
Determinants of Green Financing Implementation

Galih Suprpto, Sri Muljaningsih, Nurul Badriah

Faculty Of Economics and Business, Brawijaya University

Corresponding Author: galih2020@student.ub.ac.id

ABSTRACT

Purpose: The severity of climate change and environmental degradation continuing to worsen, the implementation of sustainable development principles in a variety of industries, including Islamic banking, is becoming increasingly important. Islamic banks, which have values that support sustainability, have a strategic role to play in supporting green finance, which refers to the financing of projects that have a positive impact on the environment, such as renewable energy and waste management. Green finance is something that Islamic banks have a strategic role to play in supporting sustainable practices. To be more specific, the purpose of this study is to investigate the influence that green policies, green customers, green operations, and green products have on green financing in Islamic financial institutions. There are a number of factors that fall under this category, including banking products that support sustainability, green operational management, the preferences of customers who are becoming increasingly environmentally conscious, and the policies and regulations that are implemented by banks.

Design/methodology/approach: The application of quantitative methods is the primary focus of this study, which is primarily concerned with the analysis of the customers of the Bank Jatim Syariah Kediri Branch. A sample size of seventy-five individuals was utilised for the purpose of data collection. This was accomplished through the utilisation of research instruments and primary data that was obtained directly from the source. Among the methods that are associated with data analysis is the technique known as multiple linear regression analysis.

Finding: The green products, green operations, and green policies significantly support green financing, whereas, green customers have no significant effect on green financing. Therefore, banks are advised to continue developing green products, optimising green operations through digital technology, strengthening green policies with clear targets, and engaging customers through education and sustainable products.

Paper type: Research type

Keywords: *Green product, green operation, green policy, green customer, and green financing*

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I. INTRODUCTION

The concept of the green economy encourages all economic activities to reduce their environmental impact, including the banking sector through green banking. While banking itself is not a major polluter, the financing provided to customers can indirectly support activities that have an environmental impact. Green banking prioritises environmentally friendly operations, social responsibility, and the management of environmental and social risks. Anwar's (2022) research outlines the green economy strategy in Indonesia, but does not specifically address green financing. Raihan et al. (2022) focuses on green financing, but limits this to the energy sector. Meanwhile, studies on green financing across all corporate sectors in Indonesia are still rare, and to date, there is no comprehensive regulation governing the mechanism of green financing. Bank Indonesia, through PBI No. 14/15/PBI/2012, encourages national banks to incorporate environmental feasibility factors when assessing business prospects, in accordance with Law No. 32 of 2009, Government Regulation No. 27 of 2012, and Regulation of the Minister of Environment No. 5 of 2012 regarding AMDAL.

Green banking aims to establish environmentally friendly, socially responsible, and sustainable banking operations. Banks not only focus on profit but also take into account environmental (planet) and societal (people)

aspects in their pursuit of sustainability. This approach involves managing environmental and social risks through initiatives such as online banking, mobile banking, green loans, and energy-saving measures. Bai et al. (Sharma & Choubey, 2022) argue that by integrating environmental considerations into business decisions, banks can mitigate the negative impacts of their operations while promoting social responsibility and sustainability (Shaumya & Arulrajah, 2016). The adoption of green banking practices can enhance a bank's position in the global market, which is increasingly focused on environmental concerns, support environmental sustainability, and bolster its positive public image.

Several studies have examined the positive impact of green banking implementation, an environmentally conscious banking concept that promotes environmentally responsible financing and eco-friendly internal processes. (Masukujjaman & Aktar, 2014) argue that green banking helps prevent environmental damage, ensuring the Earth remains habitable through innovative green banking products. As an entity with high visibility, banking tends to address social issues to improve its image and attract customers (Branco & Rodrigues, 2006), making green banking a concept worth adopting. Through green banking initiatives, banks introduce paperless and technology-based services while promoting their role as corporate citizens responsible for sustainability (Fernando et al., 2017). A bank's involvement in formulating green banking policies can improve its reputation and attract new customers, contributing to the bank's long-term sustainability (Lymeropoulos et al., 2012).

