

Customer Perception and Literacy Regarding the Implementation of Green Banking at BCA Bank Tbk. (Gen-Z Case Study)

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Abstract

Awareness of environmental issues and climate change has increased, and the concept of "green banking" or sustainable banking has become increasingly important to overcome the climate crisis. In this context, customer perception and literacy have an important role in supporting the improvement and development of green banking programs. Thus, this research aims to determine the influence of customer perception and literacy on the implementation of Green Banking. This research uses a quantitative descriptive approach method by taking samples using a non-probability sampling method with a purposive sampling technique. Data for the research was obtained through the distribution of questionnaires distributed via Google Forms to 100 respondents who were BCA Bank customers in Karawang. The selection of the number of respondents was based on the Lemeshow formula with an unknown population size. The data analysis method applied is Structural Equation Modeling (SEM) using the Partial Least Square (PLS) approach, carried out with the help of SmartPLS 3.2.9 software. The results of the analysis show that there is a partial positive and significant influence of the Customer Perception and Literacy variables on the implementation of Green Banking.

1. Introduction

Awareness of environmental issues has increased significantly in recent decades. Climate change, pollution, habitat destruction and the preservation of natural resources are increasingly becoming global concerns (Yulianti, 2020). Environmental problems are the basis for increasing individual awareness, where the banking sector has an important role in supporting these initiatives. As one of the main pillars of the global economy, banking plays a key role in formulating environmental policies and supporting sustainable development (Sulistyowati & Ei, 2020). The concept of green banking or sustainable banking is becoming an increasingly important concern due to the increasing public concern for environmental issues and climate change. In this case, green banking practices need to be considered in an effort to improve eco-sustainability (Angel Natalia Haurissa & Nurhayati, 2022).

In line with this, BCA Bank, one of Indonesia's largest private banking institutions, has participated proactively supported environmental conservation efforts. BCA Bank implements various energy management and involves active participation from BCA employees, as well as actively providing education through internal communications. This action is a form of BCA Bank's commitment and support in reducing the impact of global

warming (Hanriarseto & Cholid, 2020). Not only that, but BCA has also introduced various sustainable initiatives and adopted green banking initiatives by integrating environmentally friendly practices into its operations (Bank Central Asia, 2022). BCA also promotes financial literacy in order to increase the financial literacy and inclusion index of Indonesian society. This is proven by the award from the Deposit Insurance Corporation that BCA Bank is included in the category of banks that are active in encouraging Green Banking financial literacy (Muslimawati, 2022).

Meanwhile, BCA also takes responsibility for reducing global warming by referring to international standards and TCFD guidelines and implementing the principle of accuracy regarding credit distribution, especially in sectors that have a high risk of the environment and climate change (Bank Central Asia, 2022). However, despite having these initiatives, data analysis shows that BCA Bank is still less committed to mitigating climate change, especially in terms of corporate credit, project financing and client assets. This analysis is based on annual reports, sustainability reports, data from company websites, policy documents and other information disclosed by banks to the public (Ahdia, 2023).

This is in contrast to BCA's Bank initiative to integrate environmentally friendly practices into their operations as an effort to reduce global warming, as shown in the results obtained in Fig. 1. As follows:

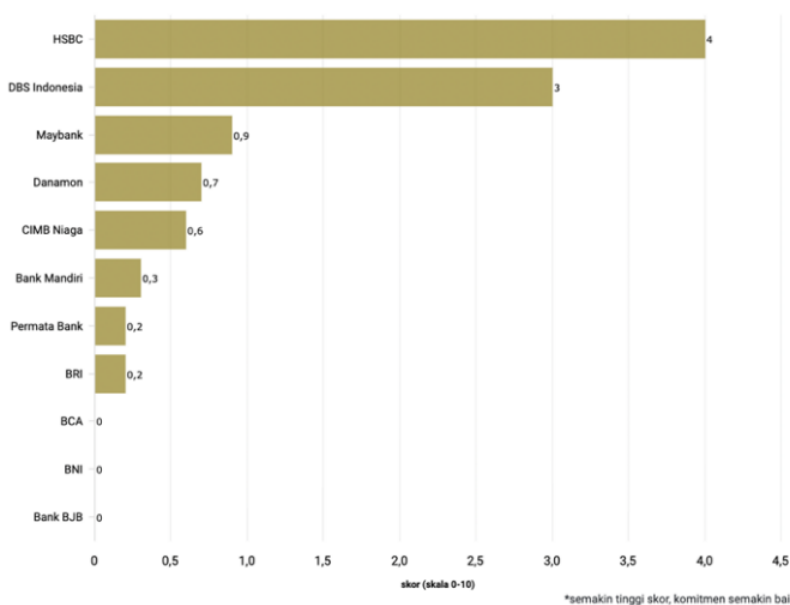


Fig. 1 Bank Commitment Score in Mitigating Climate Change in Indonesia (2022)

