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The Impact of the Business Cluster Program on Micro Business Growth Through a Green Economy Approach

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Abstract

This study aims to measure the impact of the BRI Business Cluster Program on micro enterprises growth through a green economy approach at BRI Pasar Kodim Pekanbaru. This research used a quantitative method with data collection techniques through questionnaire surveys and secondary data analysis. The research population is the Business Cluster Program at BRI Pasar Kodim Pekanbaru, with a sample of 13 micro enterprises at Gerai Kembang Setaman. The results of the linear regression analysis show that micro enterprises growth (X) has a significant impact on environmental sustainability (Y) with the regression equation Y=18.058+0.405X. The ANOVA test results show an F value of 15.179 with a p-value of 0.002, indicating that the regression model is significant at a 95% confidence level. The R Square value of 0.580 indicates that 58% of the variability in environmental sustainability is explained by this model. Descriptive analysis shows significant improvements in various aspects of micro enterprises after joining the BRI Business Cluster Program, such as increases in monthly turnover, number of employees, and the use of QRIS/EDC. These findings reflect the program's success in promoting business growth and environmental sustainability through the application of the green economy.

Keywords

Business Cluster Program, Environmental Sustainability, Green Economy, Microenterprise Growth.

1. Introduction

In the era of globalization and a continuously evolving economy, micro enterprises have become a crucial pillar for the national economy. They not only create jobs but also reduce poverty and enhance the welfare of society, especially among the lower-middle class. In Indonesia, micro enterprises dominate the business sector with approximately 6.396 million units, thereby absorbing around 89% of the workforce and contributing 37.8% to the Gross Domestic Product (GDP). According to Novitasari (2022), micro enterprises account for 98.68% of businesses in Indonesia, with a labor absorption rate of around 89%. The contribution of micro enterprises to GDP is 37.8%. These figures indicate that micro enterprises have a vast reach with significant employment absorption capacity (Angadi et al., 2023).

Micro enterprises have a broad business mix and a strong foundation to withstand crises, coupled with rapid transaction turnover. BRI Bank supports micro enterprises through its "Klaster Hidupku" business cluster program, which aims to explore business potential and promote the growth of micro enterprises in various regions. Based on this data, it is evident that there has been a significant increase in the development of micro enterprises among the Indonesian community. Consequently, BRI Bank continues to implement innovative programs to empower micro enterprises throughout Indonesia, which are increasing in number each year through the BRI Business Cluster Program called "Klaster Hidupku." This program helps to explore business potential and encourage the growth of micro enterprises in various regions. According to BRI Bank's 2021 sustainability report, the "Klaster Hidupku" is a marketing approach aimed at communities or groups, making it more effective and efficient.

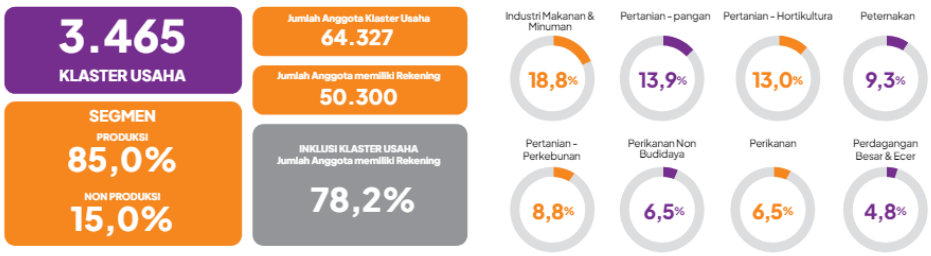

Figure 1. Performance Data of Business Clusters

Figure 1 provides a comprehensive overview of the BRI Business Cluster Program designed to support micro enterprises in various sectors. With a total of 3,465 business clusters spread across Indonesia, this program involves 64,327 members, of which 50,300 have accounts with BRI. This indicates a strong connection between micro entrepreneurs and Banking services, facilitating transactions and access to various financial services offered by BRI. The program not only assists micro enterprises by providing access to Banking services but also promotes financial inclusion and supports various industry sectors to enhance production and member welfare. Through this program, BRI plays a key role in empowering micro enterprises and supporting sustainable economic growth in Indonesia.