The study by (Pariag-Maraye et al., 2017), focusing on customer perspectives in Mauritius, found that customers had positive perceptions of the efficiency of green banking projects, while (Mehedi, S et al., 2017) identified organizational pressure and policies as key drivers in adopting green banking in Bangladesh. (Bryson et al., 2016) highlighted environmental integrity, attitudes towards green banking, environmental concern, and collectivism as key factors influencing the use of green banking services. (Chen, 2011) emphasized the importance of gaining a green competitive advantage through a strengthened green culture and environmental leadership. However, (Masukujjaman & Aktar, 2014) noted that green banking practices in developing countries like Bangladesh are still lagging despite consistent implementation efforts. (Rahman & Barua, 2016) found that foreign banks excel in green banking compared to state-owned banks. In Indonesia, the implementation of green banking is driven by relevant regulations, in line with stakeholder theory, which underscores the responsibility of banks to key stakeholders such as customers, shareholders, and the community. Green products in green financing reflect the bank's commitment to addressing the needs of stakeholders who prioritize the environment, fostering customer loyalty and improving the bank's reputation. Stakeholder theory also stresses the importance of responding to stakeholder demands through green operations, including energy efficiency, digitalization of services, and carbon footprint reduction. Customers' concern for the environment encourages banks to expand green products (Fernando et al., 2017), while internal policies supporting green banking demonstrate commitment to global agendas like the SDGs and strengthen relationships with external stakeholders (Lymeropoulos et al., 2012).

(Gupta, 2015) identified several challenges in implementing green banking, such as customer acceptance, technology adoption, data protection, costs, and employee capabilities, all of which require significant investments in new technologies, data protection, renewable energy, and recycling. Customers need time to adapt, and bank employees require education and training to embrace green banking practices. While some banks have declared themselves as green, the actual implementation remains diverse, with no clear technical guidelines. In Indonesia, green banking practices are still developing, unlike in developed countries where they are more established in financing (Bisnis, 2017). State-owned banks are expected to lead by example in adopting green banking practices, aligning with the sustainable financial goals set by the Financial Services Authority. The goal of adopting green banking is to increase environmental awareness and foster changes towards more environmentally friendly business patterns (Handayani et al., 2023), although the implementation faces several challenges. Research by (Handayani et al., 2023) identified key indicators of green banking activities in state-owned banks, such as green products, green operations, green customers, and green policies, which serve as the basis for studying the "Determinants Of Green Financing Implementation."

II. METHODS

This study used a quantitative methodology, namely the Partial Least Squares (PLS) analysis, in order to investigate the impact that factors such as business development, capital structure, Good Business Governance (GCG), and earnings management have on the value of a firm. The objective measurements and statistical analysis of numerical data are the foundations of a quantitative approach, which is used to ascertain the correlations between the variables (Sugiyono, 2010). Between the years 2021 and 2023, the study population consisted of 124 principal companies operating in the consumer products market that were listed on the Indonesia Stock Exchange (IDX). It is possible to define a population as a collection of things, persons, or entities that share particular traits that are pertinent to the aims of the research (Sugiyono, 2010). The selection of 41 companies for the study was

accomplished through the use of the purposive sample approach. Purposive sampling is a non-probability sampling strategy in which the researcher picks samples based on specified criteria or judgments relevant to the study (Sugiyono, 2010). A sample is a subset of a population that represents the characteristics of the population as a whole.

The secondary data that were utilized in this study were gathered from the financial statements of the firms, which can be found on the official website of the IDX corporation. There are three types of variables that make up the study variables: independent factors (business development, capital structure, and GCG), a dependent variable (firm value), and an intervening variable (earnings management). Validity and reliability evaluations, normality checks, PLS regression, and hypothesis testing through bootstrapping are some of the data analysis approaches that are utilized. Various metrics, including R2 criteria, path coefficient estimates, impact size (f2), and predictive relevance (Q2), are utilized in the evaluation of models. In order to analyze hypotheses, the T test is utilized, and the significance value is used to determine whether the hypothesis is accepted or rejected (Ghozali., 2018).

