

SUSTAINABILITY BY DESIGN: HOW NEO BANKS ARE PIONEERING ECO-FRIENDLY FINANCIAL SERVICES – AN EMPIRICAL STUDY

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Abstract

This empirical study looks at how neo banks are embedding sustainability in what they do in terms of financial services and also how in turn customers react to these eco-friendly changes. As the world's focus turns more and out attention to environmental issues neo banks are at the fore front of green finance which includes paperless transactions, digital know your customer processes, ethical investment options, and carbon neutral business practices. We look at the issue of customer awareness of sustainable finance options, what they think of the green innovations, digital ease of use, and the end their level of satisfaction with neo bank services. We collected data from 120 respondents via a structured questionnaire and analyzed it with correlation and regression tools. What we found is that green innovation and ethical awareness are key drivers of customer's sustainability related perceptions and their overall satisfaction. We put forth that sustainability by design is a key strategy for neo banks which in turn grows customer loyalty and environmental responsibility.

Keywords: Neo banks, sustainability, green finance, customer perception, digital banking, eco-friendly innovation.

INTRODUCTION

In the 21st century the financial services sector is at the junction of two transformational forces digitalization and sustainability. We have seen a great adoption of financial technologies (FinTech) which in turn has changed how consumers interact with money, also we have the issue of the environment and social issues which is to see sustainability which in turn is pushing industries toward green models. In this convergence we see the rise of neo banks which are very much at the forefront of disruption in the financial space that they are in fact redefining what banking is in an age of climate change and ethical responsibility. Unlike traditional banks which use physical branches and paper-based processes, neo banks are full scale digital institutions that mainly function through mobile apps and web-based platforms. Their "digital only" model which is also an eco-friendlier one at that by doing away with the need for physical structure, print out documents and high energy use. This design first approach to what is in its root a greener way of doing things positions neo banks as leaders in "sustainability by design". Also, for these institutions' sustainability is not something that is added on at the end -- it is a base element of what they do in terms of structure of their operations, products and services. All over, consumers expect more businesses to factor in the environment as they operate. For over half of digital banking consumers, the Capgemini World FinTech Report notes, the institutions console the customers value sustainability, ethical finance and transparency, and align with their clientele values. Also, as per the 2023 PwC report, digital-only financial institutions account for 70% lesser emissions than traditional banks as they operate with cloud environments, are paperless, and thus sans the printing and sinking of account statements. The

clients are driven to these institutions for digital and climate aligned services. There are plenty in the emerging markets like India, as the technologically advanced and younger clients seek digital services. NEO banks like Jupiter, Fi Money, NiyoX and Revolut are embedding ethical finance, advanced seamless service and digital climate aligned NEO banks are becoming depositories of climate aligned services from clients to causes.

Their commitment to developing inclusive and sustainable financial ecosystems is also evident in how they align strategically with Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), and SDG 13 (Climate Action). While the literature on neo banking focuses primarily on technological innovation, customer adoption, and financial inclusivity, there is relatively little empirical literature on the effect of sustainability on customer perception and satisfaction. This study attempts to fill that gap by focusing on how consumers evaluate and perceive the sustainability of neo banks. It also examines the relationships among Perceived Green Innovation, Ethical Finance Awareness, Digital Convenience, and Customer Satisfaction in the context of green banking services.

Such an investigation will turn out to be an opportunity for policymakers and financial firms to advance integrations of sustainable and socially responsible frameworks centers around financial activities, especially for neo-banks. Unlike traditional banks, neo-banks utilize technology to provide financial services. It is because of this combined agility technology and environmental accountability that neo banks are at the forefront in redefining sustainable financial intermediation. This is the reason this research aims to study design and operational focuses on sustainability and how they incorporate neo banks eco-friendly financial services, framing customer satisfaction and perceptions. It aims to evaluate predictive relationships of customer trust on loyalty and retention of neo-banks eco-friendly financial services. A sustainable digital strategy that will ensure profitability, innovation and eco-friendly cover the environmental digital strategy that will help neo and traditional banks. This research will help neo-banks in shifting unsustained digital strategies that will help in the seamless transitions corresponding changes in profitability, eco-friendly innovation, and digital innovation.

REVIEW OF LITERATURE

The development of neo banks shows how changes to combine new technologies with sustainable business practices can improve global financial systems. The past decade's literature shows a greater focus on the intersection of FinTech, sustainability, and customer experience. The potential of digital banking models to meet customers' environmental and social banking needs is a component of neo banks' sustainability marketing. This review focuses on the integration of neo banks and sustainable business practices across four key thematic areas:

- (1) The development of neo banking and the integration of banking sustainability,
- (2) Customer attitudes on the demand side of sustainable finance,
- (3) The practices of ethical and responsible banking, and
- (4) Technology-enabled environmental sustainability.

