

**REVIEW OF LITERATURE**

A Literature Review is an instance of academic writing demonstrating knowledge and understanding of the academic literature on a specific topic placed in context. It also includes a critical evaluation of the material. The two main objectives of literature review are the content covering existing research, theories, and evidence and a critical evaluation and discussion of this content. A literature review gives the researcher a general image of the existing knowledge on the research topic.

- 2.1 Introduction
- 2.2 Theoretical approach
  - 2.2.1 The Technology Acceptance Model (TAM)
  - 2.2.2 The Value-Belief-Norm (VBN) Theory
  - 2.2.3 Theory of Planned Behaviour (TPB) Model
  - 2.2.4 Sustainability Theory
- 2.3 Literature review on sustainability and sustainable banking practices:
  - 2.3.1 Sustainable banking
  - 2.3.2 The implications of sustainable banking practices
  - 2.3.3 The strategy of sustainable development in sustainable banking
  - 2.3.4 The initiatives for sustainable banking practices
  - 2.3.5 Banking and environmental concerns
  - 2.3.6 The dimensions of sustainable banking
  - 2.3.7 Adoption, awareness and usage of sustainable banking practices
- 2.3 Research Gap
- 2.4 Conclusion

## **2.1 Introduction**

Sustainable banking involves strategic planning and execution of banking operations and business activities while considering the impact of ESG (Environmental, Social and Governance). Banks must act on internal and external sustainability initiatives—the practice of conducting banking operations contributing to a general decrease in carbon emissions. Banks are pledging to provide financial assist, invest, and make the business easy by activities that focus on Environmentally and Socially responsible solutions while also ensuring a suitable Governance (ESG) model, moving to a low-carbon future, and ensuring a positive social impact. The consultation with internal and external stakeholders will help determine the ESG strategy, the Key Performance Indicators (KPIs), and targets. These goals will relate to sustainable finance, carbon emissions, diversification, and social impact. Banks will both drive innovation in the banking industry and open doors to financial access to deprived people.

RBI issued a notification on “Corporate Social Responsibility, Sustainable Development in December 2007. The central bank is taking proactive policy measures to promote and support green financing initiatives, Including the small renewable energy sector under its Priority Sector Lending (PSL) in 2015. under this scheme, firms in the renewable energy sector are eligible for loans up to 30 crores (sep-15 crore), and households are eligible for ten lakhs for investing in renewable energy. In September 2019, India announced a target to reach 450 GW of renewable energy generation by 2030. RBI initiates improving green finance activities by greenwashing (Conveying false impressions or providing misleading information about how a company’s products are more environmentally sound). Indian Renewable Energy Development Agency (IREDA)- a govt. Backed agency for promoting clean energy investment- India’s first green bank in May 2016. Green channel counters without using pay-in slips, withdrawal forms, chequebooks or remittance forms, cash deposits, cash withdrawals or fund transfers, Online payments, opening an account using Aadhar, Biometric (at home/bank agent), UPI-enabled mobile apps, digital wallets, payment gateway, DIGI bank from DBS (entire banks squeezed into a smartphone)DBS bank has executed its first paperless domestic trade financing transaction with Lincon Polymers Pvt. ltd. No documentation can share details through IDEAL (DBS’s digital banking platform). Green bonds are issued by any sovereign entity, intergovernmental group, alliance, or corporation with the aim that the

proceeds of the bonds are utilised for projects classified as environmentally sustainable. First issue 21<sup>st</sup> Jan 2015. maturity above five years.

In recent years, Indian banks have come a long way in demonstrating their commitment to ESG-centred operations and incorporating them into financing activities and operations. Making the Indian banking sector more sustainable has become a major challenge that has been met, as evidenced by the paradigm shift towards ESG (Environmental, Social, and Governance) considerations. This literature review concerns research that was published in 2024, and it talks about the steps that Indian banks took towards Sustainability and their implications. Sharma et al. (2024) comprehensively examined activities that lead to sustainability in banking which includes sustainable lending, green finance, and responsible banking. The study demonstrated how these activities can help the environment and increase the bank's financial stability and integrability into society. The authors see ESG as the most significant theme in banking operations. The 2024 publications point to a lot of changes that are coming into force in Indian banks in favour of sustainable banking practices which is bound by various factors such as regulatory frameworks, stakeholder expectations, and global sustainability trends. However, a lot of work still need to be done in areas addressing challenges such as standardised metrics, improved data collection, and enhanced regulatory frameworks. By addressing these challenges, Indian banks will be able reap the benefits of sustainable banking and play a significant role to achieve broader sustainability goals.

This thesis illustrates to what extent the Indian commercial banking sector has changed and how much it has adopted Sustainability. The literature review will be comprehensive and clear covering different aspects and dimensions of sustainable banking practices in India. The influencing factors that lead to the emergence of sustainable banking in both public and private banks were assessed. A customer-centric approach has been used where the awareness and preference of the consumers with regard to sustainable banking in India have been evaluated. This review goes on to discover the benefits that accrue to the Banks, Customers, and the Environment. This review will also discover the inherent challenges in sustainable banking practices and numerous essential factors that leads to sustainable banking practices in India. This section will discuss research studies and articles that contribute to the development of Sustainability in the Indian Banking sector.

## **2.2 Theoretical approach**

### **2.2.1 The Technology Acceptance Model (TAM)**

According to Liao et al. (2018), TAM assesses how external factors associated with the novel technical idea affect an individual's inner convictions, aptitudes, attitudes, mindsets, and intentions. As a result, one of the benefits of utilising TAM is that it more accurately forecasts the adoption and rejection of contemporary technology relative to the people being studied, and according to Olushola & Abiola (2017), applying the Technology Acceptance Model (TAM) to the relevant areas where technology is intended aids in creating a user-friendly system that encourages people to engage and adhere to the use of technology. However, it is confirmed that this structure provides fewer contributions than expected to account for the changes in IT systems when there are external influences that are affected by Perceived Usefulness (PU), Perceived Ease of Use (PEU), or any other factor. Moreover, Mertins & Austermann (2014) stated that the Technology Acceptance Model (TAM) can only be used for technological advancement and acceptance and offers a generalized viewpoint on a person's attitude towards technical acceptance.

According to the TAM approach, a variety of variables, including the following, affect users' decisions regarding how and when to employ novel technology when confronted with it: Perceived usefulness refers to how an individual perceives that one specific system could improve their job productivity. Perceived Ease-of-Use is the extent to which an individual assumes that utilizing a particular system will seem free from effort (Deslonde & Becerra, 2018). The Technology Acceptance Model (TAM) can be employed to examine and assess the variables impacting the acceptance of environmentally friendly procedures and technologies within the Indian banking industry. The aspect of perceived usefulness is designed to measure how sustainable initiatives in the banking industry are perceived as bringing benefits to stakeholders such as customers, investors, and employees. Perceived ease of use is related to how easily sustainability can be brought into the bank's operations. The attitude towards adoption aims to identify the views of the stakeholders such as bank staff, clients, and authorities, about the implementation of sustainability practices in the banking industry. Behavioural Intention identifies if the necessary players in the Indian banking sector are able to take part in or carry out sustainability activities.

Theoretical framework that leads the current research is the Technology Acceptance Model (TAM), which is a well-known model in the field of information systems and technology adoption and was originally proposed by Fred Davis. TAM is about understanding and predicting the acceptance by users of new technologies. According to the model, Perceived Usefulness and Perceived Ease of Use are the two most important factors that lead to technology adoption. Perceived Usefulness is an idea that refers to how much users think a technology will make their work easier, while Perceived Ease of Use is a concept that is used when users are asked to estimate the time to be able to use a particular technology (Sharma, 2018).

Integrating TAM into the already present research methodology is a potent instrument to examine the implementation of environmentally friendly practices in the Indian banking sector. The survey will gather customer data to evaluate their views regarding the helpfulness and ease of use of sustainability measures in their banks, which are in line with the TAM concepts. The study delves into the factors that affect the acceptance and use of sustainable practices in Indian banks, highlighting the drivers and barriers to application and contributing to a fuller understanding of this critical issue.