In the Klaster Hidupku program, micro business owners are mentored by BRI Micro Marketing Officers (Mantri) to become sustainable micro enterprises. The marketing data management, previously done manually by the Mantri, is now recorded in a database system. A Mantri typically manages hundreds of business clients, helps market their products, and actively fulfills their Banking needs, serving as a digital advisor for all BRI customers. The "Klaster Hidupku" program focuses

on achieving sustainable and inclusive economic growth and helps micro enterprises increase resource and energy efficiency through training and mentoring, which aligns closely with the concept of the green economy.

The Green Economy concept emphasizes the triple bottom line framework, balancing economic growth and development with societal and environmental well-being. Implementing a Green Economy creates new market areas with the potential to boost economic growth, such as the biofuels market and renewable resources (Anwar, 2022). The Green Economy concept can be adopted by micro entrepreneurs and is expected to enhance community economic growth. Increased economic growth in the community leads to higher savings, investment, technological advancement, and growth in the Gross Regional Domestic Product (Saudah & Nuryadin, 2022). By creating environmentally friendly and safe products, public trust increases, leading consumers to prefer these products, thus offering micro entrepreneurs' opportunities to gain public trust regarding their products (Sutrisno, 2023).

A previous study by Pradana et al. (2023) concluded that the implementation of Green Economy principles in Jetis Village, Besuki District, Situbondo Regency, is still lacking in fulfilling the ten principles of Green Economy. The focus was mainly on recycling solid waste to add economic value, resulting in new products besides tofu. The MSME actors have experienced direct impacts from the Green Economy implementation, particularly in terms of income. Product diversification from waste processing has increased income and created new business opportunities for the surrounding community (Sundari, 2022; Bakhtiar et al., 2022).

Based on this, the research problem formulated in this study is how the BRI Business Cluster Program affects the growth and sustainability of micro enterprises in Indonesia. Additionally, this study will explore the extent to which the Green Economy concept applied in the BRI Business Cluster Program can enhance resource use efficiency and overall community welfare. This study aims to analyze how the BRI Business Cluster Program influences the growth and sustainability of micro enterprises in Indonesia. Furthermore, it assesses how the implementation of the Green Economy concept within the program can improve resource use efficiency and community welfare (Kadaba et al., 2023; Rahayu et al., 2023).

This research is based on literature highlighting the importance of micro enterprises in the economy, microeconomic theory, and the Green Economy concept. Micro enterprises play a role in enhancing community welfare and economic growth through job creation and increased income. The Green Economy concept, with its principles of sustainability and resource efficiency, is expected to strengthen the sustainability of micro enterprises and support environmentally friendly economic growth. The hypothesis of this study is that the BRI Business Cluster Program has a significant positive impact on the growth and sustainability of micro enterprises in Indonesia. Additionally, the implementation of the Green Economy concept within this program is expected to improve resource use efficiency and community welfare.

2. Method

This research uses a quantitative approach through surveys. The data collection technique utilizes two methods: surveys (questionnaires) and secondary data analysis (including internal BRI documents, micro business reports, and external data). The population in this study is the Cluster Business Program at BRI Pasar Kodim Pekanbaru, while the sample in this research is the Cluster Business Program at BRI Pasar Kodim Pekanbaru located in the Gerai Kembang Setaman area, with a total of 13 business participants. Gerai Kembang Setaman has been participating in the Cluster Business Program at BRI since September 2021. The variables in this study consist of micro business growth (X) and environmental sustainability (Y).

The data collection method used in the research with questionnaire surveys measures two variables. First, micro business growth is assessed based on changes in income before and after participating in the BRI Cluster Business Program, an increase in the number of employees as an indicator of expansion, and improvements in production efficiency. Second, environmental sustainability is assessed based on the use of environmentally friendly raw materials, the effectiveness of waste management, and the reduction and efficiency of energy use in the operational activities of micro businesses. The collected micro business reports include several indicators, such as monthly income, number of employees, monthly expenses, becoming a BRILink agent, the use of QRIS/EDC, frequency of attending entrepreneurship training, use/production of environmentally friendly products, participation in marketing programs, waste management, and energy efficiency.

