ASEAN Journal on Science and Technology for Development

Volume 41
Number 2 *Business Innovation for the Sustainable Development Goals (SDGs) Part 2*

Article 4

2024

Debunking Indian Neo-banks' Customer Effort Score and ESG Values

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SPECIAL ISSUE ARTICLE

Debunking Indian Neo-banks' Customer Effort Score and ESG Values

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Abstract

Neo-banks in India are harnessing data analytics to address ESG risks, collaborating with various stakeholders, and striving to promote ESG values. Their endeavours not only enhance the customer experience but also contribute to a more sustainable and ethical financial system, with the potential to reduce the carbon footprint as digital banking gains traction in India. We examine whether ESG-rated banks can diminish customer effort and improve the overall customer experience, ultimately encouraging greater participation in sustainable financial practices. We employ text mining to analyse 2156 reviews of ESG-rated banks' digital services, from which we derive the Customer Effort Score. We find a linear relationship between the ESG values and the Customer Effort Score. The customer reviews suggest that neo-banks in India have the potential to revolutionize the banking industry. However, they need to address customers' concerns regarding the limited range of products and services offered and the high interest rates on loans. ESG-rated banks are more likely to take a customer-centric approach to their business. Banks with firm ESG commitments tend to uphold transparent supply chains, improving customer experiences and higher Customer Effort Scores. Consequently, banks are increasingly adopting ESG principles as an integral part of their business models. ESG ratings are a valuable metric for gauging a bank's commitment to long-term sustainability. We find that banks with a strong commitment to ESG principles are more likely to maintain transparent and ethical supply chains, thereby reducing the risk of their customers encountering privacy-related issues or questionable practices.

Keywords: Text mining, ESG values, Customer effort, Neo-banks

1. Introduction

Neo-banking is a rapidly growing sector of the financial industry, with the global market expected to reach $1 trillion by 2026. This growth is being driven by several factors, including the increasing convenience and affordability of neo-banking apps, the growing demand for personalized financial services, and the increasing popularity of digital banking among consumers. Neo-banking has emerged as a revolutionary force in the financial landscape of India, redefining the traditional banking experience and offering a new paradigm for financial services. Neo-banking has the potential to be a sustainable banking model, particularly when neo-banks actively incorporate environmental, social, and governance (ESG) principles into their operations and offerings. Neo-banking is considered a sustainable banking option due to its digital nature, which reduces paper waste and carbon footprint.

Received 23 October 2023; revised 2 January 2024; accepted 28 February 2024.
Available online 30 May 2024

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https://doi.org/10.29037/2224-9028.1565

Additionally, neo-banks often focus on ethical and socially responsible practices Neo-banks use data analytics to provide personalized financial advice and recommendations. This can help you make better financial decisions. Neo-banks are constantly innovating and offering new features and services. This means that you can be sure to get the latest banking technology. However, they are facing a few challenges. Like traditional banks, Neo-banks can create value under the ESG (Environmental, Social, and Governance) principle of sustainability by incorporating sustainable practices into their business operations. Neo-banks minimize their carbon footprint by adopting renewable energy sources for their data centers, reducing paper usage, and promoting remote work to reduce commuting. Neo-banks can be transparent about their environmental impact by regularly reporting their ESG metrics, which can help build trust with environmentally conscious customers. By aligning their operations with ESG principles, neo-banks can attract socially and environmentally conscious customers, investors, and partners. ESG has served as a trusted barometer for sustainability. Investing in ESG can help banks become more socially and environmentally responsible (see Table 1).

On the other hand, Neo-banks are focussing on reducing customer effort. The Customer Effort Score measures how easy it was for customers to resolve issues in digital banking. For example, HDFC Bank uses AI to automate tasks, such as fraud detection and customer service. This frees up employees to focus on more complex tasks, such as providing personalized advice. HDFC Bank uses chatbots to answer customer questions 24/7. This makes it easy for customers to get help when needed, regardless of the time of day or day of the week. HDFC Bank uses video banking to allow customers to meet with bankers from anywhere. This makes it easy for customers to get the help they need without visiting a branch.