TAM, when considered as a theoretical framework, is appropriate to understand the aspect of technology adoption. Here, the use of sustainability in banking can be interpreted as a technological change in the bank. Sustainability measures typically entail the incorporation of novel technologies, processes, and systems that lessen the environmental impact and at the same time promoting responsible banking (Zhixia, 2018). The study, by using TAM for the adoption of sustainability, perceives sustainable practices as an innovation in the banking sector that changes the way banking services are delivered and managed

Environmental awareness of customers and their commitment to it considerably affect their demand for sustainable products and services provided by banks. Yadav and Pathak (2016) concluded that young consumers in developing countries are inclined to choose green products when they observe strong environmental commitment. This means that in the banking sector, customers' perception of a bank's sustainability efforts can affect their use of green banking services. Environmental commitment, when combined with other factors such as perceived usefulness and ease of use, can explain customers' behavioural intentions toward sustainable financial products. Knowing these customer-

driven factors is important for Indian banks, green banking solutions is promoted among customers.

As outlined above, the well-planned and validated survey instrument is the key component in the data collection process. It acts as a structured channel through which the perceptions of usefulness and ease of use are gauged, thus, it is in line with the core constructs of TAM. For customers, this means evaluating how they perceive the utility and convenience of sustainability measures provided by their banks.

By adapting the more general Theory of Reasoned Action (TRA) to the particular context of technology use, TAM, which has been initially proposed by Davis et al. (1989) is a significant progression in technology research. As per TAM, two beliefs: perceived usefulness (PU) and perceived ease of use (PEOU) are the major determinants of a person's choice to use the latest technology. Perceived usefulness is the measure of how one sees that using a particular system would make one's work more efficient, while the measure of how one sees a system that utilizes a specific platform would be uncomplicated is known as perceived ease of use (Al-Momani & Ramayah, 2025). In this research, the TAM Model is of particular significance as the perceived utility component is utilized to find out how various stakeholder groups like customers, investors, and employees view environmentally friendly banking practices. The perceived ease of use factor indicates the level of difficulty in embedding the sustainability aspect into banking operations. The aim of this study with respect to adoption is to survey the views of bank employees, clients, and legislators concerning the implementation of green practices in the banking sector. The behavioural intention of key players in the Indian banking industry governs their ability to engage in or support sustainability initiatives.

### **2.2.2 The Value-Belief-Norm (VBN) Theory**

The Value-Belief-Norm (VBN) theory by Stern et al. (1999), delineates a psychological framework that explains how personal values and moral beliefs determine pro-environmental behaviour. The theory is essentially a normative one which argues that individuals' environmental concerns, ethical orientations, and value-driven beliefs such as awareness of environmental consequences and a feeling of personal responsibility lead to activation of personal norms or a moral norm of obligation to behave in an environmentally friendly manner. VBN theory is essential to explain a situation where bank customers who see their bank as environmentally friendly, feel a moral obligation to

support its sustainability initiatives. This belief–norm pathway emphasizes that, through the adoption of deeply internalized values and ethical considerations, customers' behavioral intentions are not only influenced to engage in sustainable banking practices but also to participate in them. VBN, as compared to other behavioral theories, is capable of providing more elaborate reasons for individuals' environmental commitment, hence, it is very significant to this study. By adding a new entity to the conceptual model, this study aims at capturing the essence of Perceived Environmental Commitment portraying how the customers notice the bank's environmental activities. The point here is that individual environmental values and beliefs can only be reconciled with the institutional commitment if the environmental adoption behavior is through the ethical concerns and normative obligations.

Essentially, Value Belief Norm Theory (VBN) is a framework that explains the main reasons for behavior that supports the environment. Its core content is that an individual's values determine their ideas, and consequently these ideas activate the individual's norms and ultimately bring out the individual's behaviors. Subjected to the case of sustainability, the explanation indicates a logical way from universal moral norms to concrete deeds. From this perspective, values are the fundamental principles that not only regulate one's life but also goals. These could be, for example, pride, biospheric anxiety, or altruism, each of them representing different outlooks of the world and one's place in it (Roos & Hahn, 2019). Within the scope of the current research, VBN turns out to be instrumental, as people holding environmental values to a great extent, have views about environment effects and experience moral obligation to behave in an ethical way. Such views are exemplified by green banking that acknowledges the benefits that ethical assets, environmentally friendly financing, and socially responsible lending bring to the environment. Consumers are motivated to use sustainable financial services by these ideas that activate personal norms. The incorporation of moral responsibility, ecological concern, and ethical values into environmentally friendly financial decisions by the theory is instrumental in deepening the commitment of customers towards sustainable banking.

### **2.2.3 Theory of planned behavior (TPB) model**

A groundbreaking expansion of the Theory of Reasoned Action (TRA), the Theory of Planned Behavior (TPB) was first presented by Icek Ajzen in 1991 with the goal of offering an increased awareness of how behavioral intentions affect human behavior.

According to TPB, the three factors that most influence a person's intention to perform a certain behavior are: the person's attitude towards this behavior, personal standards, and perceived behavioral control. This intention is the most direct determinant of the behavior. Subjective expectations are the perceived social pressure to perform or not to perform a certain behavior; attitudes are the degree to which an individual evaluates the behavior positively or negatively; and perceived behavioral control, which is quite similar to the notion of self-worth, is the factor that indicates whether the behavior is performed with ease or difficulty (Ajzen, 2020). The Theory of Planned Behaviour is used in this research to provide an explanation of how consumers' behavioral intentions bring about the change of environmentally friendly banking practices. People's attitudes disclose if they believe sustainable banking to be beneficial to nature and the community. Subjective norms represent the social influence which comes from peers or organizations endorsing morally right financial conduct. The perceived behavioral conduct of consumers reflects their confidence in the acquisition and utilization of sustainable financial services. These factors comprise a system that determines intention, which directly affects adoption. The paper employed TPB to investigate the role of external and internal factors in shaping customers' willingness to engage in sustainable practices by perceiving ease of use, social expectations, and personal assessment.

#### **2.2.4 Sustainability Theory**

Sustainability that focuses on the economy, the community, and the environment growing in harmony came out first in the 1980s and has been climbing the political ladder ever since. Corporations as well as governments are not only aware of but also actively implementing Sustainable theory in their work. The goals of educational institutions worldwide include sustainability aims as important components. From the start, the concept of Sustainability has been changing its face. Now, there are various explanations of Sustainability, but the confusions still remain. The theory of Sustainability emerged from execution, and it is impossible to distinguish the research of Sustainability from the application of pertinent laws. Concepts for Sustainability have sprouted, followed by several SD initiatives, including the UN Global Sustainable Development Conference (Shi et al., 2019). Sustainability has seen numerous transformations, moving from addressing environmental problems to addressing global geopolitical issues. By examining the development of Sustainability theory and the ideas that led to it, various developmental issues that affect humanity at multiple stages can be addressed. The theory of

Sustainability guides the ongoing evolution of Sustainability methods, and the enrichment and improvement of Sustainability aims. The sustainability theory now focuses on using environmental resources sustainably, eradicating poverty, and, finally, the more all-encompassing and international SDGs as sustainable development goals (Broman & Robèrt, 2017).

## **2.3 Literature review on sustainability and sustainable banking practices**

### **2.3.1 Sustainable banking:**

According to Mozib (2015), Sustainability is the major focus of concern across different industries, which are not the same. One of such sectors which has become the subject of many discussions concerning sustainability issues is the banking industry. While companies around the world are racing to save the planet and reduce the effects of global warming, the situation in Indian banks has been quite different, as they are less progressive in terms of the implementation of green strategies. Acknowledging the challenges that come with competing at the international level and taking up their environmental and social responsibilities seriously, Indian banks are making available to client's various green products and services such as internet and mobile banking, ATMs, electronic fund transfers, green mortgages, and credit cards. The use of solar and wind energy, paper recycling, and green building is part of what they do. Still, there is a very long way ahead after the steps they have taken so far. Indian banks should make their green targets clear, devise plans, and carry out their eco-friendly activities step by step. Adopting green banking practices will be a source of inspiration not only for the banks and other industries but also for the overall economy and asset quality in the long run. Gayathry (2015) conducted a study to assess the environmental initiatives undertaken by ICICI Bank. It is a case study, and descriptive analysis is used; the study is quantitative. ICICI Bank Limited has adopted eco-friendly initiatives to promote Sustainability and to motivate customers to follow a green lifestyle. The steps taken are among others cashing in on environmentally friendly behaviors, getting customers involved in Eco-issues, and creating awareness about the importance of Sustainability. The paper also executed a survey to understand how these sustainable banking initiatives influenced the total efforts of the Indian banking industry towards environmental conservation.