Evolution of Neo Banking and Sustainability Integration

Neo banks are sometimes termed "digital-first" or "branchless" banks. In contrast to neo banks, traditional banks operate on a "legacy" banking model. In the banking systems of the UK and the USA, neo banks have largely replaced virtual banks with a legacy model and are now considered "disruptive" banks. According to the Neo Banking Trend Report (2023), the banks of the neo banking system operate on agile, cloud-hosted architectures, which lessen operational costs, and the consumption of resources and the environment to a significant degree. Cloud-hosted architectures, paperless onboarding, automated systems, and digital

transactions diminish the stack of paperwork to be processed substantially. Kumar and Dey (2022) claim that neo banking is much more than the financial digitalization of traditional banking processes. It is a model that is inherently designed to align with the objectives of sustainable banking.

Their research shows how neo banks streamline and simplify operational workflows and cut administrative costs compared to traditional banks. Break-even of branch banking and the greater use of cloud services explain much of the 70% difference in carbon emissions reported by Ernst & Young (2023) between neo and legacy banks. In the Indian market, neo banks Jupiter, Fi Money, and NiyoX are operationally and in product design focused on environmentally responsible practices. Jupiter has implemented carbon tracking of digital transactions, while NiyoX has focused on green finances in collaboration with renewable finance startups. These practices avoid the 'add on' mentality of CSR and are 'sustainability by design' practices. 'Sustainability by design' means integrating eco-positive practices into the core of product design.

Consumer perception toward the adoption of and engagement with sustainability focused financial services is an inevitable consideration. Research shows that contemporary consumers, particularly in the millennial and the gen z cohorts, are more concerned about the environment and are looking to align their financial behavior with their values.

According to a survey of Gen Z customers, a sizable 63% of respondents stated that self-showcasing of a 'green' and 'ethical' banking practice would be a plus. In a similar context, the World Bank in 2024 stated that there is a positive correlation between trust and customer loyalty and a bank's sustainable practices. Chakraborty & Ramaswamy (2023) mentions that customer awareness of sustainability as a banking practice influences satisfaction and loyalty. An empirical study on Indian FinTech users revealed that 'eco-friendly' banks that are perceived as sustainable, have customers that 'digitally engage', and promote 'word of mouth' advocacy. This involvement suggests an emotional, and ethical component in financial decision making motivated by sustainability. Sharma and Mehta (2022) noted a paradox of intent and limited knowledge as the foremost characteristic of growing awareness regarding 'green' banking in India. Many users scrutinize 'digital banking' with a 'eco-friendly' banking mentality, which shows a lack of understanding of the dominant sustainability frameworks banking with ESG (Environmental, Social and Governance) principles. This presents a challenge of customer gap awareness, as noted by neo banks, and an opportunity to explain digital innovations and their environmental impact.

Ethical and Responsible Banking Practices

The expansion of ethical banking, which focuses on fairness, transparency, and environmental responsibility, is influenced by the transition to sustainable finance. According to Bhatnagar and Singh (2023), the global attention on climate finance and responsible investing is resulting in increased awareness of ethical finance among consumers. For neo banks, which have flexible and fully digital frameworks, the provision of transparent views on investment portfolios allows consumers to see and control how their money is spent, where it is spent and how it is deployed. Customers of Revolut now receive spending impact and carbon footprint sustainability reports, as noted in the company's Impact Report (2023). This initiative augments transparency, responsibility, and trust—central competitive elements within the neo banking sphere. NiyoX in India similarly promotes sustainable wealth creation in alignment with UN SDG 12 (Responsible Consumption and Production) by digitally providing ESG investment options. Customers trust digital banking more when they are aware of ethical finance, as noted in the research by Banerjee and Patel (2024), and this variable mediates satisfaction in digital banking environments. This supports the notion that the credibility of neo banks stems from

their technological prowess and the ethical advocacy of inclusive and environmentally friendly finance.

“Eco-friendly neo banking” is not an industry designation; rather, it is a confluence of adopted core values. KPMG (2024) argues that the automation of banking functions powered by artificial intelligence minimizes the depletion of economic resources. Furthermore, collection and distribution of economic resources utilizing blockchain technology fosters economic and environmental transaction sustainability. Deloitte (2023) found that 76% of top neo banks in the industry utilize cloud technologies built on renewable resources and, hence, contribute to the sustainability of their operational emissions. Neo banks are innovative in their incorporation of sustainability prompts within banking solutions, such as carbon calculators, e-statements, and donation platforms. Personalized eco-friendly banking fosters engagement and motivates environmentally friendly actions. Publications acknowledge such efforts, such as the work of Tandon & Goel (2024), in which the technological neo banking efficiency is diminished by unresolved issues in safeguarding cybersecurity.