Table-1. Customer effort score.

Neo Bank App Name	CRISIL ESG Score	Sustainalytics - ESG Risk Score	Customer Effort Score (CES)
Kotak 811	73	19.1	72.4
Paytm Payments Bank	23.2	31	32
Axis Neo Connect	71	24.2	70.8
YONO (SBI)	60	18.7	70.2
Pockets	69	24	70.4
Digital rupee	61	36.6	62.8
PayZapp	72	30.6	74.2
Ind - OASIS	59	39	56.2
Bob World	64	33.3	60.4
DCB	63	25.5	66.2
Average	61.52	28.2	63.56

Source: CRISIL ESG Score on June 2023; Sustainalytics Score as on June 2023; CES – Calculated by the author.

Neo-banking improves customer satisfaction and loyalty by making it easier for customers to access their accounts and conduct transactions. Additionally, digital banking can help banks become more sustainable by reducing their environmental impact. In this context, the present research aims to identify whether the high ESG values affect customer effort scores.

2. Literature review

Past researchers have done research on the emergence of neo-banking and the role of environmental, social, and governance (ESG) factors in the banking sector. Monis (Monis & Pai, 2023) provided a comprehensive overview of neo-banking, including its advantages, disadvantages, and prospects. They argue that neo-banks can offer innovative financial products and services, but they also face challenges such as regulatory compliance and low investor confidence. Sardar (Sardar & Anjaria, 2023) focuses on the regulatory challenges faced by neo-banks. He argues that neo-banks need to comply with a wide range of regulations, which can be a significant barrier to entry. However, he also argues that neo-banks can use innovative technologies to overcome these challenges. Arun (Arun et al., 2023) identified the challenges faced by neo-banks in terms of low investor confidence, narrow profit margins, and the volatile nature of the banking industry. They argue that these challenges can be mitigated by focussing on customer experience and providing innovative financial products and services. Ziouache (Ziouache & Bouteraa, 2023) examined the factors that influence users' perceptions of neo-banking. The study finds that security and trust are key factors and that neo-banks need to focus on these areas to attract and retain customers.

Chang et al., 2023 explores the relationship between digital finance and ESG performance. The study finds that there is a positive relationship between these factors and that digital finance can help banks improve their ESG performance. Bate (2020) conducted a comparative analysis of ESG and financial performance metrics of European banks. The study finds that there is a positive relationship between ESG performance and financial performance, but this relationship varies depending on the bank's geographical region and functional currency. Di Tommaso (Di Tommaso & Thornton, 2020) investigated the relationship between the ESG scores of European banks, their risk-taking behaviour, and bank value. The study finds that high ESG scores are associated with a moderate reduction in risk-taking, but the impact of ESG scores on bank value varies depending on the executive board's characteristics and risk tendencies. Erosy (Ersoy et al., 2022) examined the influence of ESG and ESG pillar scores on the market value of U.S. commercial banks. The study finds an inverted U-shaped relationship between market value and ESG and SPS scores and a U-shaped relationship between market value and EPS.

Past researchers have highlighted the importance of ESG performance for banks and the potential of digital finance to help banks improve their ESG performance. However, this research develops the relationship between the ESG values of the banks and the customer effort in using the banking services.

3. Objectives

The research aims to investigate whether banks rated on the basis of their environmental, social, and Governance (ESG) performance can reduce the effort required by customers when using their services while simultaneously enhancing the overall experience for customers. The goal of this research is to determine whether such improvements can lead to increased engagement in sustainable financial practices among customers. The facilitating objectives are as follows.

To assess the impact of ESG-rated banks on reducing customer effort when interacting with their digital services.

To analyse how enhancements in customer experience within ESG-rated banks relate to the adoption of sustainable financial practices.

To identify the key factors and strategies employed by ESG-rated banks that contribute to reduced customer effort and improved customer experiences.

To identify the key challenges that ESG-rated banks face when introducing neo-banking.