Deka (2015) sets out to analyze the environmental method of banks with a focus on the State Bank of India. The study shows the impact of green banking practices on

customers' awareness and involvement in SBI Assam while listing a spectrum of environmental and other advantages. The analysis has been done using SPSS. Data is from 100 online surveyed respondents, and the study is descriptive and quantitative. Several financial institutions in India, including the country's largest commercial bank, State Bank of India, have implemented sustainable banking initiatives to promote sustainable and eco-friendly practices. The bank has recently launched a variety of paperless banking services to attract customers to save the environment.

Ahuja (2015) conducted a literary review on environmentally friendly banking in India. The objective of this research paper is to review the literature on green banking and identify the significant issues related to the implementation of this sustainability phenomenon. It serves as a conceptual paper with descriptive analysis. Only feedback through an online form is considered, and the research is quantitative. Green Banking aims to support environmentally friendly practices within the financial industry while decreasing both the internal and external carbon footprints of the business. It also implies the inclusion of green standards as a lending criterion. Although the banking industry is usually not linked to pollution, it still impacts the environment due to increased energy and paper usage. This paper reviews the literature on green banking and pinpoint major obstacles to the implementation of this eco-friendly approach. One major problem is consumer awareness and education, while public sector banks are more likely than private banks to embrace Sustainable practices. SBI is a great example of how banks can become more eco-friendly.

Lalon (2015) explored the significance of Green Banking practices in Commercial Banks of Bangladesh, the factors leading to their implementation, and the different methods each bank used for their Green Banking practices. Besides that, the paper looks into the policy guidelines and regulations that govern Green Banking practices. The primary objective of this research work is to examine the sustainable banking procedures of the commercial banks of Bangladesh, clarify the reasons for the implementation of this policy, and compare the different operations of the commercial banks regarding sustainable banking. The article employs the evaluation and qualitative analytical methods. The banking sector is more and more concerned with 'Green Banking', which means banking activities that focus on economic development and environmentally friendly strategies.

Tara, et al., 2015 researched sustainable banking for environmental management, focusing on paradigm shifts and evaluating the stages, initiatives, benefits, and the future of sustainable banking in India. This qualitative paper embodies comprehensive research of the significant topics related to the environment-friendly banking practice and the adoption of Sustainability principles. The paper deeply examined different real-life situations that highlight the significance of adopting environmentally friendly banking practices in today's society. Besides, the paper discusses the connection between organizations, laws, and guidelines related to environmental conservation and Sustainability and the practice of green banking. The paper is an extensive and authoritative source on the issues of green banking and its indispensable role in making a sustainable future possible.

Ansan and Uddin (2015) conducted a study to justify the present state of green banking in Bangladesh. The main objective of this paper was to figure out the reasons that lead to the adoption of sustainable banking practices in Bangladesh and to showcase a scenario. This paper uses secondary data from related websites, published reports, and articles, so descriptive analysis is used, and a qualitative analytical method is applied in the present article. This study uses secondary data from relevant websites, published reports, and articles. The findings indicate that only a few private and foreign commercial banks have implemented green banking guidelines and provided financing for sustainable projects. In contrast, state-owned commercial and specialised development banks have yet to take noteworthy initiatives. Nonetheless, it is essential to note that all green banking activities in Bangladesh are on an upward trajectory.

Sindhu (2015) executed an evaluative study on banking and environmental concerns. This research focused on customers' awareness and preference for sustainable banking. This paper aims intends to assess sustainable banking practices in Indian banks and gauge customers' comprehension of these measures. Being a study solely based on secondary data, it is of a descriptive nature, and the quantitative data were gathered from the respondents. As the biggest consumers of technology, financial institutions, especially banks, can become a major force in the global environmental movement if they decide to follow eco-friendly practices. By presenting innovative product and service offerings and using technology, banks can help their customers to reduce resource consumption, for instance, by lessening paper usage, and at the same time, be a part of environmental

protection. Providing customers who take up and implement green technologies with affordable financing can be a source of positive environmental change with far-reaching effects for a long time to come. This report is a comprehensive evaluation of green banking measures implemented by Indian banks, including customer awareness levels, and their preferences for green banking activities.

### **2.3.2 The implications of sustainable banking practices**

Juariah (2015) studied the sustainable banking in Banking Services to improve quality. The paper analyses the relationship between electronic banking as operational support and customer service enhancement. The study has been carried out through descriptive analysis and is of a qualitative nature. The paper is intended to examine the potential contributions of electronic banking to customer service. Banks may upgrade their services and at the same time be eco-friendly by lessening the use of paper and using recycled materials. This could lead to a higher customer perceived quality of service. The authors have employed a qualitative research method with a descriptive approach and literature review for this study. The research paper is designed for banks that are either willing to adopt or have already implemented Green Banking practices as it is assumed that the knowledge of Green Banking can be a great service quality enhancer.

Trehan (2015) performed an evaluative survey to measure the level of sustainable banking in India. This study aims to evaluate the role and impact of sustainable banking in Indian banking systems and practices. This study was carried out using descriptive analysis method. The concept of green banking pertains to promoting environmentally friendly practices and reducing the carbon footprint in banking activities.

This approach not only ensures that industries become more environmentally conscious but also helps improve the quality of assets for banks in the future. In India, businesses adopt green practices due to government regulations and public pressure. Green companies also recognise that waste management and pollution control have benefits besides attracting capital investment. Financial institutions increasingly rely on implementing environmental conservation measures, supporting deprived sections of society, and prioritising concern for the quality of life and nature to establish the quality of service. This paper discusses the introduction, importance, and initiatives of green banking, environmental management by banking institutions, enforcement of environmental management, and the role of government in green banking strategies.

Shaumya and Arulrajah (2016) researched Measuring sustainable banking Practices. This study was conducted with evidence from Sri Lankan banks. This examination aspires to explore sustainable banking practices in Sri Lanka and develop an instrument to measure sustainable banking concepts/practices. The content analysis approach was used in the present investigation and is descriptive. As part of our research objectives, the authors developed a tool to evaluate the implementation of green banking practices. This tool was assessed among 155 bank employees at specific branches. In addition, they investigated ninety-eight distinct green banking practices across four private sector Commercial Banks in Sri Lanka to achieve our first objective. For this, they have developed a comprehensive 16-item questionnaire comprising four dimensions to accurately assess the level of green banking in Sri Lanka. This instrument has been designed with the utmost care and diligence and is specifically tailored to meet the rigorous standards demanded by the business and academic communities. Its use will enable organisations to understand their environmental impact better and make informed decisions regarding sustainable banking practices.

Biswas (2016) analyzed the sustainable banking practices, using a conceptual framework. This study examines institutional frameworks in sustainable banking practices. As this study has been done as an abstract paper, a descriptive approach and qualitative analysis have been used in this research paper. Mahfuzur and Barua (2016) researched designing and adopting a sustainable banking framework for environmental protection in Bangladesh. The research objective was to evaluate the adoption of sustainable banking and environmental conservation. Then, the information is collected online from the respondents, and the study is quantitative. (i) Bank-wise weighted average progress level across all policies of the GBG and (ii) policy-wise level of progress across all banks was evaluated using the weighted average method.

Rifat et al. (2016) investigated commercial banks' contributions to embracing sustainable banking from Bangladesh's perspective. This study examines the bankers' attitudes toward adopting sustainable banking initiatives in Bangladesh using the Unified Theory of Acceptance and Use of Technology (UTAUT) model in commercial banks. This study has been done as an empirical study using SPSS tools, and this article is qualitative. This research has confirmed strong connections between factors such as performance expectancy, effort expectancy, social competition, environmental concerns, central bank

regulations, and how bankers in Bangladesh perceive and use green banking. The findings suggested that bankers have a positive outlook to incorporate green banking into their work activities.