III. RESULTS AND DISCUSSION

A. Results

1. Descriptive Test

Table 2. Descriptive Test

	N	Minimum	Maximum	Mean	Std. Deviation
Green Product	75	3.00	5.00	3.8495	.49388
Green Operation	75	3.00	5.00	4.1856	.45093
Green Customer	75	3.00	5.00	4.0193	.41113
Green Policy	75	3.00	4.83	4.0240	.45243
Pembiayaan Hijau	75	3.17	5.00	3.8756	.49277
Valid N (list wise)	75				

Source: SPSS Processed Data, 2024

According to the results of descriptive statistics, the Green Product variable reveals an average value (mean) of 3.8495, with the least value being 3.00 and the utmost being 5.00, accompanied by a standard deviation of 0.49388. This signifies that the level of implementation of green products by respondents is of a high nature, consistent, and steady. The Green Operation has an average of 4.1856, with a minimum of 3.00 and a maximum of 5.00, and a standard deviation of 0.45093, demonstrating that the green-based operations have been executed commendably, with the perceptions of the respondents being fairly harmonious. Further, the Green Customer variable holds an average of 4.0193, accompanied by a standard deviation of 0.41113, indicating that customer participation or the support for the green principles is notably high, with slight variations in perception. Green Policy presents an average of 4.0240, with a minimum value of 3.00 and a maximum of 4.83, with a standard deviation of 0.45243, revealing that the green policies have been adequately implemented, though slight differences in perception exist among respondents. Lastly, Green Finance holds an average of 3.8756, with a standard deviation of 0.49277, signifying that green finance is executed at a reasonably good level, with relatively minimal variation in perceptions. In sum, these results reflect that the green elements—products, operations, customers, policies, and financing—have been faithfully implemented, with the perceptions of respondents tending to be in agreement in each variable.

2. Test of Validity of Data

To ensure the trustworthiness and consistency of the instruments used in this research, validity and reliability tests were conducted. The validity test revealed that all statement items, whether pertaining to dependent or independent variables, displayed correlation values exceeding 0.3 with significance below 0.05, thus confirming their validity. The reliability test employed the Cronbach's Alpha method, where all variables—Green Product (0.825), Green Operation (0.683), Green Customer (0.700), Green Policy (0.688), and Green Financing (0.792)—attained values surpassing 0.6, hence they were deemed reliable and fit for continued analysis.

The classical assumption test included assessments of normality, heteroscedasticity, autocorrelation, and multicollinearity. The normality test, conducted via the PP Plot graph, displayed that the data points were spread near the diagonal line, indicating a normal distribution of residuals. The heteroscedasticity test, visualized through a scatterplot, revealed a random distribution of points around the zero line, signifying the absence of

heteroscedasticity. The autocorrelation test, with a Durbin-Watson value of 1.780, lay between dU (1.70) and 4 - dU (2.30), thereby affirming that no autocorrelation exists. The multicollinearity test showed that all independent variables possessed VIF values below 10—Green Product (1.611), Green Operation (1.880), Green Customer (2.632), and Green Policy (3.895)—indicating no presence of multicollinearity. Thus, the regression model satisfies all classical assumptions and is deemed appropriate for further examination.