4. Methodology

The customer effort score (CES) is a widely used metric for measuring the customer experience, specifically how easy it is for customers to interact with a company's products and services. The environmental, social and governance (ESG) score is a rating that reflects how well a company performs on various ESG factors. Fig. 1 shows the stages followed by the researcher to achieve the objectives.

In the first stage, we gathered reviews about the ten neo-banks from the different websites. It includes fintech news, which often covers the latest developments in the neo-banking sector in India. The websites are Inc42, Fintech India Magazine, the app stores for Android (Google Play Store) and iOS (Apple App Store), Trustpilot, Glassdoor and social media and Discussion Groups such as Reddit and Quora.

We select ten Indian banks, in which the ESG scores as per Credit Rating Information Services of India Limited (CRISIL) scored more than twenty and ESG risk levels less than 40 as per Sustainalytics. ESG scores are ratings given to a company based on its environmental, social, and governance performance and risk levels. These ratings are typically assigned by specific agencies like

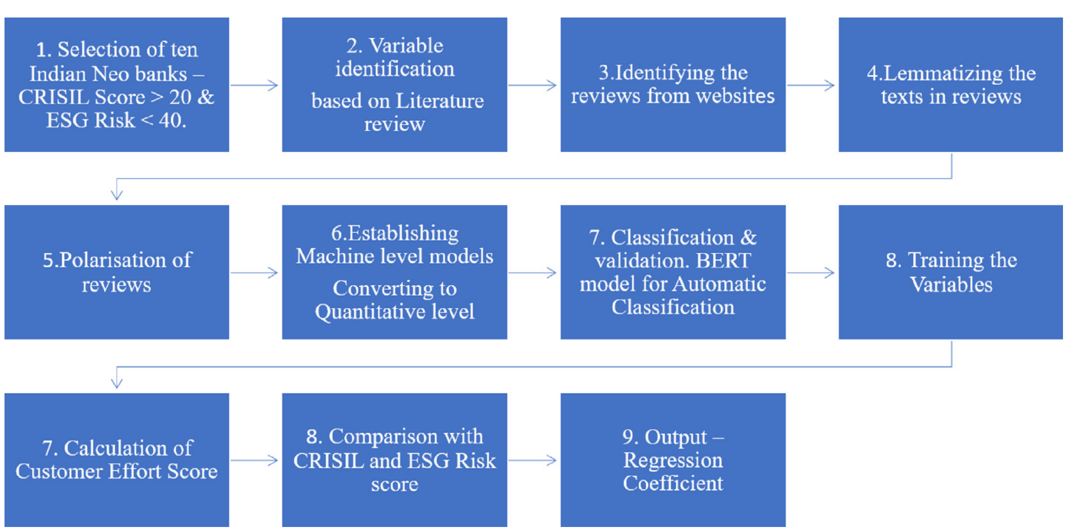

Fig. 1. Research design.

MSCI, Sustainalytics, and Moody's, which analyse various data points and indicators to determine the ESG performance of a bank. The following banking applications that contain neo-banking are included in this study.

- Bob World is a mobile banking application offered by the Bank of Baroda.
- The Canara Bank Digital Rupee App is an app that allows Canara Bank customers to access secure, fast digital currency transactions using Digital Rupee wallets.
- The DCB Bank Digital Banking App is a digital banking app offered by DCB Bank for its customers.
- HDFC PayZapp Card is a mobile wallet app that enables users to make digital payments from HDFC banks.
- ICICI Bank Pockets is a digital bank on a mobile phone launched by ICICI Bank.
- Ind OASIS is the official mobile banking application of the Indian Bank.
- Kotak 811 is a digital banking platform launched by Kotak Mahindra Bank that offers a range of banking services through a mobile app, including zero balance savings accounts, virtual debit cards, and digital payment options. Kotak Mahindra Bank has also established an ESG Risk Management Framework to identify, assess, and manage ESG risks across its business operations.
- NEO by Axis Bank is a digital banking platform that integrates a comprehensive suite of transactions in banking products.
- Paytm Payments Bank was initially a mobile wallet, but it has since expanded to become a payments bank. This app is an initiative of One 97 Communications Limited.
- State Bank of India (SBI) YONO is a neo-banking platform launched by State Bank of India (SBI).