Jayabal and Soundarya (2016) wrote a research paper on sustainable banking as a bank's initiative for sustainable development and progress. The objective is to understand the significance, steps, challenges, and benefits of sustainable banking. Since this is a study based on only secondary data, the descriptive analysis method has been employed. The respondents collected the survey through the questionnaire, and the study was quantitative. The Green Bank Initiative includes a variety of measures, such as Automated Teller Machines (ATMs), customer paperless banking options, and the erection of windmills in the villages of India. The main objectives of green banking are: first, to ensure the efficient use of resources and energy while cutting down carbon emissions, and second, to encourage and finance environmentally friendly sustainable investments. This banking method revolves around the use of sustainability resource management principles and issuing of credits in a manner that is friendly to the environment. This paper explores how bank initiatives can be a source of bank green movement and support sustainable development.

Kaur (2016) tried to figure out the green initiatives of banks in India as a paradigm shift by writing a research paper. The main goal of this research is to assess the environmental protection programs of Indian banks through secondary data only. This research is descriptive since it employs a case study method and a quantitative approach. The study intended to find out the steps taken by the banking sector in India to protect the environment and promote eco-friendly development. The research discussed the issue through a case study and depended on trustworthy secondary sources like bank websites and reports published by the Reserve Bank of India. It allowed for a comprehensive and structured understanding of the subject matter. The results reveal that these banks have been actively involved in sustainability initiatives.

Sharma et al. (2016) conducted a Comparative Study on Green Initiatives Taken by Selected Public and Private Sector Banks in Mumbai. The objective of this study is to explore existing literature about sustainable banking. Secondly, there is a need to know about initiatives by leading select public and private banks to promote those products, processes, and technologies that reduce the environmental carbon footprint. As this study

has been done with secondary data, descriptive analysis is done, and qualitative research is conducted among the leading banks like HDFC, Axis, and ICICI.

### **2.3.3 The strategy of sustainable development in sustainable banking**

Jatana and Jain (2016) conducted a study on sustainable banking, Green Banking: A Study of Customers' Perspective in Rajasthan. This paper has been written to check consumer awareness of sustainable banking services in selected public and private sector banks in Rajasthan. This study has been done as a secondary data-based study.

It primarily describes and includes both qualitative and quantitative analysis. Environment-friendly banking through green initiatives is one of the major contributors to a cleaner and sustainable future. Indian banks promote corporate social responsibility which is led by green banking as one of the major components. Banks have the potential to be instrumental in the rollout of green banking strategies across the country. This article reviews the degree to which consumers are aware of green banking practices available in Rajasthan, India. Faruque et al. (2016) conducted a research on sustainable banking and its potential in Bangladesh. The present investigation is geared towards identifying the role of particular Sustainable banking measures in the abatement of carbon emissions. The bank ought to support the development of clean technology and the area of the reduction of pollution with the introduction of new products. This research is analytical and conceptual, so it is descriptive in its tool for analysis, and the research is qualitative. Green finance is the main driver of carbon footprint reduction and resource efficiency. There is a lack of sufficient awareness in Bangladesh concerning air pollution, which may have a very bad effect on the country's future.

Mehta and Sharma (2016) did research on customer perseverance for sustainable banking in Nepal. The current research is about the level of customers' awareness of sustainable banking and its activities in Nepal. The descriptive analysis method is used to measure customers' knowledge and perception of sustainable banking from the data collected from the customers. The study is qualitative. This research is designed to find out the level of knowledge of customers in Nepal about the concept of Green Banking and their understanding of the steps and the practices undertaken by banks. A descriptive research design was utilized to evaluate customers' cognizance and attitudes towards Green Banking. Customers' knowledge of the general concept of Green Banking was

limited, but they recognized the importance of the Green Banking initiatives for the conservation of the environment and the achievement of sustainable growth.

Saigal and Rajeswari (2016) studied the role of sustainable banking in achieving sustainability. The present study provides guidelines at two levels: first, the greening of processes, products, services, and strategies; and second, the greening of physical infrastructure at the branch level. This article intends to lay down the guidelines for bank branches to realize operational excellence and environmental efficiency, thus, making it easier for the banks to become an Equator Principles Financial Institution (EPFI). This study was done as a secondary data-based descriptive analysis, and this article was done with qualitative research. Scholars could study how banks can improve their tracking and reporting of environmental obligations. Comparing a bank's position to industry standards can help branches transition to green growth. Future Green Banking efforts could focus on improving the 'Green Management Maturity Grid' based on Indian banking sector benchmarks, fostering eco-sensitivity in Indian banks.

Vadrale and Katti (2016) researched sustainable banking initiatives by Indian public and private sector banks. This study was done for the International Conference on Sustainable banking for Green Industry and Economy. This study evaluates green banking products and sustainable banking initiatives by public and private sector banks. As this study has been done with secondary data, it is descriptive, and the research is qualitative. Public and private banks are working to promote environmental awareness among their employees, customers, and the Public. They have transitioned from promoting e-banking to implementing sustainable practices like recycling, treating water, harvesting rainwater, using solar-based equipment, and constructing eco-friendly buildings.

Khan and Ali (2016) researched the Present Scenario of sustainable banking practices followed by Private Commercial Banks in Bangladesh. This study aims to discover the present scenario of sustainable banking practices in Bangladesh. This study was done using descriptive analysis. The survey was conducted by the consumers, who are all tied up with the private banks, and this study is a quantitative analysis. Bangladesh Bank advocates for green banking practices by creating guidelines and legal frameworks for commercial banks to develop their policies. It shows their commitment to sustainable business practices and environmental stewardship, serving as a model for other countries.

Mehedi and Maniruzzaman (2017) explored the characterisation of bankers' perceptions of sustainable banking adoption indicators in Bangladeshi-regulated commercial banking institutions. The prime objective of the study is to evaluate middle-level bankers' perceptions regarding sustainable banking in Bangladesh. The study aims to accumulate the factors that have influenced the adoption of sustainable banking. Factor analysis using SPSS was used in this study, and it is qualitative. The paper explore the innovative ideas in green banking and contribute to existing literature. This approach is expected to catalyse further research in the field of green banking.

#### **2.3.4 The initiatives for sustainable banking practices**

Giridhar and Sudhakar (2017) did a thorough analysis on sustainable banking and the issues and challenges that followed by India. They wanted to explore the problems that the banking sector faced while trying to go green in India through this paper. The research used descriptive and quantitative methods. The implementation of sustainability norms in the banking sector does not stop at the environmental aspect only. It offers such institutions a great variety of advantages like lowered risks and costs, enhanced reputation, and support of the environment, among others. Green banking is in line with a bank's business goals and Corporate Social Responsibility; thus, it is very important for Indian banks to realize that they have to take care of the earth and the society. Their success in the global market and survival as a strong competitor depend on their recognition of the need to take care of the environment and society.

Sahi and Pahuja (2017) researched the Changing Scenario of Banking. This research has been tried as an Empirical Study on Customers' Perspectives on Sustainable banking. The primary purpose of this research is to make known the awareness of the banking initiatives that support sustainability, the frequency of green services usage, and the perceived benefits by the customers in using sustainable banking services among the customers of the selected public and private sector banks in Punjab. This research adopted SPSS based analysis and is qualitative research. As per the latest studies, a large number of people are familiar with the green banking concept. The most popular green products are debit and credit cards. Surprisingly, education was not a factor that led to the use of green banking services. A detailed factor analysis brought out three major factors that could influence a person's decision to use green banking services: online transactions, security, and environmental benefits.

Mehedi and Kuddus (2017) researched Sustainable banking: a case study on Dutch-Bangla Bank Ltd. This research is intended to measure the banking performance of Dutch-Bangla banks. It was a secondary data-based study. SPSS was the tool used for data analysis, and the article implemented quantitative research. The finance sector is the one that can do the best for the environment by, for example, implementing a lending policy that supports green investments and a clean future for the next generations. The research highlights the importance of accountability in the firm's internal and external spheres, especially as far as the industry's activities are concerned, which get credit facilities from the financial institutions. That is how it guarantees that sectors are the ones held responsible for the consequences of their post-operation on the environment.

Shayana, Raj, and Rai (2017) researched problems and prospects of sustainable banking concerning the coastal regions of Karnataka. The main objective of sustainable banking is to minimise filth and give importance to the environment and society. This study is based on secondary sources; descriptive analysis and quantitative surveys are used. The trend of green banking is gaining momentum globally in recent times. Although there may be more lucrative business avenues, it presents a potential for significant market share and profitability soon. To adopt green banking practices successfully, the Reserve Bank of India and the Indian government must proactively craft green policy guidelines and financial incentives.