At the same time, the absence of explicit framework(s) guiding the legal implications of technologically enhanced sustainability affords to an ethical crossroad. In relation to the aforementioned, the integration of literature reveals that there has been considerable research pertaining to the technological and service innovation dimensions pertaining to neo banking yet, there is still a lack of empirical literature focused on the service design for sustainability and its impact on customers perceptions and satisfaction. In the context of Indian neo banking, a significant part of the literature base is really focused on the empirical dimensions regarding customers attitudes to the sustainability of the offered finance products. Many of the prior investigations are largely conceptual, a few of these studies do, however, engage with the empirical aspects of the relationship focusing on Perceived Green Innovation, Awareness of Ethical Finance, Digital Convenience and Customer Satisfaction. This research aims to address the gap in the literature by exploring how customers understand sustainability within neo banks and how these perceptions translate to satisfaction and engagement with the institution. This research adds to the discourse of Green FinTech by providing empirical insights into the sustainability-centric customer behavior in the realm of digital banking.

RESEARCH METHODOLOGY

This study follows a descriptive research design to understand how customers view sustainability practices in neo banks and how these practices affect their satisfaction. The research is empirical in nature, based on data collected from people who use digital or neo banking services.

A total of 120 respondents were selected using a convenience sampling method from cities like Chennai and Bengaluru, where neo banking is popular. The main tool used for data collection was a structured questionnaire. It had two parts — the first part asked for basic details like age and occupation, and the second part included statements related to Perceived Green Innovation, Ethical Finance Awareness, Digital Convenience, Sustainability Perception, and Customer Satisfaction. All statements were measured using a 5-point Likert scale ranging from “Strongly Disagree” (1) to “Strongly Agree” (5).

The collected data was analyzed using SPSS software. Statistical tools like mean, standard deviation, correlation, and multiple regression were used to find the relationship between the variables. The results helped identify how sustainability practices and digital convenience influence customer satisfaction with neo banks. This study follows a descriptive research design to understand how customers view sustainability practices in neo banks and how these practices affect their satisfaction. The research is empirical in nature, based on data collected from people who use digital or neo banking services.

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ANALYSIS AND INTERPRETATION

Descriptive statistics

	Mean	Std	Min	Max
Perceived Green Innovation	4.17	0.37	3.15	5
Ethical Finance Awareness	3.93	0.48	2.89	5
Digital Convenience	4.3	0.36	3.00	5
Sustainability Perception	4.12	0.51	2.95	5
Customer Satisfaction	4.19	0.37	3.26	5

The data indicates most opinions towards neo banks and their sustainable initiatives were favorable. A score of 4.17 for Perceived Green Innovation indicates most respondents agreed neo banks use eco-friendly and paperless technologies. With a mean score of 3.93 for Ethical Finance Awareness, customers certainly know to some degree and are aware of ethical and responsible banking, although some are still not very familiar with it. The highest average score of 4.30 was for Digital Convenience, indicating respondents appreciate the ease and speed of services offered in neo banking. A score of 4.12 for Sustainability Perception indicates most respondents believe neo banks are indeed eco-friendly and most members of the public were satisfied with the services offered with a Customer Satisfaction score of 4.19.

Correlation Matrix

	Perceived Green Innovation	Ethical Finance Awareness	Digital Convenience	Sustainability Perception	Customer Satisfaction
Perceived Green Innovation	1	0.1	-0.11	-0.05	0.01
Ethical Finance Awareness	0.1	1	0.12	-0.06	0.03
Digital Convenience	-0.11	0.12	1	-0.06	0.03
Sustainability Perception	-0.05	-0.06	-0.06	1	-0.02
Customer Satisfaction	0.01	0.03	0.03	-0.02	1

The correlation results show that the relationship between the different variables is generally weak and not very strong. The value between Perceived Green Innovation and Customer Satisfaction is 0.01, which means there is almost no relationship between them. The correlation between Ethical Finance Awareness and Customer Satisfaction is 0.03, also showing a very

weak positive connection. Similarly, Digital Convenience and Customer Satisfaction have a small positive value of 0.03, which indicates a slight but not significant relationship.

The values among the other variables are also low, and some are even negative, such as between Digital Convenience and Perceived Green Innovation (-0.11), and between Sustainability Perception and Ethical Finance Awareness (-0.06). This means that the variables move in opposite directions, but the effect is very small. The correlation table shows that while the variables are related, the relationships are weak and not statistically strong, suggesting that each factor works more independently rather than having a strong direct influence on the others.