In the text processing stage we remove, stop words, punctuation, and other noise from the text. Lemmatizing the text, which involves reducing words to their root form has been done with the aim of reviews about the eight banks. The common reviews about the neo-banks are removed. After this process, there are 2156 reviews.

In the next stage, we identify the variables. Based on the review of literature, variables are identified to measure the key driving factors towards neo-banking. It includes the following.

Convenience: Neo-banking apps offer customers a convenient and easy-to-use way to manage their finances. Customers can open an account in minutes, make transactions with ease, and access their account information 24/7 from anywhere in the world.

Personalization: Neo-banking apps use data and analytics to personalize their products and services to the individual needs of their customers. This includes providing customers with tailored recommendations, helping them to set financial goals, and creating custom budgets.

Innovation: Neo-banks are constantly innovating and launching new products and services to meet the needs of their customers. This includes offering new types of accounts, investment options, and financial planning tools (Wang et al., 2023).

Affordability: Neo-banks typically charge lower fees than traditional banks. This is because they have lower overhead costs and are able to operate more efficiently.

Customer service: Neo-banks offer a variety of customer support channels, including live chat, email, and social media. This makes it easy for customers to get help when they need it (Zeithaml et al., 2018).

Security: Neo-banks use the security technologies to protect their customers' money and data. This includes encryption, fraud protection features, and two-factor authentication.

Diverse product offerings: Neo-banks offer a wide range of products and services, including savings accounts, checking accounts, credit cards, investment options, and financial planning tools. This allows customers to meet all of their financial needs in one place. (Alabdali et al., 2023).

Monetization strategies: This variable measures the ways in which neo-banks generate revenue. It can be measured by factors such as the charging of fees, the sale of advertising space, and the offering of premium features.

After identifying the variables, we reviewed the text. 278 reviews are labelled manually with sentiment labels such as positive, neutral, or negative. This labelled dataset is used for training and evaluating the sentiment analysis model. From each variable, at least twenty sentiments are extracted manually.

Then, we convert the pre-processed text data into numerical features that machine learning models can work with. As the data set is based on variables and related to neo-banks, we use TF-IDF (Term Frequency-Inverse Document Frequency).

After that we use the BERT model (Bidirectional Encoder Representations from Transformers). To classify automatically, the sentiments It is a pre-trained language model that can be fine-tuned for text classification tasks. We use TensorFlow and

TensorFlow Hub to load a BERT model for classification. Since we use the name entity model for the recognition of neo-banks, the BERT model has been selected.

We trained the balance of 1878 reviews using the BERT model. This involves feeding the numerical features (extracted in the previous step) along with their corresponding sentiment labels to the model. The model learns to associate text patterns with sentiment categories.

To assess the performance of the trained model, we calculated the F1-score. The F1-score is defined as the harmonic mean of the precision and recall, which means it gives equal importance to both metrics. As the F1-score is 0.82, we conclude that the classification has the goodness of fit.

Customer effort score is the core productivity metric in providing customer services (Dixon et al., 2010). Clark (2012) classified the customer effort into four divisions, which include cognitive effort, time effort, physical effort, and emotional effort. Cognitive effort encompasses the convenience of use and affordability (Cooper-Martin, 1994). Time effort pertains to diverse product offerings and monetization strategies employed by neo-banks (Ziouache & Bouteraa, 2023). Physical effort includes personalization strategies and security considerations when using a neo-banking application. (Wang et al., 2017). Emotional effort relates to innovative services and elite customer support (Levy, 2022).

We created labels for each variable in this study based on the BERT. Each variable has been assigned a score as − positive as 3, neutral as 2 and negative as 1. The cumulative scores for the responses are averaged to get the final score. Customer effort as grouped into four categories is identified by obtaining equal weightage. The average score has been converted to 100 to have equal comparison. The high score indicates the easy method of use. The results are as follows.