### **2.3.5 The banking and environmental concerns**

Raj and Rajan (2017) surveyed customer awareness of Sustainable banking initiatives. The objective of this study for SBI is to know its customers' perceptions of the sustainable banking initiatives it has taken up. The study will also help understand customers' satisfaction level with sustainable banking products introduced by SBI. This study uses descriptive analysis; the survey was done with private banks, and this article contains a qualitative analysis.

Arumugam and Chirute (2018) researched numerous factors that determine the adoption of sustainable banking in commercial banks in Malaysia. This study examines the factors affecting bankers' adoption of sustainable banking in Malaysia. SPSS was used, and Cronbach's alpha result showed a significant correlation between the variables evaluated. Pearson chi-square analysis was also done. However, the current extent of

sustainable banking practice and its adoption has yet to be found in this study. It needs to be extended as a cross-country analysis, and the study is quantitative.

Igbudu, Garanti, and Popoola (2018) examined about enhancing bank loyalty through sustainable banking practices. In this study, the mediating effect of corporate image is also evaluated. This study aims to measure the role of sustainable banking practices on the corporate image of banks. SPSS was used for data analysis, and Values of the standardised factor loading, Cronbach's alpha, composite reliability, Average Variance Extracted (AVE), and model fit indices were used to assess convergent validity as it is evident that the dimensions of sustainable banking and corporate image & bank loyalty have not been measured in this study. This article is descriptive, and it is a quantitative approach.

Giramkar (2018) investigated sustainable banking in India to study sustainable development. This study aims to evaluate green initiatives and actions in the banking sector in India and cite international developments. This study uses descriptive statistical analysis, as it was conducted as a primary data-based study using SPSS, and this study is a qualitative analysis. This study turns the spotlight on environmentally conscious measures and modernizations of the Indian banking sector, alongside the global progress. The article emphasizes the possibilities of banks becoming involved in environmentally friendly activities such as carbon credit trade, green financial products, and integrated IT solutions that may be one of the ways to help the earth become greener a bit more. Furthermore, the central bank of India, the Reserve Bank of India, is depicted as being instrumental in the creation of green banking regulations to be the main driver of a clean environment and sustainable development.

Kulsum and Huda (2018) researched Rethinking the Sustainable banking Model in the context of Bangladesh. This paper evaluates the impact of climate change on Bangladesh and sustainable banking in combating climate change. This research is based on secondary data and uses descriptive and quantitative analysis. This study explores the perceptions of employees working in private commercial banks in Bangladesh. However, it is essential to note that the findings and conclusions of this study should not be generalised to other service organisations.

Zhixia et al. (2018) investigated about sustainable banking for Environmental Sustainability. This study also evaluated the present status and future agenda. This study

focuses on the Experience from Bangladesh. This study assesses the current situation of Sustainable banking practices, progress, and different green initiatives Bangladeshi banks take to maintain environmental Sustainability. Narrative analysis has been done using secondary data from various sources. To facilitate economic growth in developing countries, banking institutions must adopt an initiative-taking approach and accord environmental considerations a top priority in all their business activities. Given the dynamic and ever-changing nature of the environment, banks can ensure a return on investment by embracing environmental guidelines in their lending practices, thus incentivising polluting industries to undertake environmentally friendly measures.

Kumar and Prakash (2019) conducted a study to develop a framework for assessing sustainable banking performance. This study was done in the Indian banking sector. This study aims to provide a theoretical framework for banks' environmental and social conduct. Content analysis and the Mann–Whitney U test were used to determine the differences in the sustainable banking performance of the banks in India. As this study provides a theoretical framework for the environmental and social conduct of banks, it also helps assess the impact of the environmental and social behaviour of banks on the Sustainability of Indian banks – an empirical study must be done in this direction. This article is descriptive, and the data were collected online and applied to quantitative and qualitative approaches to this survey.

Bukhari et al. (2019) researched the Determinants of Sustainable banking Adoption as a theoretical framework. This study aims to determine the nature and extent of Sustainable banking adoption. This study uses the descriptive analysis method; it is quantitative, and a framework has been suggested for Sustainable banking adoption. The role of external factors or institutional aspects has not been researched, which must be done in Indian and UAE banks, which is attempted in this work.

Muraleedharan (2019) did a study on sustainable banking and green Initiatives taken by the State Bank of India as an overview. The study objective is to measure Sustainable banking initiatives taken by SBI. As this study used secondary data, it used descriptive and qualitative analysis.

Rodrigues (2019) explored environmental management through Sustainable banking. This study has been done on Sustainable banking practices concerning SBI. This study evaluates environmental management practices and their impact on Sustainable

banking in SBI. As this is a conceptual paper, descriptive analysis has been done. This article contains both qualitative and quantitative analysis. Green banking practices promote Sustainability and enhance asset quality for banks. State Bank of India has implemented paperless banking options to contribute to the environment and encourage socially responsible investments. This paper showcases SBI's green banking initiatives and their environmental benefits.

### **2.3.6 The dimensions of sustainable banking practices**

Khan and Szegedi (2019) researched to evaluate the concept of sustainable banking in Pakistan. This study aims to assess the Sustainable banking practices in Pakistan. As this study is based on secondary data, it is descriptive, and a qualitative method is used. The dimensions of Sustainable banking and its impact on Sustainable banking sustainability have not been evaluated in Indian and UAE banks, which is attempted for the first time with this study.

Charan et al. (2019) evaluated Customers' Perceptions of Sustainable banking Practices in India. This study aims to examine Sustainable banking practices, customer perception of Sustainable banking towards climate change, and sustainable development goals. This study was conducted as a primary data-based study, SPSS was used for analysis, and the quantitative approach was utilised in this survey.

De Silva (2019) has researched Sustainable banking to create a sustainable competitive advantage. This research is to the green initiatives of the banks in Sri Lanka that have been reviewed. It also provides insights on the strategic importance of sustainable banking in creating a sustainable competitive advantage. This study was only supported by secondary data., using descriptive analysis and a quantitative approach. The role of sustainable banking and its impact on the implementation of sustainable banking practices in Indian and UAE banks is a topic that has not been delved into hence this research will examine these aspects. Soumya (2019) researched Sustainability and sustainable banking for environmental Sustainability and its implications. This paper evaluates the existing sustainable banking practices and their influence on the environment. The usage of descriptive analysis and qualitative method characterized the study.

Raisa and Maria (2019) performed a study on the efficient sustainable banking its effects on the economy in Bangladesh. It has attempted to highlight the systems, opportunities, difficulties, and advantages of Sustainable banking policies. This study used secondary data from Bangladesh Bank Reports and other commercial bank reports for descriptive analysis, and the approach was qualitative. Green banking measures help banks to reduce their energy consumption and be in line with the Sustainable Development Goals. This requires setting up green targets for both the short and the long run, planning strategies, and implementing greening activities bit by bit. This approach is a win-win for the industry and the future asset quality of banks.

Shershneva and Kondyukova (2020) analyzed sustainable banking practices, their impact on financial activities, and their role in the transition to sustainable economies. This research is aimed at assessing sustainable banking practices in BRICS countries. The current sustainable banking practices in BRICS countries have been evaluated in this study using SPSS analysis, and the technique is quantitative

Kumar and Prakash (2020) studied the sustainable banking practices in India and the present level of adoption of such practices. The purpose of this study is to measure the adoption of sustainable banking in Indian banks. This study was a secondary review of various articles and publications on sustainable banking in India, and descriptive analysis was used.

### **2.3.7 Adoption, awareness and usage of sustainable banking practices**

Singh (2024) explored the usage of eco-friendly banking activities in India and measures their effects on financial performance, compliance with regulations, and social benefits. The research pinpoints the main actions taken by Indian banks and evaluates the effectiveness of these actions in achieving the overall sustainability goals. The results show that sustainable banking practices lead to cost saving, risk reduction related to environmental and social factors, and stakeholder engagement.

Anjanappa (2024) elaborates on the difficulties that come with decarbonizing the Indian Banking sector, a significant move in India's commitment to the Paris Agreement. The research points to blockades like a lack of regulations that could guide the way, the necessity for normalized ESG standards, and that turning towards sustainable models is

very expensive. It infers that overcoming these challenges requires collaborative efforts among stakeholders and the development of clear guidelines to facilitate the process of decarbonization.