Source: Databoks.katadata.co.id

BCA has also allocated funds to the pulp and paper and palm oil industries, based on data compiled by Forest and Finance in the 2012-2022 period. The analysis reveals that BCA has financed the sector with a total of \$5,174 million, or around IDR 76.6 trillion, which was allocated to several large companies such as Salim Group, RGE, Sinarmas Group, DSN Group, Fangiono Agro Plantation, Rajawali Nusantara, Gozco Group, and Jardine Matheson Group (Redaksi, 2023). The distribution of these funds is related to environmental crimes, destroying natural forests, biodiversity, inappropriate permits, and illegal land acquisition, as well as social risks such as human rights violations, forced/child labor, and conflicts with indigenous/local communities. Along with the law, the role of banks in green banking is supported by Article 8 of Law no. 7 of 1992 relating to Banking, which was amended by Law no. 10 of 1998, as well as Law no. 32 of 2009 regarding Environmental Protection and Management. Meanwhile, financial institutions in Indonesia are starting to pay attention to AMDAL in financing analysis in accordance with Bank Indonesia regulation no. 7/2/PBI/2005 and Bank Indonesia Circular Letter No. 7/3/DPNP dated 31 January 2005 (Sulistiyowati & Ei, 2020).

Apart from that, BCA involves customers in recognizing, increasing understanding, and supporting the implementation of the green banking concept and the activities carried out (Bank Central Asia, 2022). However, awareness of public perception and literacy regarding green banking can be said to be relatively low, based on research surveys, public perceptions of sustainable financial products, which are listed in Katadata.co.id (2022) shows that 42.3% of the public still do not know about the implementation of Green Banking, the application of Green Banking principles by customers is still low with survey results showing 11.2%, while the public's perception of Green Banking products is still low with survey results showing 36.0%, and there are still many people who do not know the term Green Banking with survey results showing 43.8% and there is minimal

public literacy regarding Green Banking. This is a concern because customer perception and literacy influence how far BCA Bank's introduction and implementation of green banking is carried out.

As stated in research Angel Natalia Haurissa & Nurhayati (2022) that Customer Perception and Knowledge simultaneously have a significant influence on BNI's Green Banking Implementation. In research conducted by Pariag-Maraye *et al.* (2019) regarding green banking, it was found that the majority of customers in Mauritius have a positive view of the efficiency of green banking implemented by banks through green bank products and funding schemes. Other research that is in line is the study Chandran & Sathiyabama (2020) stated that customer perceptions of the implementation of Green Banking are positive as evidenced by survey results which show that 41% of respondents think that Green Banking is important. Regarding Customer Literacy in the research results Sri Rahayu *et al.* (2023) stated that increasing literacy results in success in dedication and active participation in Green Banking sustainability initiatives.

The presence of green banking in Indonesia is considered to have important potential in efforts to maintain ecosystem balance and in implementing the green banking concept which is part of the global movement to overcome the climate crisis and also reflects awareness of the potential for ecological disasters that can hamper a country's economic growth Sri Rahayu *et al.* (2023). Therefore, this research is very relevant and important to find out how far the introduction of customer perceptions and literacy to the implementation of green banking conducted by BCA Bank. With a deeper understanding of customer perceptions and literacy, BCA Bank can develop more effective strategies in communicating with customers, increase their financial literacy, and encourage active participation in green banking practices adopted by the bank. Thus, this research aims to determine the influence of Customer Perception and Literacy on the Implementation of Green Banking.

2. Literature review

As stated in Nengah *et al.* (2019), the Triple Bottom Line concept, namely People, Planet, and Profit, was developed by John Elkington in 1997. It states that apart from pursuing profit, companies must pay attention to and be involved in fulfilling the welfare of society and actively contributing to preserving the environment.

2.1 Perception

As stated in Angel Natalia Haurissa & Nurhayati (2022), perception is a response formed by an individual to their environment, which is then processed and interpreted through the five senses. After that, the response is assessed by the individual to obtain a certain meaning from the information received. According to Rakhmat as stated in Praganingrum *et al.* (2023) Perception is the experience an individual has regarding an object or event, which is obtained through processing information and interpreting the meaning of the message received. It is important to note that each individual's perception can vary because it is influenced by subjective factors and personal experiences. According to Kreitner and Kinicki in Suroso & Suherman (2019) Perception is a cognitive process that allows individuals to interpret and understand their environment. This involves selecting, organizing, and interpreting incoming information to form a description of the existing situation.