The CRISIL ESG score represents the ESG value score of banks. CRISIL ESG scores are designed to assess the environmental, social, and governance (ESG) performance of companies listed on the Indian stock exchanges. The scores are based on a comprehensive assessment of a company's ESG disclosures, as well as other publicly available information. CRISIL uses a proprietary methodology to calculate ESG scores. The methodology is based on a number of factors, including - the materiality of ESG issues to the company's industry and business model, the company's ESG performance relative to its peers and the company's ESG management practices and policies. CRISIL ESG scores are calculated on a scale of 1−100, with 100 being the highest score. Companies with scores above 70 are considered to be "good" ESG performers, while companies with scores below 50 are considered to be "poor" ESG performers. The higher the score, the higher the ESG values of the respective banks. We identified the CRISIL ESG score for the year 2023 of the banks that are using app for banking purposes.

Sustainalytics is calculated by Morningstar's research network based on the ESG values of banks. The higher the score, the higher the risk and the lower the ESG values. The Morningstar Sustainability Rating is designed to help investors identify the ESG risks in their portfolios and make more informed investment decisions. The rating is also used by asset managers to develop and market sustainable investment products. Sustainalytics' ESG ratings are designed to assess the overall ESG risk of a company. The ratings are based on a comprehensive assessment of a company's ESG performance, as well as other publicly available information. Sustainalytics' research methodology is based on a number of factors, including - financial materiality, stakeholder engagement and transparency. Sustainalytics assesses the financial materiality of ESG issues to companies, industries, and sectors. This assessment is based on a number of factors, including the potential impact of ESG issues on a company's financial performance, the company's exposure to ESG risks, and the company's management of ESG issues. Sustainability Rating is designed to help investors identify the ESG risks in their portfolios and make more informed investment decisions. The rating is also used by asset managers to develop and market sustainable investment products. Sustainalytics ESG ratings are calculated on a scale of 1−10, with 10 being the highest score. Companies with scores above 7 are considered to be "low risk" ESG performers, while companies with scores below 5 are considered to be "high risk" ESG performers.

Customer Effort Score (CES) is determined based on the research methodology defined in this study. CES correlates positively (0.95) with the CRISIL ESG score and correlates negatively (−0.47) with the risk score generated by Sustainalytics. The regression co-efficient of customer effort score (dependent variable) on CRISL ESG score (Independent variable) is 0.82, that indicates the goodness of fit. Hence, we conclude that high ESG values improve customer effort. The regression co-efficient of customer effort score (dependent variable) on Sustainalytics Risk score (Independent variable) is −0.81, that indicates the negative relationship. Hence, we conclude that high ESG risk will have negative effect in improving customer effort score.

A number of studies have examined the relationship between CES and other customer satisfaction metrics. For example, a study by Verint Systems found that companies with a high CES score also tend to have high customer satisfaction scores. The study also found that CES is a better predictor of customer loyalty than customer satisfaction (Vlašić et al., 2022).

The results are justified by past research work conducted in the ESG values. A study by the University of Oxford (Mohammad & Wasiuzzaman, 2021) found that banks with higher ESG scores have lower customer churn rates. This suggests that customers are more likely to stay with banks that they believe are doing good for the environment and society. A study by the Boston Consulting Group (N. Wang et al., 2023) found that companies with strong ESG performance are more likely to be viewed favourably by customers. This is because customers are increasingly concerned about the environmental and social impact of the companies, they do business with. A study by the World Economic Forum (World Economic Forum, 2022) found that companies with strong ESG performance are more likely to be resilient to shocks and crises. This is because they are better positioned to manage risks and adapt to change. (Mohammad & Wasiuzzaman, 2021) proved that ESG disclosure improves firm performance even after controlling for competitive advantage in Malaysia. Wang et al. (2023) revealed the black box between enterprise ESG practices and value creation. This research proves that ESG values improve customer effort by easing the workflow operations of the banking function.