3. Hypothesis Testing

Table 3. Results of Testing Indirect Effects

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.683	.324		-2,104	.039
Green Product	.271	.073	.272	3,714	.000
Green Operation	.362	.086	.331	4,187	.000
Green Customer	.123	.112	.103	1,099	.276
Green Policy	.373	.124	.343	3,009	.004

a Dependent Variable: Green Finance

Source: SPSS Processed Data, 2024

Based on the results of the partial t-test, the interpretation for each independent variable is as follows:

1. Green Product holds a t-value of 3.714 with a significance value of 0.000 ($p < 0.05$), indicating that this variable exerts a statistically significant influence on Green Financing. It signifies that as the value of Green Product rises, so too does the Green Financing.
2. Green Operation bears a t-value of 4.187 with a significance value of 0.000 ($p < 0.05$), demonstrating a substantial positive impact on Green Financing. This indicates that an increase in Green Operation leads to a corresponding increase in Green Financing.
3. Green Customer has a t-value of 1.099 with a significance value of 0.276 ($p > 0.05$), suggesting that this variable does not have a noteworthy impact on Green Financing. Thus, alterations in Green Customer do not statistically influence Green Financing.
4. Green Policy shows a t-value of 3.009 with a significance value of 0.004 ($p < 0.05$), signifying a significant positive effect on Green Financing. This reveals that improvements in policies related to Green Policy result in a rise in Green Financing.

Limit t (t-crisis):

For a sample size of 75 ($n = 75$) and 4 independent variables ($k = 4$), the degrees of freedom (df) for the t-test are calculated as:

$$df = n - k - 1 = 75 - 4 - 1 = 70.$$

At a significance level of 0.05 with $df = 70$, the critical t-value (t-table) is approximately 1.995.

Thus, if the computed t-value exceeds 1.995 or falls below -1.995, the null hypothesis is to be rejected, and the variable is considered to have a significant influence on the dependent variable (Green Financing). In this case, Green Product, Green Operation, and Green Policy have t-values greater than the critical value (1.995), whereas Green Customer does not demonstrate significance, as its t-value is less than the threshold.

Table 4. Anova f test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13,778	4	3,445	57,542	.000(a)
	Residual	4,190	70	.060		
	Total	17,969	74			

a Predictors : (Constant), Green Policy, Green Product, Green Operation, Green Customer

b Dependent Variable: Green Financing

Source: SPSS Processed Data, 2024

The results from the ANOVA test reveal that the entirety of the regression model holds significance in forecasting Green Financing. This truth is illuminated by the F value of 57.542 with a significance of 0.000 ($p < 0.05$), which signifies that there exists a noteworthy connection between the independent variables—Green Policy, Green Product, Green Operation, and Green Customer—and Green Financing. Hence, this regression model stands firm as a valid instrument to elucidate the variations in Green Financing. The minuscule significance value serves as evidence that the predictors, when considered collectively, contribute profoundly and significantly to the dependent variable.

Table 5. Determination Coefficient Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,876(a)	,767	,753	,24467	1,780

a Predictors : (Constant), Green Policy, Green Product, Green Operation, Green Customer

b Dependent Variable: Green Financing

Source: SPSS Processed Data, 2024

Verily, the value of R, a robust 0.876, signifies that the bond between the independent variables and the dependent variable is of great strength. The R Square, a sacred number of 0.767, reveals that 76.7% of the variation in Green Financing is explained by the predictors within the model, with the remaining 23.3% being influenced by forces beyond its grasp. The Adjusted R Square of 0.753 refines the estimation, considering the multitude of variables at play. The Std. Error of the Estimate, standing at 0.24467, unveils the extent of deviation of the data from the sacred regression line.

B. Discussion

1. Green Products towards Green Financing:

According to the wisdom of Legitimacy Theory, companies must preserve their honor by aligning with the increasing expectations of society in the realm of the environment (Branco & Rodrigues, 2006). Green Products, having a marked influence on Green Financing, reflect that companies may earn favor and legitimacy through the offering of products that protect the Earth. These products draw in customers who value sustainability, thus creating a favorable public image. In the teachings of Stakeholder Theory, banks must attend to the desires of those they serve, offering products that mirror their concern for the planet (Ullah & Rahman, 2015). By providing green products, financial institutions strengthen their bond with stakeholders, thereby fostering the growth of Green Financing (Munjali & Malarvizhi, 2021).