Fajri (2022) states that customer perception involves a process in which individuals select, organize and interpret related information, with the aim of forming an overall picture. This can influence customers' decisions to use or not use the product. According to Yulianti in Khasanah *et al.* (2022) Factors that can influence perceptions include the goals or targets to be achieved, as well as the conditions in which perceptions are formed. The characteristics that can influence this perception include: 1) Attitude, 2) Motivation, 3) Interests, 4) Expectations, 5) Past experiences, 6) Goals.

According to Djamin in Fajri (2022) explained that customer perception is divided into three dimensions, including: 1) perception of functional value, 2) perception of emotional value, 3) perception of social value. Meanwhile, Bimo Walgito in Pratama (2022) explained that perception includes several indicators, including: 1) Absorption or response to stimuli or objects from outside the individual, 2) Understanding or comprehension, 3) Assessment or evaluation 4) Trust in an individual.

2.2 Literacy

Refer to Putri *et al.* (2023) that understanding literacy is not limited to the ability to read and write alone, but also includes literacy in the fields of finance and management. According to Yusuf & Asytuti (2022) literacy is defined as a deep understanding of the planning paradigm, potential, ability, motivation and confidence to utilize information effectively in making decisions that impact all financial dimensions, with the aim of creating prosperity and contributing to active participation in the economy. As for according to Umy Nurhalim Harahap & Anggraini (2023) Literacy is also considered as a series of processes or activities designed to improve skills, beliefs, knowledge, and influence individual attitudes and behavior in decision making in order to improve quality.

According to Yuhelmi *et al.* (2022) Customer literacy aims to change people's behavior in using banking services and products so that they become more optimal and educated customers will be more inclined to manage

environmental risks in their investment and financial decisions. Tabrani (2020) stated that there are several dimensions in evaluating the customer literacy index, including banking knowledge, customer financial behavior, and customer financial attitudes. As for according to Nadila (2021), Indicators contained in literacy include: 1) Knowledge, 2) Abilities, 3) Attitudes and Behavior.

2.3 Green Banking

As stated in Akhter *et al.* (2021) *Green banking* is a banking practice that seeks to implement environmentally friendly principles in all aspects of banking activities. This involves prioritizing investment in environmentally sustainable businesses and projects, as well as efforts to minimize the environmental impact of other banking operations. Refers to Sri Rahayu *et al.* (2023) *Green banking* is a banking method that aims to reduce internal and external carbon indications. so customers are not required to go to the office, customers only need to make transactions via the application available on the e-banking service. According to Vikas Nath in research Arsy (2022) implementing green banking involves technological development, operational improvements, and changes in customer behavior in the banking sector with the aim of introducing environmentally friendly practices and reducing the carbon footprint of banking activities.

Sulistiyowati (2020) stated that green banking is directed at increasing efficiency and ensuring sustainable bank economic growth. This includes strengthening harmonious relationships between banks and other parties involved in order to provide benefits and maintain environmental sustainability. The green banking concept is expected to create greener, more comfortable and conducive living conditions, improve the bank's positive image which has an impact on reputation and the market, and increase employee dedication and productivity. According to Wahyu Ningsih & Iqbal (2019) explained that the main principle of green banking is to strengthen bank risk management, especially those related to environmental issues, and encourage banks to develop financing portfolios that support environmental sustainability. This includes financing for projects such as energy efficiency, renewable energy, eco-tourism, environmentally friendly transportation, organic farming, and products that meet eco-label standards.

Ramila and Gurusamy in Anggraini *et al.* (2020) identified two important dimensions in green banking. The first dimension relates to the transformation of bank operations to increase the use of technology and the internet, which enables increased efficiency and reduced use of paper (paperless), towards more environmentally friendly operations. The second dimension relates to how banks allocate funds or provide loans for business activities that do not have a negative impact on the environment. Shaumya and Arulrajah as stated in Angel Natalia Haurissa & Nurhayati (2022) formulated 16 green banking indicators, which include education and training related to environmental awareness, saving paper usage (paperless), environmentally based reward systems, environmental performance evaluation, environmentally friendly banks, waste management or recycling, use of energy saving equipment, environmentally based policies, green projects, green-based credit evaluation, green enterprise facilities, green partnerships, green branches, green loans, green procurement, and green strategic planning.