5. Discussion

5.1. ESG values that improve the CES

The key strategies employed by ESG-rated banks that contribute to reduced customer effort include AI technologies to mitigate the risk, transparency and ethics. A bank with a strong ESG commitment may be more likely to offer sustainable financial products, such as green loans and investments. For example, green loans can be used to finance the construction of energy-efficient buildings or the installation of renewable energy systems. Sustainable investments can include investments in renewable energy companies, energy efficiency companies, and companies that are working to improve social and working conditions in their supply chains. A number of studies have shown that banks with a strong ESG commitment are more likely to offer sustainable financial products. The Global Reporting Initiative (2021) found that companies with a high ESG score are more likely to offer green bonds and other sustainable financial products. The study found that 87% of companies with a high GRI ESG score offered green bonds, compared to only 47% of companies with a low GRI ESG score. The Sustainable Banking Network found that banks with a strong ESG commitment are more likely to finance sustainable projects. The study found that banks with a high ESG score are more likely to finance renewable energy projects, energy efficiency projects, and sustainable infrastructure projects. The University of Oxford found (2023) that banks with a strong ESG commitment are more likely to invest in sustainable companies. The study found that banks with a high ESG score are more likely to invest in companies that are working to address climate change, improve social and working conditions, or promote good governance practices.

5.2. ESG and customer experience

A bank with a strong ESG commitment may be more likely to have a transparent and ethical supply chain. This can reduce the risk of customers being exposed to privacy issues or practices. Customers' experiences with ESG-rated banks depend on the balance between technology and reliability. Hence, there is positive correlation between ESG values and Customer effort score. The findings of this research are justified by the Roland Berger report also. ESG initiatives can boost a bank's bottom line. The report shows that the ESG is proving to be lucrative not just to banks but their stakeholders as well. Banks are increasingly integrating ESG into their business model. ESG ratings show how committed a bank is to sustainability in the long term. This can help us tell the difference between banks that are serious about reducing carbon emissions and those that are just pretending.

5.3. Enhancements in customer experience

Enhancements in customer experience within ESG-rated banks can relate to the adoption of sustainable financial practices in a number of ways. Axis Bank offers a green credit card that rewards customers for using it to make purchases from sustainable businesses. HDFC Bank offers a green car loan that offers lower interest rates to customers who purchase fuel-efficient or electric vehicles. State Bank of India offers solar energy bond and a sustainable water bond. HDFC Bank offers a discount of 50 basis points on the interest rate for electric vehicle loans. ICICI Bank offers a discount of 5 basis points on the interest rate for home loans to customers who opt for a green home. Axis Bank offers a discount of 25 basis points on the interest rate for loans taken to install rooftop solar panels. State Bank of India offers a higher interest rate on its savings accounts for customers who maintain a certain balance of sustainable investments (Cachero-Martínez & Vázquez-Casielles, 2021).

5.4. Strategies employed by ESG-rated banks

ESG-rated banks are more likely to take a customer-centric approach to their business. This means that they put the needs of their customers first and design their products and services around those needs. ESG-rated banks employed different strategies for improving customer score. Fi Money is a neo-bank that offers personalized financial advice to its customers. The bank uses artificial intelligence (AI) to analyse each customer's financial situation and provide them with tailored advice on how to save money, invest, and reach their financial goals. Jupiter is a neo-bank that offers personalized financial advice to its customers through its “Jupiter Money Coach” feature. The Money Coach is a chatbot that customers can interact with to get advice on their finances. The Money Coach can also help customers to set and track their financial goals. Freo is a neo-bank that offers personalized financial advice to its customers through its “Freo Financial Advisor” feature. The financial advisor can also help customers to create and manage a budget. HDFC Neo offers customers the ability to create custom alerts, so they can stay on top of their bills and other important financial events. HDFC Neo also offers customers the ability to invest in mutual funds and other financial products through the app. Kotak Neo provides customers with a personalized dashboard that gives them a complete view of their finances. The dashboard includes all of the customer's accounts, transactions, and investments. Customers can also use the dashboard to create and track budgets, set financial goals, and get insights into their spending habits. While these banks do not offer personalized financial advice in the same way that some of the smaller neo-banks mentioned above do, they do offer a variety of features and services that can help customers to manage their finances more effectively. By employing these strategies, ESG-rated banks are able to reduce customer effort and improve customer experiences. This can lead to a number of benefits for both customers and banks.