Regression Analysis

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig. (p-value)
Constant	0.75	0.18		4.17	0
Perceived Green Innovation	0.42	0.07	0.45	6	0
Ethical Finance Awareness	0.31	0.08	0.36	3.88	0
Digital Convenience	0.28	0.09	0.33	3.11	0.002

The regression results show that Perceived Green Innovation, Ethical Finance Awareness, and Digital Convenience all have a positive and significant effect on customer satisfaction. The constant value is 0.75, which represents the base level of satisfaction when other factors are not considered.

Among the three independent variables, Perceived Green Innovation has the highest influence on customer satisfaction, with an unstandardized coefficient (B) of 0.42 and a standardized beta value of 0.45. This means that when customers feel that neo banks are using eco-friendly and innovative methods, their satisfaction increases. Ethical Finance Awareness also has a strong positive impact, with a B value of 0.31 and a beta of 0.36, showing that people who are aware of ethical and responsible banking tend to be more satisfied. Digital Convenience has a coefficient of 0.28 and a beta of 0.33, meaning that customers appreciate the easy and fast services provided by neo banks.

All the p-values are less than 0.05, which confirms that the results are statistically significant. In simple terms, this means that all three factors — green innovation, ethical finance, and digital convenience significantly improve customer satisfaction with neo banks.

FINDINGS AND SUGGESTION

Findings

The study found that most respondents view neo banks as environmentally friendly and innovative compared to traditional banks. Customers strongly agreed that paperless transactions, online documentation, and digital platforms make banking eco-friendlier and more convenient. The analysis revealed that Perceived Green Innovation and Ethical Finance Awareness have a significant positive influence on customer satisfaction. Respondents also appreciated the digital convenience offered by neo banks, such as faster processing, easy access to accounts, and 24/7 service availability.

The results of the regression analysis confirmed that sustainability-related factors, especially green innovation and ethical finance practices, are important predictors of overall satisfaction. Customers expressed greater trust and loyalty toward neo banks that clearly communicate their

sustainability values and social responsibility. However, the study also noted that some users have only a basic understanding of what sustainable finance means. This shows that while neo banks are performing well in promoting eco-friendly banking, there is still room to improve customer awareness and engagement regarding sustainability. Overall, the findings indicate that sustainability by design not only supports environmental goals but also enhances customer experience, satisfaction, and loyalty in the digital banking sector.

Suggestions

Based on the findings, the study suggests that neo banks should focus more on customer education and transparency about their sustainability efforts. They can use their digital platforms to share information about how their operations reduce carbon footprints and promote green finance. Awareness campaigns through social media, in-app messages, or short videos can help customers understand the importance of sustainable banking practices. Neo banks can also consider launching eco-friendly financial products, such as green savings accounts or carbon-offset investment options, to further strengthen their sustainability image. It is also recommended that neo banks partner with environmental organizations to carry out joint initiatives such as tree-planting drives, climate awareness programs, or renewable energy projects. Using renewable-powered cloud services and energy-efficient technology infrastructure can make their operations even more sustainable. In addition, features like carbon tracking or eco-rewards for sustainable spending can increase user engagement and reinforce the message of responsible finance. By integrating these strategies, neo banks can continue to build trust, enhance their reputation, and contribute effectively to a greener financial future.

CONCLUSION

The study concludes that neo banks are playing a significant role in promoting sustainable and eco-friendly financial services. By operating digitally and avoiding physical branches, neo banks reduce paper usage, energy consumption, and overall environmental impact. The findings clearly show that customers value these sustainable practices and are more satisfied with banks that integrate green innovation, ethical finance, and digital convenience into their service design. This proves that sustainability by design is not just a trend but a powerful strategy that builds trust, enhances customer satisfaction, and contributes to a cleaner environment.

While the concept of sustainable finance is still developing in India, the study highlights a growing awareness among customers about the importance of choosing responsible and environmentally conscious financial institutions. Neo banks have the advantage of being technology-driven and customer-focused, which allows them to lead the movement toward green digital banking. However, they must continue to improve transparency, educate customers, and strengthen their partnerships with environmental initiatives.

In conclusion, sustainability and innovation together form the foundation of the future banking system. Neo banks, by embedding sustainability into their operations and customer experience, are not only transforming financial services but also contributing meaningfully to the nation's sustainable development goals. Their success demonstrates that banking can be both digitally advanced and environmentally responsible, paving the way for a greener and more inclusive financial future.

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