Kumar and Prakash (2024) created a hybrid framework grounded on the Global Reporting Initiative (GRI)-G4 standard to evaluate the disclosure of sustainability practices in Indian commercial banks. Their study investigates 28 banks to examine their environmental, economic, social, and governance contributions. The results shows variability in sustainability practices between the banks, which is a call to action for standardized reporting practices to enhance transparency and comparability.

Gupta and Arora (2024) investigated the quality of sustainability reports in the Indian banking sector. Their study explores the influence of bank ownership, market capitalization, and board composition on the quality of disclosures. The paper concluded that the report has improved yet there is long way to go to meet international norms and expectations of stakeholder.

Sharma and Desai (2024) explained the overall impact of sustainable finance on Indian banks, focusing on the challenges, opportunities, and effects of the change. According to the article, sustainable finance acts as a key driver of ESG excellence, while facing some challenges, like regulatory uncertainties and need for standardized metrics. Authors contend that in spite of challenges, sustainable finance is a source of tremendous opportunities for banks to innovate and strengthen their position.

Sina and Vennila (2023) investigated how customers perceive sustainable practices in Indian banks. The study emphasizes the necessity of banks being socially responsible especially in a developing nation like India. Results indicate that customers acknowledge the importance of "going green," however, very few are aware of sustainable practices in Indian banks. The paper positions consumer research as a priority to unveil user awareness and demand.

Bhalani and Patel (2020) researched Sustainable banking practices adopted by banks in the Valsad district. This study aims to discover the various initiatives public and private sector banks take by adopting Sustainable banking. The descriptive statistical package SPSS-16 version has been used for statistical analysis. The quantitative approach is utilised in this survey.

Bihari and Swayin (2020) examined the sustainable banking practices in India as a case study with SBI. This study has been done as an exploratory study. This research has been done with secondary data; no specific analysis tool has been used or mentioned, and the qualitative method is used in this survey. Nisha et al. (2020) conducted a research study on Sustainable banking adoption as an evaluative study with state-owned banks in Bangladesh. This study examines the role of environmentally sustainable practices in banking sustainability. The examination of the attitudes of bankers in state-owned banks towards the implementation of green banking is of utmost importance. Research has revealed that factors such as central bank regulations, environmental concerns, and facilitating conditions significantly impact the overall perceptions of bankers. The findings indicate that bankers are practical in developing attitudes towards green banking in their work activities across all state-owned banks.

Kumar et al. (2020) researched integrating sustainable development in banking. This study has been attempted using an analysis method using a historical approach, and a conceptual framework has been provided. This examination aims to evaluate the role of Sustainability in Indian banks in the last three decades. As it is an abstract paper, the analysis method and a specific descriptive process were used for evaluation. The quantitative approach is used in this article. As this study has been done as a descriptive study of national and international practices on sustainable banking practices, an empirical survey of international practices must be conducted.

Bukhari et al. (2020) explored about the journey of Pakistan's banking industry towards Sustainable banking adoption. The investigation intends to assess the challenges encountered, successes, and lessons learned from Pakistan's Sustainable banking programs for other developing nations fighting environmental deterioration. The research relied on a case study approach, and a qualitative and descriptive analysis method was employed. This case study follows the transformation of Pakistan's banking sector in the adoption of Green Banking practices, the issues it confronted, the achievements it made, and the lessons it learned. For regulatory authorities and other stakeholders in emerging economies, it is a source that shows the implementation of such environmentally friendly measures.

Jatana and Jain (2020) explored Sustainable banking and profitability. Their work was an empirical study of Indian commercial banks. The primary goal was to explore the

effect of sustainable banking products or services on the profitability of Indian commercial banks. Since this is an empirical study, a SPSS-based analysis was performed, and quantitative analysis was used in the article. A recent study has suggested that Indian Commercial Banks can be more profitable if they prioritize Green Banking Services. Out of the four services that were taken into consideration, it was found that only Total Retail Electronic Clearings had a significant effect on profitability. This finding pinpoints the necessity of integrating environmentally sustainable measures into the banking sector, especially in terms of electronic transactions. In this way, banks can become carbon neutral and contribute to the planet's welfare and enhance their financial performance. It is recommended that financial institutions take a closer look at Green Banking Services and consider integrating them into their operations to achieve greater profitability.

Sultana (2020) researched moving Towards Socially Responsible Banking through a Sustainable banking Initiative. This study was done to investigate IBBL. This paper aims to discover sustainable banking practices and explore their potential in commercial banks like Islami Bank Bangladesh Ltd. (IBBL). This study is based on secondary data, and descriptive analysis is used; it is quantitative. Socially responsible banking and Sustainability with Sustainable banking initiatives have not been explored in Indian banks compared to UAE banks, and this study is an attempt at it.

Bouterraa (2020) made a descriptive based approach towards sustainable banking in the United Arab Emirates (UAE). This study aims to review the literature on sustainable banking in the scope of the UAE's present status regarding adopting sustainable banking. It has also highlighted the central initiatives, benefits, and challenges of Sustainable banking in the UAE. Narrative and descriptive analysis methods have been used as a literature review, and this paper is a quantitative approach.

Al Mulla and Nobanee (2020) did a mini-review paper on sustainable banking. This study aims to determine the role of Sustainable banking practices in fostering environmental sustainability development by obtaining and evaluating data from Dutch-Bangla Bank Limited.

The article relied on secondary data to investigate the topic. The study employed descriptive statistical tools such as simple averages, tables, and percentages, and utilised a qualitative approach. Green Banking initiatives, such as online banking, paperless office, and green lending policies, are environmentally friendly and contribute to the

Sustainability goal. They correspond to sustainability principles and lower the harmful effects of traditional banking practices as well. Financial institutions should therefore adopt Green Banking measures to achieve the SDGs.

Julia and Kassim (2020) analysed sustainable banking and its implications on sustainable banking practices. The main goal of this study is to evaluate sustainable banking practices. It is a secondary data-based study, narrative analysis is used, and the research is quantitative. According to the study, the banking sector in Bangladesh is described as going through the diversification phase after it has hiked through the intensification and foundation phases. The sector is making gradual progress and is full of potential to be a major player in the promotion of the country's sustainable development and green finance. Banks need to make and execute strong well-planned and effective strategies to achieve this goal.

Srividya and Vijayalakshmi (2021) performed a literature review on Sustainable banking Practices in India during COVID-19. The research aims to reveal how Sustainable banking practices benefited Indian banks during the COVID-19 pandemic. Since this study is conceived as a secondary data research, no specific analysis tools have been mentioned or utilized, and a quantitative approach has been followed in this paper. Among other things this paper deals with the impact of COVID-19 on the banking industry in India and the crucial role that green banking practices play in that industry. Sustainable banking practices serves as a means to get rid of the problems that banks encounter in these difficult times. It has beneficial implications for policymakers, regulators, and practitioners in the industry to promote resilient banking practices.

Aarif and Faizanuddin (2021) researched Sustainable banking and its benefits, challenges, and opportunities in India. This study reviewed the information collected from various sources for descriptive and quantitative analysis. The authors of this article evaluated the difficulties faced by the sample bank while practising Sustainable banking and studied Sustainable banking and its associated advantages.

Rout and Shoo (2021) researched green finance and its implications for future sustainable banking in India. This study aims to analyse various challenges for green financing in India. As this study has been attempted as a secondary data-based study, specific data analysis tools have yet to be used or applied, and the study is qualitative. This

research study has been conducted as a secondary data-based study, and more empirical studies must be done on sustainable banking practices in India.

Chandran and Sathiyabama (2021) researched sustainable banking practices in selected Indian banks. This study aims to determine which sustainable banking practices have been applied in India. As this study has been attempted with secondary data, specific data analysis methods or tools have yet to be used, and the paper is qualitative. This study was done with secondary data from SBI and ICICI banks, as sustainability issues in the Indian banking sector must be evaluated with empirical primary data.

Dhall and Malik (2021) researched sustainable banking practices and their role in sustainable development. This study aims to explore various dimensions related to sustainable banking. No specific analysis tool has been used in this study, and quantitative analysis is utilised. Furthermore, the study has revealed that the Reserve Bank of India (RBI) has yet to formulate any specific guidelines for sustainable banking practices in India. The findings of this study are expected to augment the existing body of knowledge on sustainable banking and facilitate the development of a novel framework for evaluating sustainable banking practices.