2.4 Literature study between Customer Perception and Literacy variables on the Implementation of Green Banking

2.4.1 Customer Perceptions and Green Banking

Angel Natalia Haurissa & Nurhayati, (2022) found that Customer Perception significantly influences BNI's Green Banking implementation. There are other similar research findings, namely in a study conducted by Pariag-Maraye *et al.* (2019) regarding green banking, which revealed that the majority of bank customers in Mauritius have a positive perception of the efficiency of "Green Banking" implemented by banks in the form of green bank products and funding. Based on this description, the following are the hypotheses proposed in this research:

H₁: Customer perception influences the implementation of Green Banking at BCA Bank.

2.4.2 Customer Literacy and Green Banking

Sri Rahayu *et al.* (2023) found that increased literacy led to success in dedication and active participation in green banking sustainability initiatives. Other research that is in line is the study Ellahi *et al.* (2023) which states that customer literacy appears to have a significant positive impact on awareness of environmentally friendly banking. Based on this description, the following are the hypotheses proposed in this research:

H₂: Customer literacy influences the implementation of Green Banking at BCA Bank.

2.5 Framework

Every research process requires a framework or concept that can help organize and increase understanding of the topic being researched. Therefore, it is important for research to be equipped with a framework for thinking. Sugiyono (2019) defines a framework as a conceptual structure that describes the theoretical relationship between various factors that have been identified and the problem to be researched. In this research, the framework consists of Perception (X_1) and Literacy (X_2) as independent variables, and Green Banking (Y) as the dependent variable. The following is an illustration of the rationale for this study:

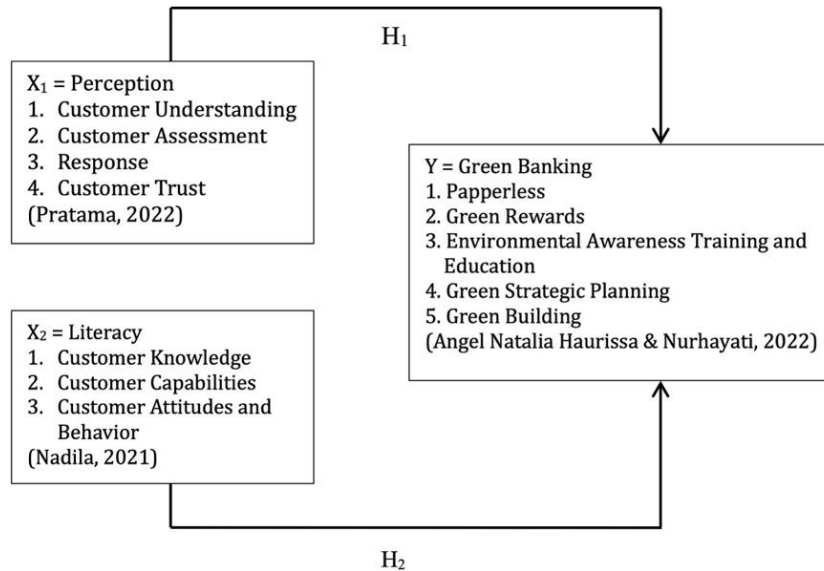


Fig. 2 Framework of Thought
(Pratama, 2022; Nadila, 2021; Angel Natalia Haurissa & Nurhayati, 2022)

Based on Fig. 2. above showsthere is a partial influence betweenPerception (X_1) and Literacy (X_2) towards the implementation of Green Banking (Y). This candeterminedwith the relationship between each variable through the hypothesis proposed in the research.

3. Research Methods

This research adopts a descriptive method with a quantitative approach, with the aim of compiling a structured, fact-based and accurate picture of the characteristics and facts of the population studied (Syahza, 2021). In this research, the researcher chose to use a non-probability sampling approach through a purposive sampling technique, where sample selection was carried out based on specific criteria previously determined by the researcher, to ensure relevance to the research issue. The sample criteria used in this research include active BCA Bank customers in the Karawang area who have knowledge and use BCA products and services, and also show interest and concern for the environment. The sampling technique was carried out based on meetings with researchers and met the predetermined criteria.

Research data includes primary and secondary data. Primary data was collected directly from respondents using a questionnaire distributed via Google Forms. Secondary data was obtained from various sources including scientific journals, books, previous research, and articles available on the internet. The research sample consisted of 100 respondents who had been determined based on the Lemeshow formula because the population size was unknown with a sampling error of 10% (0.1 in decimal form). Therefore the sample size is around 96 which is rounded to 100 (Sugiyono, 2019). For data analysis, this research utilized the Structural Equation Modeling (SEM) method which is based on the Partial Least Square (PLS) technique, with support from SmartPLS 3.2.9 software.