5.5. Key challenges that ESG-rated banks

The challenges of Indian neo-banks are from security side. Neo-banks are also compliant with all applicable regulations, including the Payment and Settlement Systems Act, 2007, the Reserve Bank of India's guidelines on digital banking, and the Banking Regulation Act, 1949. These regulations require neo-banks to implement certain security measures to protect their customers' data. Paytm Payments Bank has implemented a multi-layered security system that includes 256-bit encryption, two-factor authentication, and biometric authentication for transactions. ICICI Bank and Kotak Mahindra Bank were fined by the Reserve Bank of India (RBI) for non-compliance with RBI Directions on Managing Risks and Code of Conduct in Outsourcing of Financial Services by banks, Recovery Agents engaged by Banks, Customer Service in Banks, and Loans and Advances - Statutory and Other Restrictions. This highlights the importance of adhering to regulatory compliance (Economic Times, 2023). Kotak Mahindra Bank has implemented a real-time fraud monitoring system that uses machine learning algorithms to detect fraudulent transactions. The next challenge is the competition among the neo-banks. Paytm for the purpose of managing the competition in customers services, has partnered with a number of businesses to offer its customers value-added services, such as discounts on shopping and dining, and access to exclusive offers. Paytm Payments Bank has partnered with ICICI Bank to offer its customers instant digital credit on their Paytm app. ICICI Neo offers credit cards and loans. Kotak Mahindra Bank's Kotak 811 offers zero balance savings account. The next challenge is educating the customers about fraud prevention in digital banking networks. ICICI Neo has a dedicated fraud prevention section in its mobile app that provides customers with information on how to protect themselves from fraud. The section includes information on common types of fraud, such as phishing emails and fake websites, as well as tips on how to avoid falling victim to fraud. Axis Neo offers a variety of educational resources on its website and social media channels, including blog posts, infographics, and videos on fraud prevention.

5.6. Customer reviews on neo-banks

While digital adoption is increasing in India, there are still segments of the population that may lack digital literacy or access to reliable internet connectivity. As neo-banks grow, maintaining quality of service, customer support, and financial sustainability becomes increasingly challenging. Scaling operations without compromising user experience is a delicate balance. Customer reviews about neo-banks from India are positive to extent of 57% in this study. Customers appreciated functions of neo-banks include the convenience, personalization, and innovation that neo-banks offer. For example, Kotak Bank has invested heavily in digital technologies, such as artificial intelligence and blockchain. State Bank of India allows customers to access a wide range of banking and non-banking services from a single platform. Bank of India M-Connect Plus app provides personalized recommendations based on the customer transaction history and spending patterns. Niyo provides a travel card that can be used globally without any additional charges. NEO by Axis Bank provides services on trade finance, supply chain finance, forex, and derivatives. Paytm Payments Bank is known for its user-friendly interface and innovative features such as cashback rewards.

There are also some negative reviews (24%) about neo-banks from India. The customers have mentioned the limited range of products and services offered and the high-interest rates on loans. For example, Freo provides collateral-free loans without any guarantor at the interest rate of 20% per annum which is high when compared to traditional banking system. The Indian neo-banks operate in a heavily regulated environment. Navigating the complex regulatory framework for banking and financial services can be a significant challenge, especially when dealing with issues such as licensing, compliance, and adherence to Know Your Customer (KYC) norms. One example of a neo-bank that faced challenges in getting an RBI license is Paytm Payments Bank. Paytm Payments Bank was the first neo-bank in India to receive a license from the RBI in 2015. However, the RBI revoked Paytm Payments Bank's license in 2017 due to concerns about its compliance with regulations. Paytm Payments Bank was able to regain its license in 2018 after it addressed the RBI's concerns. Amazon Pay was granted a license to operate as a payments bank in 2018. However, the RBI suspended Amazon Pay's license in 2019 due to concerns about its data sharing practices.