Scholars of the past, such as (Masukujjaman & Aktar, 2014), have declared that green banking serves as a path to environmental harmony, where products born of sustainability guide the way. (Pariag-Maraye et al., 2017) affirmed the significant role of customer awareness in nurturing the acceptance of green banking. Therefore, the green products, offered with transparency and trust, help banks to rise as champions of both environmental and financial sustainability (Handajani et al., 2019).

2. Green Operation towards Green Financing:

In the vast teachings of Legitimacy Theory, those banks that practice Green Operation earn their place in the hearts of the people, maintaining their dignity by serving the environment (Branco & Rodrigues, 2006). A Green Operation that impacts Green Financing signifies that by improving operations to honor the Earth, banks gain the trust of the public. Stakeholder Theory echoes this truth, as customers expect institutions to act in harmony with nature. As these green operations are enhanced, the bank’s reputation grows, and Green Financing flourishes (Handajani et al., 2019).

The ancient knowledge of (Chen, 2011) revealed that a green competitive advantage arises from an organization’s culture, steered by sustainability and enlightened leadership. Similarly, (Pariag-Maraye et al., 2017) revealed the importance of operational efficiency in securing loyalty and trust from customers. (Rahman & Barua, 2016) noted that green practices, such as energy efficiency and digital advancements, align the bank’s operations with societal expectations, bringing forth greater success in Green Financing.

3. Green Customer towards Green Financing:

While customers who are mindful of sustainability hold great significance, the insignificant influence of Green Customers on Green Financing reveals that their environmental awareness alone does not catalyze the adoption of Green Financing (Branco & Rodrigues, 2006). This shows that banks must refine their strategies, offering products that more effectively meet the needs of these conscious customers. The teachings of Stakeholder Theory suggest that aligning customer desires with the right products is key to success, yet in this case, other factors may hold greater sway (Handajani et al., 2019).

While prior research (Fernando et al., 2017) and (Biswas, 2011; Bryson et al., 2016) pointed to the promise of green customers embracing sustainable products, this study unveils a different truth. It is not merely awareness that drives action, but a confluence of other forces that guide customers to choose Green Financing.

4. Green Policy towards Green Financing:

In the ancient wisdom of Legitimacy Theory, it is understood that responsive policies toward sustainability enhance the institution's honor and respect in society (Branco & Rodrigues, 2006). A Green Policy that nurtures

Green Financing reflects that the proper policies elevate public trust in the institution. According to Stakeholder Theory, policies that resonate with environmental concerns will meet the needs of stakeholders, fostering further participation in Green Financing (Handajani et al., 2019).

Research by (Lymperopoulos et al., 2012) has revealed that well-constructed green policies improve the reputation of financial institutions, thereby attracting both new and loyal customers. (Masukujaman & Aktar, 2014; Tandukar et al., 2021) reminded us that policies grounded in sustainability foster awareness and create a favorable image of the bank. A robust Green Policy serves as a beacon for customers who seek alignment with environmental values, thereby strengthening Green Financing.

IV. CONCLUSION

The results are clear: Green Products, Green Operations, and Green Policies significantly foster Green Financing. The Green Product, with a t-value of 3.714, signals that banks should persist in creating environmentally friendly products to drive Green Financing. Green Operations, with a t-value of 4.187, urge banks to enhance their sustainability practices and digitalize services for greater impact. Green Policies, with a t-value of 3.009, reveal that strong sustainability policies will further encourage Green Financing. Conversely, Green Customers, while valuable, do not significantly influence Green Financing (t-value of 1.099), thus prompting banks to explore additional factors that might encourage customer adoption of green products.

Banks are advised to continue developing green products that meet the needs of a more environmentally conscious market, such as renewable energy financing. Green operations should be optimized through the use of digital technology and policies that reduce the carbon footprint. Moreover, banks must engage green customers through education and the introduction of sustainability-driven products. Finally, Green Policies should be strengthened with clear targets, transparent reporting, and sustainable practices. Future research is encouraged to explore further the impacts of green operations and policies on customer decisions, particularly in light of growing regulations and awareness surrounding sustainability.

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