4. Result and Discussion

4.1 Data on Respondent Characteristics

Table 1 *Characteristics of Respondents*

Characteristic	Frequency	Percentage (%)
Gender		
Male	21	21
Female	79	79
Total	100	100
Age		
18-20 Years Old	12	12
21-23 Years Old	72	72
24-26 Years Old	16	16
Total	100	100
Domicile in Karawang		
Yes	100	100
No	0	0
Total	100	100
Job		
Students	38	38
Government Employees	0	0
Private Sector Employees	40	40
Businessman	4	4
Etc	18	18
Total	100	100
Monthly Income		
< Rp 1,000,000	24	24
Rp 1,000,000-Rp2,500,000	17	17
Rp 2,500,000- Rp 4,500,000	20	20
Rp 4,500,000- Rp 6,500,000	24	24
Rp 6,500,000- Rp 8,500,000	8	8
> Rp 8,500,000	7	7
Total	100	100
Long As BCA Customer		
< 1 Years	22	22
1-3 Years	45	45
3-5 Years	21	21
> 5 Years	12	12
Total	100	100

Source: Processed results from questionnaire (2024)

Based on the respondent characteristics data listed in Table 1 above, it can be seen that 100 respondents (100%) are people living in Karawang who use BCA Bank. Based on gender, it shows that 21 respondents (21%) are men and 79 respondents (79%) are women. This implies that the majority of respondents are women. As for the highest age, namely 21-23 years old, there are 72 people (72%). Meanwhile, the majority of respondents' jobs are private sector employees, namely 40 people (40%) with income earned from 4.5 million to 6.5 million and less than 1 million with balanced survey results, namely 24 people (24%) respectively. The majority of respondents, 45 people (45%), have been BCA Bank customers for approximately 1 to 3 years.

4.2 Descriptive Analysis of Perception, Literacy and Green Banking Variables

As stated in Nugraha (2019) to carry out descriptive analysis of measurements, can use a range of scales and interpretation categories for each variable which can be seen from the class intervals. The results of the descriptive analysis are known as in the following Table 2.

Table 2 Variable Descriptive Statistics

Variable	Indicator	Mean	Category
Perception (X1)	Customer Understanding	3.84	Good
	Customer Assessment	4.12	Good
	Response or Response	4.02	Good
	Customer Trust	3.94	Good
Total Average		3.98	Good
Literacy (X2)	Customer Knowledge	3.91	Good
	Customer Capabilities	4.17	Good
	Customer Attitudes and Behavior	4.25	Very good
Total Average		4.11	Good
Green Banking(Y)	Paperless	4.15	Good
	Green Rewards	4.04	Good
	Environmental Awareness	3.79	Good
	Training and Education	3.84	Good
	Green Strategic Planning	3.84	Good
	Green Buildings	3.96	Good
Total Average		3.95	Good

Source: Data Processing Results (2024)

Based on the results of descriptive analysis as in Table 2, it shows that the average respondent's assessment of customer perceptions is 3.98. This shows that the perception of BCA bank customers is of good value in terms of understanding, assessment, responses, as well as customer trust, which will influence the implementation of BCA Green Banking. The average respondent score for customer literacy was 4.11 and this variable had the highest score among the other variables. Therefore, customer literacy is good in terms of knowledge, abilities as well as customer attitudes and behavior which has been assessed as good so that it will greatly influence the implementation of BCA Green Banking. And for the implementation of Green Banking, BCA showed that the average score of respondents was 3.95, which means it was considered good in terms of the implementation of paperless, green rewards, environmental awareness training and education, green strategic planning, and green building.

4.3 Convergent Validity Test

Based on Mashuri & Generous (2022), Convergent validity is determined by examining the loading factor value, where each indicator must have a minimum value of 0.70 for the construct. From the data presented in Fig. 3, all values show numbers greater than 0.70. Thus, it can be concluded that the measurement has met the established convergent validity criteria.