Ellahi et al. (2021) surveyed customer awareness of sustainable banking practices. This study aims to explore and evaluate customer awareness towards Sustainable banking practices. The SPSS method was used, SEM analysis was done, a model was given as the output, and qualitative and quantitative analyses were done with this survey. It is found that there has yet to be a research study on demographic factors and sustainable banking practices in India.

Ellahi et al. (2021) studied the adoption of Sustainable banking practices and environmental Performance in Pakistan. In this study, Structural Equation Modelling was used as the tool for analysis, and it is descriptive. The customers collected the data from their banking accounts, and the approach was quantitative. The study's objective is to evaluate Sustainable banking practices and environmental performance. As these dimensions have not been empirically assessed in the Indian context, there is a research gap.

Prabhu (2021) researched Sustainable banking practices as a case study on the Indian Sustainable banking system. This study assesses the environmental Sustainability

of Sustainable banking practices used by commercial and public financial institutions in India. The analysis is focused on secondary data, as it is evident that sustainable banking initiatives must be done as an empirical study to measure their adoption level in India compared to UAE banks, which is attempted through this study and is a quantitative study.

Devkota et al. (2021) researched the Current Understanding of Adequate Sustainable banking Practices in Nepal and the Lessons Learned. This paper aims to find whether banking businesses consider clean environmental issues and banks' corporate social responsibility. This study uses a mixed research method; empirical data, which was qualitative, was analysed.

Ghosh (2021) did a research study on green initiatives by the banking sector in India. The study employed secondary data to investigate the topic. The study used descriptive statistical tools like simple averages, tables, and percentages, and this paper utilises the method of qualitative analysis. Green Banking initiatives such as internet banking, paperless operations, and green lending policies, can help the environment and contribute to Sustainability as well. These practices are in line with the principles of sustainability and lessen the adverse effects of conventional banking operations. Financial institutions need to implement Green Banking to achieve the SDGs.

Shafique et al. (2020) conducted an empirical study that examined the numerous factors that affected bankers and their behavioral intentions in implementing sustainable banking practices. This paper aims at shedding light on India's adoption of environmentally friendly banking methods and the contribution of such methods in protecting the environment and maintaining environmental balance. The paper's methodology is a theoretical framework grounded on various secondary sources, which include research articles, websites, government reports, etc. Besides, it employs descriptive and quantitative analysis.

Sharma and Choubey (2022) performed empirical research on banking initiatives and practices concerning the environment. The study has been qualitative and practical, focusing on the Indian banking sector. The research sought to determine the influence of Banking green activities on the development of green products, CSR, and eco-friendly initiatives. The research approach used was qualitative, the case study method was employed, and the data were analyzed using descriptive and quantitative analysis. The study's results indicate that most of the respondents, more than 60 percent, are of the

opinion that green banking initiatives have a positive impact on customer trust through the enhancement of the green brand image. Acknowledging the deficiency of research in green banking in India, this study adds to the existing body of knowledge and opens up new avenues for future research in the field of green banking, which can ultimately contribute to sustainable development.

Mir and Bhat (2022), published a review paper on sustainable banking and sustainability practices, performed a similar investigation on sustainable banking practices. This conceptual research paper has been conducted as a literature review from various secondary sources. A research study in India connected the banking industry with Sustainability and identified areas for improvement in green banking practices. The study guides banks to become more environmentally responsible and promote sustainable development. Whitney U test and cross-tabulation were used, and tables were used to present the data. Although private and public sector banks in Valsad and Sustainable banking initiatives and their impact were evaluated, this study is restricted to a particular place in India.

Narayanan and Chandrasekaran (2022) did an evaluative study on Sustainable banking initiatives in public sector banks of Tamil Nadu. This study aims to check customers' awareness and usage of Sustainable banking initiatives. SPSS-based analysis was used in this study, and a descriptive and qualitative approach was utilised in this survey. It also studied customers' knowledge of sustainable banking initiatives in selected public sector banks in Madurai. This study aims to learn about the sustainable banking initiatives of the Indian banking sector. Descriptive and quantitative analyses have been done in this study. All-India-based research has yet to be done on these dimensions and issues in sustainable banking. This study attempts to compare these dimensions with Indian and Russian banks.

Kumar et al. (2022) researched the factors influencing the adoption of sustainable banking practices. This study examines the most pertinent issues about Sustainable banking in India. SPSS was used for analysis, and exploratory factor analysis and quantitative analysis were applied.

Tsindeliani et al. (2022) examine the digitalisation of the Russian banking system and identify legal guidelines to implement prudential rules. International banking research shows that digitalisation promotes regulatory cooperation and harmonisation. The growth

of digitalisation will aid in effectively enforcing prudential rules, and improvements to current legislation and regulations are recommended.

Gunawan et al. (2022) investigated sustainability and green banking practices in banks in Indonesia, analysing the information disclosed in their sustainability reports over nine years. Our findings reveal that the nature and extent of disclosures related to Sustainability and green banking practices vary yearly, with economic disclosures being the most frequently reported, while environmental disclosures are the least informed.

The sustainability disclosure guidelines from the Global Reporting Initiative (GRI) and the Measuring Green Banking Practices guidelines developed by Shaumya & Arulrajah (2016) is selected as the base of this study. By integrating these two metrics, the authors have developed a more detailed disclosure list. Our study is important as it adds to the scarce green banking literature. It contributes to the demand for further standardization in sustainability reporting by developing a set of indicators to facilitate research on sustainability measurement and reporting related to green banking. Our findings suggest that banks should establish a sustainability governance platform to evaluate and monitor their sustainable finance action plan and develop a sustainability strategy to manage Environmental, Social, and Governance (ESG) risks.

Zhang et al. (2022) examined the impact of green banking activities on the environmental performance of private commercial banks in Bangladesh. It also investigates the role of green financing in this relationship and explores the challenges and benefits of green banking in an emerging economy. The findings show that green banking activities positively affect banks' environmental performance and sources of green financing. Green financing mediates the relationship between green banking activities and banks' environmental performance. Significant challenges include absence of customers' awareness, technical problems, high cost of investment, and the necessity for more qualified staff. Benefits include improving goodwill, reducing costs, increasing competitiveness, and reducing carbon footprints. The study concludes with policy implications, limitations, and future research directions.

Chen et al. (2022) did an evaluative empirical study on various effects of Sustainable banking practices on banks' Environmental Performance and green financing. This study evaluates Sustainable banking practices followed by bank employees and their influences on Sustainability in Indian banks. SPSS was used as the specific tool for EFA,

convergent validity, Discriminant validity, and model fit statistics with CFA using Amos 23, and SEM output was also obtained. The study is descriptive, and quantitative analysis is applied.

Aslam and Jawaid (2022) researched green banking adoption practices and their impact on improving the banks' environmental, financial, and operational performances. This study aims to discover the role of sustainable banking adoption practices on sustainable banking performance in Pakistani banks. The quantitative analysis is utilised in this paper. In this study, SPSS analysis was done, and the PLS-SEM model was developed to determine the impact of Sustainable banking practices on performance, as it is evident that no comparative study of Indian sustainable banking practices has been done with other countries in the Asian or Gulf region.

Moufty et al. (2022) researched communication practices in the banking sector and their implications on sustainable banking practices. This descriptive study has been attempted as a cross-country analysis, and Content analysis has also been performed to reveal significant results.

Gunawan et al. (2022) conducted a research study on the exploration of Sustainability and Sustainable banking disclosures. This study has been attempted in the banking sector. This study aspires to explore the role of Sustainable banking disclosures on sustainable banking practices in Indonesia. This study was qualitative, as the content analysis method was used for analysis and evaluation. The environmental and economic exposures and their impact on sustainable banking practices in India have yet to be compared with any other country, which can be done.

Bukhari et al. (2022) did an evaluative study on pathways toward sustainable banking Adoption. In this investigation, the moderating role of top management commitment and its influences has also been ascertained. The research objective is to investigate objectively the factors that influence the adoption of sustainable banking and the moderating function that top management commitment plays in corporate ethical behaviour regarding the environment. Data analysis was done using qualitative SEM methods in SPSS. In the Indian context, it is necessary to assess the drivers and results of the adoption of Sustainable banking as well as the moderating impact of top management commitment to corporate environmental ethics.

