought and flooding, extreme temperatures have forced us to think again regarding global warming and its effects, that everyone are facing and what our future generations are going to face in upcoming decade. All our activities should be made to address this issue. This situation isn't the responsibility of any one segment of the society. Every individual whether it's the government, businessmen, NGO's or any individual working at small level should take participation in stopping global warming and making the planet more sustainable for everyone. We need to address all the sectors whether its primary, secondary or territory sector but the financial institutions, particularly banks, when allocated properly with AI will be crucial in this environment by promoting the growth of a strong and prosperous low-carbon economy. AI projects and schemes developed by banking institutes will definitely improve the environmental vitals as well as reflect a positive impact in the long term value of the company. The industries having bigger carbon output must be considered as high risk factors in future banks may skip from investing in these companies

in favour of cutting-edge technological approaches that absorb or lower carbon emissions. I would conclude by the fact, application of AI in the current trend is green banking, which is a source of sustainable development and will surely help banks, businesses, and the environment in general.

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