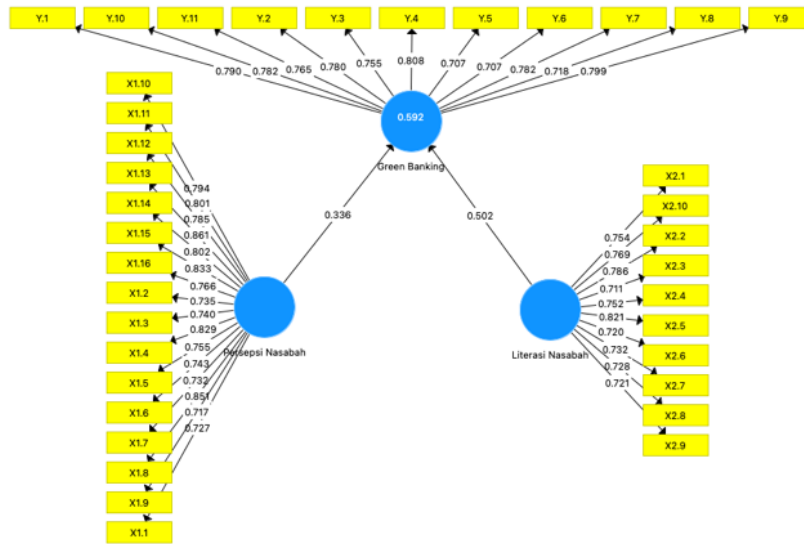


Fig. 3 Output Loading Factor Modeling (SmartPLS3 Output Results, 2024)

In this case, an indicator is considered valid as a suitable measuring instrument if the Outer Loading value is > 0.70. The outer loading results of convergent validity between indicators and variables are known through the following Table 3.

Table 3 Output Result for Outer Loading (SmartPLS3 Output Results, 2024)

Perception (X ₁)		Literacy (X ₂)		Green Banking (Y)	
Indicator	Outer Loading	Indicator	Outer Loading	Indicator	Outer Loading
X1.1	0.727	X2.1	0.754	Y1	0.79
X1.2	0.735	X2.2	0.786	Y2	0.78
X1.3	0.74	X2.3	0.711	Y3	0.755
X1.4	0.829	X2.4	0.752	Y4	0.808
X1.5	0.755	X2.5	0.821	Y5	0.707
X1.6	0.743	X2.6	0.72	Y6	0.707
X1.7	0.732	X2.7	0.732	Y7	0.782
X1.8	0.851	X2.8	0.728	Y8	0.718
X1.9	0.717	X2.9	0.721	Y9	0.799
X1.10	0.794	X2.10	0.769	Y10	0.782
X1.11	0.801			Y11	0.765
X1.12	0.785				
X1.13	0.861				
X1.14	0.802				
X1.15	0.833				
X1.16	0.766				

Based on Table 3, it shows that all indicator values show results > 0.70, which indicates that the measurement has met convergent validity standards or the indicators above are declared valid and suitable for use for research.

4.4 Discriminant Validity Test

Refer to Kurniati (2020), to assess discriminant validity, it can be seen through the square root of average variance extracted (AVE) value, where the recommended value must be > 0.50. The results of the discriminant validity test based on the AVE value can be found in the table below:

Table 4 Discriminant Validity Test through AVE (Average Variance Extracted) values (SmartPLS3 Output Results, 2024)

Variable	Average Variance Extracted (AVE)
Perception	0.610
Literacy	0.563
Green Banking	0.583

Based on Table 4, the AVE value for all variables exceeds 0.50. Perception has an AVE value of 0.610, Literacy has an AVE value of 0.563, and Green Banking has an AVE value of 0.583. Therefore, it can be concluded that all Perception, Literacy and Green Banking variables have AVE values exceeding > 0.50 . Thus, this means that all construct variables have been proven valid or it can be said that the construct is able to explain the variation in the items.

4.5 Reliability Test

According to Sarwono and Narimawati in Wibisono *et al.* (2020) states that a variable can be said to have good reliability if the Composite Reliability value and Cronbach's Alpha value are > 0.7 each.

Table 5 Composite Reliability and Cronbach's Alpha values (SmartPLS3 Output Results, 2024)

Variable	Cronbach's Alpha	Composite Reliability	Description
Perception	0.957	0.961	Reliable
Literacy	0.914	0.928	Reliable
Green Banking	0.928	0.939	Reliable

Table 5 reveals satisfactory results regarding Cronbach's Alpha values, where Perception is 0.957, Literacy reaches 0.914, and Green Banking is at 0.928. Meanwhile, the Composite Reliability value recorded for Perception was 0.961, Literacy 0.928, and Green Banking 0.939. The conclusion from these results confirms that each variable in the study has a good level of reliability, with Cronbach's Alpha and Composite Reliability values all exceeding the threshold of 0.7. This indicates that these variables have a good level of reliability.