Choubey and Sharma (2022) did an evaluative study on Sustainable banking. This study was done with the case of the commercial banking sector in the Delhi NCR. The objective of this study is to identify the eco-friendly, sustainable banking practices that are adopted in the Delhi NCR. Qualitative exploratory analysis of data was done using SPSS. Eco-friendly, Sustainable banking practices in Indian Public and private sector banks have not been done as an empirical study.

Sharma and Sofat (2022) conducted and analysed customer perception of sustainable banking practices. This study was done in North India. This research examines the variables that affect how banking consumers perceive various Sustainable banking activities and how characteristics affect their opinion of them. SPSS software, Cronbach's alpha, factor analysis, average, variance, Mann-Whitney, and Kruskal-Wallis tests were used, and qualitative analysis was utilised. The role of banking customers and their perception of sustainable banking practices has yet to be done as an all-India study which has to be done.

Adu (2022) has researched sustainable banking initiatives and their impact on environmental disclosure and Financial Performance. This study strives to measure the positive relationship between Sustainable banking practices. Secondary data has been collected as annual reports of banks were collected and analysed with descriptive and quantitative analysis. However, no comparative study on Indian sustainable banking initiatives and their impact on financial performance has been done, which can be attempted.

Silva and Delai (2022) explained in their paper that, the banking industry in Pakistan has faced unforeseen challenges due to the global spread of COVID-19, necessitating adaptation. A study was conducted from 2006 to 2020 to examine the impact of sustainable banking regulations on bank-specific characteristics before and during the pandemic. Financial stability was also evaluated as a moderator of sustainable banking regulations. The data was analysed using the dynamic estimator known as the system-generalised Method of Moments. The study's findings show that capital adequacy, deposit, and loan ratios are main factors that contribute to profitability and market return. On the contrary, leverage ratios affect these indicators negatively. The research uncovers that sustainable banking regulations have been the main drivers of changes in bank-specific characteristics. Moreover, averages of variables over years show that banks in Pakistan

have enhanced their profitability, market return, capital adequacy, and deposit ratio both before and during the pandemic. Financial stability is also very crucial in moderating the relationship, thus a lower default risk and the effectiveness of sustainable banking operations. The practice of the State Bank of Pakistan is a good example of how it has kept the banking sector in good health through its well-regulated monitoring mechanism amid global lockdowns and economic restrictions caused by COVID-19.

Ivashvili and Katsadze (2022) presented a comprehensive and structured summary of the scientific findings in which the banks are deeply involved in financing the green economy. The authors use a very comprehensive analytical approach within a historical context. Besides this, it includes critical analysis, logical generalization, systematization, and grouping. The study draws on scientific publications by foreign authors to establish a discernible relationship between the concepts of a green, sustainable and responsible bank. A recent study recommended incorporating eco-friendly financial tools into banking operations, such as green bonds, loans (available in select countries), deposits, leasing, and insurance. This information helps companies and financial institutions adopt sustainable practices and contribute to the global effort to combat climate change.

Khan et al. (2022) studied impediments to the green finance adoption system. This study adopts a method by links the economy and the environment. This examination seeks to discover the impediments to adopting a green finance system related to the economy and environment. It is a secondary data-based study, and interpretative structural modelling has been used for analysis and interpretation. This paper is done with quantitative analysis. As this is a literature review based on secondary data, empirical research has yet to be done on impediments affecting green finance and its adoption.

Zhang et al. (2022) studied Sustainable banking activities and their implications for improving bank environmental performance. This study also evaluates the mediating effect of green finance. The Structural Equation Modelling (SEM) approach was employed for analysis. It has been found that sustainable banking activities and environmental performances, along with green financing and its impact, have yet to be determined as an evaluative and empirical study on an all-India basis, which must be done with qualitative analysis.

Da Silva Inácio and Delai (2022) conducted a research study on Sustainable banking. It has been done as a systematic review of concepts and measurements. This

analysis examines Sustainability's role in banking systems and practices. This study was done as a literature review, and a qualitative descriptive analysis was conducted. It is evident that although the concepts of banking and Sustainability have been evaluated and examined, they have not been empirically studied in the Indian context. This study aims to identify the sustainability issues assessed within the banking industry. The study conducted a systematic literature review of sixty-three papers to achieve this goal. Through this analysis, the sustainability issues examined in the research.

Nazeer et al. (2022) researched using mixed methods to explore barriers and cues to action in adopting sustainable banking practices in commercial banks in Pakistan. This study aims to discover the extent of Sustainable banking practices in Pakistan. This study is also evaluative and descriptive in the analysis. Cronbach's alpha was used, and the value came out to be 0.915, which shows high reliability using SPSS. Bank policy guidelines, trust, customer awareness, security, loyalty, privacy and their impact on sustainable Indian banking practices have not been evaluated, which must be done empirically. Qualitative analysis is done with this study.

Khan et al. (2022) investigated about the impediments to the green finance adoption system. This study also evaluates the link between the economy and the environment. This study aims to identify the existing practices mentioned in the literature review, including paperless banking, environmental awareness, e-banking, and solar and wind energy use. The detailed analysis identified new themes, including Sustainable banking practices through which Islamic banks can achieve sustainable development using descriptive and quantitative analysis.

Ecer and Pamucar (2022) found in their study as, the banking sector is crucial in promoting sustainable development, but research on sustainable banking practices in developing countries is limited. A new framework evaluates the Sustainability of banks using a logarithmic percentage change-driven objective weighting method and a multi-criteria method called Dombi Bonferroni.

The framework was illustrated by a case study of Turkish banks, among which Garanti BBVA outperformed the rest. This robust model may serve as a decision-support tool to make sustainability assessments and keep track of the changes. Jan et al.'s (2023) paper is focused on developing a framework for evaluating the sustainability reporting of Islamic banks in relation to SDGs. The study of Malaysian Islamic banks indicates an

overall trend of better sustainability reporting from 2011 to 2020; however, the level is still quite low. SDG-wise research shows that most banks outperform SDG disclosure scores, particularly for SDG-9, SDG-17, SDG-11, and SDG-1. However, SDG-16 has the lowest score, indicating incomplete information on sustainability-related issues. However, SDG-16 has the lowest score, meaning complete information on sustainability-related topics. The findings can help regulators and managers of Islamic banks embed Sustainability into their SDG reporting strategy.

Ellahi et al. (2023) evaluated the progress of green banking in Pakistan. The study shows that customers are receptive to green initiatives, and education is crucial in raising awareness. Age, gender, occupation, and sustainable banking practices also affect awareness. Green banking can contribute to sustainable economic development, and banks and policymakers can use these findings to promote it effectively.

#### **2.4 Research Gap**

While the adoption of sustainability and its opportunities have been the subject of numerous studies in advanced and emerging economies, the number of studies concentrating solely on the Indian banking sector is negligible. Especially, the interaction between environmental issues and the banks' pledge to sustainability has not been dissected in detail. Besides, many existing pieces of research have ignored a holistic view that accommodates both banks and their customers, thus leaving a population gap. From a methodological point of view, although some models have been put forward, there is scant empirical research that uses Structural Equation Modeling (SEM) to investigate perceived environmental commitment, behavioral intention, and actual use of sustainable banking practices by customers in the Indian context. Conceptually, most of the literature emphasizes external factors such as regulatory pressures and market demand, but there is limited understanding of how the perceptions of banks and customers influence sustainability-related decision-making. This research aims to fill these gaps by combining theoretical and empirical investigation to determine the factors incorporating sustainability into banking operations.

#### **2.5 Conclusion**

By filling in various research gaps, this study strengthens what is already known about Sustainable banking. For instance, most studies on sustainable practices focus on how they might boost clean energy production or achieve worldwide Sustainability.

Despite the growing significance of the sustainable banking (S.B.) strategy, more empirical data needs to be provided to demonstrate how sustainable banking practices impact bank loyalty and trust. It adds to the existing research, particularly on Sustainable banking practices. The study fills a research vacuum by theoretically and empirically examining distinct Sustainable banking practices and behaviours based on bankers' and customers' understanding. This research employs Structural Equation Modelling to assess the factors that encourage customers to adopt Sustainability in their banking services. Studies have yet to look at this issue globally, even in emerging nations like India. So, to fill these research gaps, the study focuses on the commercial banks that have a thorough awareness of Sustainable banking practices, Sustainable financing, and internal bank environmental management, in India.