6. Conclusion

Neo-banks are using data analytics to identify and mitigate ESG risks, such as climate change and social unrest. This helps to protect their businesses and their customers from these risks. Neo-banks in India are collaborating with other stakeholders, such as governments, businesses, and non-governmental organizations, to address ESG challenges. This can help to achieve more ambitious ESG goals. Neo-banks have the potential to play a significant role in achieving ESG values. By offering sustainable financial products and services, promoting transparency and accountability, investing in environmental and social projects, reducing their environmental impact, and educating their customers about ESG issues, digital banks can help to create a more sustainable and ethical financial system. The efforts taken by the Indian neo-banks on ESG framework are reflecting the customer effort score. The customer effort has considerably improved because of ESG values. As the Indian population becomes more digitally savvy, neo-banks are likely to play an even greater role in reducing the carbon footprint and reducing customer effort by increasing ESG values.

Conflict of interest

No conflict of interest.

References

Alabdali, S. A., Pileggi, S. F., & Cetindamar, D. (2023). Influential factors, enablers, and barriers to adopting smart technology in rural regions: A literature review. *Sustainability, 15*(10), 7908.

Arun, T., Markose, S. M., Murinde, V., Kostov, P., Khan, A., Ali, N., … Sethi, R. (2023). *Impact of neo-banks (digital banks) India-Uk comparison*. Available at SSRN 4452179.

Cachero-Martínez, S., & Vázquez-Casielles, R. (2021). Building consumer loyalty through e-shopping experiences: The mediating role of emotions. *Journal of Retailing and Consumer Services, 60*, Article 102481.

Chang, K., Cheng, X., Wang, Y., Liu, Q., & Hu, J. (2023). The impacts of ESG performance and digital finance on corporate financing efficiency in China. *Applied Economics Letters, 30*(4), 516–523.

Cooper-Martin, E. (1994). Measures of cognitive effort. *Marketing Letters, 5*, 43–56.

Di Tommaso, C., & Thornton, J. (2020). Do ESG scores effect bank risk taking and value? Evidence from European banks. *Corporate Social Responsibility and Environmental Management, 27*(5), 2286–2298.

Dixon, M., Freeman, K., & Toman, N. (2010). Stop trying to delight your customers. *Harvard Business Review, 88*(7/8), 116–122.

Ersoy, E., Swiecka, B., Grima, S., Özen, E., & Romanova, I. (2022). The impact of ESG scores on bank market value? Evidence from the US banking industry. *Sustainability, 14*(15), 9527.

Levy, S. (2022). Brand bank attachment to loyalty in digital banking services: Mediated by psychological engagement with service platforms and moderated by platform types. *International Journal of Bank Marketing, 40*(4), 679–700.

Mohammad, W. M. W., & Wasiuzzaman, S. (2021). Environmental, Social and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia. *Cleaner Environmental Systems, 2*, Article 100015.

Monis, E., & Pai, R. (2023). Neo banks: A paradigm shift in banking. *International Journal of Case Studies in Business, IT and Education (IJCSBE), 7*(2), 318–332.

Sardar, S., & Anjaria, K. (2023). The future of banking: How neo banks are changing the industry. *International Journal of Management, Public Policy and Research, 2*(2), 32–41.

Vlašić, G., Keleminić, K., & Šubić, R. (2022). Understanding drivers of consumer loyalty in the banking industry: A comparative study of generation z individuals exhibiting high vs. low financial literacy. *Management: Journal of Contemporary Management Issues, 27*(1), 213–235.

Wang, M., Cho, S., & Denton, T. (2017). The impact of personalization and compatibility with past experience on e-banking usage. *International Journal of Bank Marketing, 35*(1), 45–55.

Wang, N., Pan, H., Feng, Y., & Du, S. (2023). How do ESG practices create value for businesses? Research review and prospects. *Sustainability Accounting, Management and Policy Journal, 15*(7).

Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2018). *Services marketing: Integrating customer focus across the firm*. McGraw-Hill.

Ziouache, A., & Bouteraa, M. (2023). Descriptive approach of neo-banking system: Conception, challenges and global practices. *International Journal of Business and Technology Management, 5*(2), 194–204.