4.6 R-Square Results (Inner Model)

The accuracy of the model is checked through a series of tests. The first test involves evaluating the R-square value, which is based on Ghazali & Latan Dalam Mashuri & Generous (2022), a value of 0.75 indicates a strong model, a value of 0.50 indicates a fairly moderate model, and a value of 0.25 indicates that the model is weak.

Table 6 R-square (SmartPLS3 Output Results, 2024)

	R Square
Green Banking	0.592

Based on Table 6. Proving that the R square value for the Green Banking variable is 0.592, it can be said that the model is quite moderate. These results also show that 59.2% of the Green Banking variable can be influenced by the Perception variable and the Literacy variable.

4.7 Hypothesis Testing

The hypothesis testing process is carried out by testing the significance of the direct influence of the independent variable on the dependent variable. This test utilizes the Structural Equation Modeling Partial Least Squares (SEM

PLS) method, where the Bootstrapping process is implemented using smartPLS 3.2.9 software. The findings from hypothesis testing are presented in Figure 4 below.

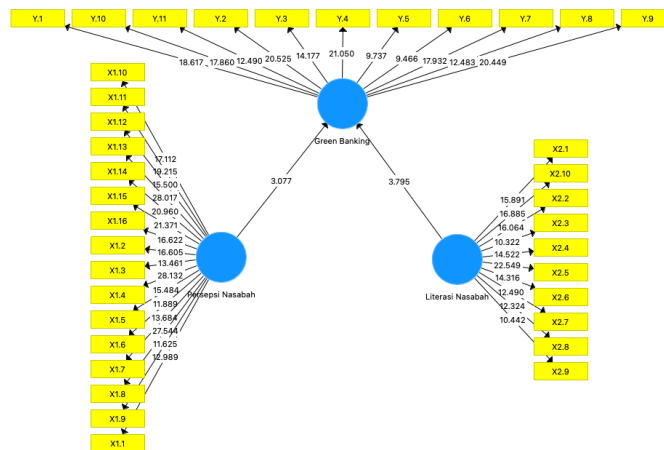


Figure 4 Output Result of Bootstrapping Modeling (SmartPLS3 Output Results, 2024)

As stated in Yurindera (2022), hypothesis testing in SEM PLS can be done by examining the t-statistic and probability values. A research hypothesis is declared accepted if the t-statistic value is greater than 1.984 and the probability value is less than 0.05. The results of the analysis show that there is a significant influence of exogenous variables on endogenous variables as explained below:

Table 7 Results of Bootstrapping Calculation of Research Data (SmartPLS3 Output Results, 2024)

	Original Sample	T Statistics	P Values
Perception -> Green Banking	0.336	3.077	0.002
Literacy -> Green Banking	0.502	3.795	0.000

Table 7 shows that the t-statistic value for the customer perception variable regarding the implementation of green banking is $3.077 > t\text{-table } 1.984$ with the original sample value having a positive result of 0.336. So, it can be stated that the relationship between the Perception variable (X_1) and the Green Banking variable (Y) has a positive direction. Meanwhile, the significance gain value is $0.002 < 0.05$. So, H_1 in this research is accepted, which means that the Perception variable (X_1) with its indicators can be said to have a significant effect on the Green Banking variable (Y) with its indicators. Then the t-statistic value for the literacy variable regarding the implementation of green banking is $3.795 > t\text{-table } 1.984$ with the original sample value having a positive result of 0.502. So, it can be stated that the relationship between the Literacy variable (X_2) and the Green Banking variable (Y) has a positive direction. Meanwhile, the significance gain value is $0.000 < 0.05$. So, H_2 in this research is accepted, which means that the Literacy variable (X_2) with its indicators can be said to have a significant effect on the Green Banking variable (Y) with its indicators.

4.8 The Influence of Customer Perceptions on the Implementation of Green Banking

Referring to the calculation results of the statistical analysis carried out, it was found that there was a significant positive influence between the Customer Perception variable on the implementation of Green Banking at BCA Bank. The results of this research were strengthened by partial testing, with a t-statistic value of $3.077 > t\text{-table } 1.984$, with the original sample value having a positive result of 0.336. So, it can be stated that the relationship between the Perception variable (X_1) and the Green Banking variable (Y) has a positive direction. Meanwhile, the significance gain value is $0.002 < 0.05$. Thus, the hypothesis in this research is accepted, which means that the Perception variable (X_1) with its indicators can be said to have a significant effect on the Green Banking variable (Y) with its indicators.

These results support the research results Angel Natalia Haurissa & Nurhayati (2022) which found that there was a significant influence between Customer Perceptions on the implementation of BNI Green Banking. There are other research results that support the study Pariag-Maraye *et al.* (2019) regarding green banking also shows

that customers' views of banks in Mauritius generally create positive perceptions regarding the efficiency of "Green Banking" implemented by banks through various green bank products and funding schemes. On research Chandran & Sathiyabama (2020) also stated that customer perceptions of the implementation of Green Banking are positive, as evidenced by survey results showing that 41% of respondents think that Green Banking is important.

This shows that positive customer perceptions can develop and encourage active participation in green banking practices adopted by BCA Bank. Customers will see banks that are committed to green banking practices as institutions that have a good reputation in terms of environmental sustainability. This positive reputation can increase customer trust in the bank and influence their decisions in choosing a bank for transactions or investments.

4.9 The Influence of Customer Literacy on the Implementation of Green Banking

Referring to the calculation results of the statistical analysis carried out, it was found that there was a significant positive influence between the Customer Literacy variable on the implementation of Green Banking at BCA Bank. The results of this research were strengthened by partial testing, where the t-statistic value was $3.795 > t\text{-table } 1.984$. with the original sample value having a positive result of 0.502. So, it can be stated that the relationship between the Literacy variable (X_2) and the Green Banking variable (Y) has a positive direction. Meanwhile, the significance gain value is $0.000 < 0.05$. Thus, the hypothesis in this research is accepted, which means that the Literacy variable (X_2) with its indicators can be said to have a significant effect on the Green Banking variable (Y) with its indicators.

These results support the research results Sri Rahayu *et al.* (2023) which states that increasing literacy results in success in dedication and active participation in green banking sustainability initiatives. The results of other research that support this include the study Ellahi *et al.* (2023) which states that customer literacy appears to have a significant positive impact on environmentally friendly banking awareness in the selected sample.

This indicates that with good customer literacy in understanding green banking, customers can better understand the financial and environmental impact of their investment decisions. Customers can recognize how their investments can support green banking projects that have a positive impact on the environment. So that's it can increase knowledge and involvement of the community, especially Gen-Z, in implementing a sustainable and environmentally friendly banking concept and supporting green banking practices carried out by BCA Bank.

5. Conclusion

From data analysis and discussion using the Smart Partial Least Square (PLS) method, the following conclusions can be drawn overall:

1. A positive and significant influence was found between customer perceptions of the implementation of Green Banking at BCA Bank. These results are proven by the results of the research statistical analysis, which shows the t-statistic value is greater than the t-table, with the original sample value being positive and significant. This is strengthened by the results of the overall descriptive analysis value, namely customer perception which produces a score of 3.98, which shows that the perception of BCA bank customers is good in terms of understanding, assessment, response or response, as well as customer trust, thus influence the implementation of BCA Green Banking.
2. A positive and significant influence was found between customer literacy on the implementation of Green Banking at BCA Bank. These results are proven by the results of the research statistical analysis which shows the t-statistic value is greater than the t-table with the original sample value being positive and significant. This is strengthened by the results of the overall descriptive analysis value, namely customer literacy which produces a value of 4.11, which shows that BCA bank customer literacy is of good value in terms of knowledge, abilities and customer attitudes and behavior which has been assessed as good so that it will greatly influence the implementation of BCA Green Banking.

6. Implications

From the analysis carried out and the conclusions drawn from this study, it was identified that factors in implementing green banking, such as customer perception and literacy have an impact on the implementation of green banking. In connection with these findings, researchers suggest several recommendations for future research, which are outlined as follows:

1. It is recommended for BCA Bank continue to be committed to implementing the green banking concept as a way to increase customer interest and company image. Apart from that, BCA Bank is advised to

always provide educational programs to employees and customers as a form of responsibility towards the environment. This is a concern because customer perception and literacy influence the extent to which BCA Bank introduces and implements green banking.

- It is hoped that researchers who wish to continue further studies will utilize the findings from this study as a basis for the literature and expand the study by adding variables that have not been explored in this research. The limitations of this research lie in the use of variables that only focus on perception and literacy variables, so researchers in the future can increase coverage by examining other variables that are relevant in the context of green banking.

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Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

Author Contribution

The authors confirm contribution to the paper as follows: **study conception and design:** Fiska Anggraini, Uus Mohammad Darul Fadli, Ery Rosmawati; **data collection:** Fiska Anggraini, Ery Rosmawati; **analysis and interpretation of results:** Fiska Anggraini, Uus Mohammad Darul Fadli, Ery Rosmawati; **draft manuscript preparation:** Fiska Anggraini, Ery Rosmawati. All authors reviewed the results and approved the final version of the manuscript.

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