The data analysis technique in this study, using questionnaires, involves linear regression analysis to measure the relationship between the independent variables (implementation of green economy such as the use of environmentally friendly raw materials, waste management, and energy efficiency) and the dependent variables (income growth, number of employees, production efficiency). The regression model will help determine the extent of the influence of green economy factors on the growth of micro-enterprises. Before conducting data analysis with linear regression, classical assumption tests, including normality test, multicollinearity test, and heteroscedasticity test, must be performed. Hypothesis testing is conducted using the t-test and the coefficient of determination (R2) test.

Meanwhile, data analysis techniques in micro business reports before and after participating in the BRI Business Cluster Program use descriptive statistical analysis, which describes the impact of the BRI Business Cluster Program on micro business growth through a green economy implementation approach. For micro business growth variables, supporting data was obtained, namely turnover per month, number of employees, and range of expenditure per month. Meanwhile, the environmental sustainability variable obtained supporting data, namely being part of a BRI-Link agent, using QRIS/EDC, attending entrepreneurship training within 1 year, using or producing environmentally friendly products, participating in marketing program exhibitions held by BRI within 1 year, managing business waste and energy efficiency. The data triangulation (data merging) process was carried out by combining the results of linear regression analysis with descriptive statistics to determine the influence and impact of the BRI Business Cluster Program on micro business growth through a green economy approach.

3. Result and Discussion

The presentation of research data from the micro-business growth variable (X) and the economic sustainability variable (Y) using SPSS version 29 software. Below is the SPSS output for the linear regression test results. The SPSS output results of the linear regression analysis for the micro-business growth variable (X) on economic sustainability (Y) obtained the linear regression equation model, which is $Y = 18.058 + 0.405X$. This model indicates that the value of environmental sustainability is predicted to be 18.058 when micro-business growth is zero, signifying the baseline value of environmental sustainability without any micro-business growth. The regression coefficient of 0.405 suggests that each one-unit increase in micro-business growth will enhance environmental sustainability by 0.405 units. The statistical significance of this coefficient, with a t-value of 3.896 and a p-value of 0.002, indicates that this relationship is statistically significant at the 95% confidence level. Practically, this means that growing micro-businesses tend to contribute more to better environmental sustainability practices, such as the use of environmentally friendly raw materials, more efficient waste management, and improved energy efficiency in their operations. Therefore, this model illustrates that

micro-business growth has a positive and significant impact on enhancing environmental sustainability.

Table 1. Linear Regression Analysis Result

Model	Unst. Coef. B	Unst. Coef. Std. Error	Std. Coef. Beta	t	Sig
Constant)	18.058	2.933		6.158	0.000
Pertumbuhan Usaha Mikro	0.405	0.104	0.761	3.896	0.002

Hypothesis testing with the F-test involves comparing the calculated F-value and the critical F-value obtained from the Analysis of Variance (ANOVA). Explains the ANOVA output from the linear regression analysis, showing that the tested regression model has an F value of 15.179 with a p-value of 0.002. This high F value and very low p-value indicate that the regression model is significant at the 95% confidence level. This means that the independent variable, micro-business growth, has a significant influence on the dependent variable, environmental sustainability. Below are the results of the coefficient of determination (R^2) test, which is used to determine and predict the extent of the contribution made by the independent variables collectively to the dependent variable. The coefficient of determination ranges between 0 and 1.

Table 2. Analysis of Variance (ANOVA) Result

Model	Sum of Squares	df	Mean Square	F	Significance
Regression	6.512	1	6.512	15.179	0.002[b]
Residual	4.719	11	0.429		
Total	11.231	12			

The R Square value or coefficient of determination is obtained, which indicates how well the regression model is formed by the independent and dependent variables. The obtained value is 0.580, meaning that micro-business growth (X) has a 58% influence on environmental sustainability (Y), while the remaining 42% is influenced by other factors beyond micro-business growth that were not examined in this study.

Table 3. Coefficient of Determination Test (R2)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.761[a]	0.580	0.542	0.655

The data analysis in the descriptive statistical analysis for the micro-business report data before and after participating in the BRI Business Cluster Program includes supporting data for the micro-business growth variable, such as monthly turnover, number of employees, and monthly expenditure range. For the environmental sustainability variable, supporting data includes being part of the BRI-Link agent, using QRIS/EDC, frequency of attending entrepreneurship training in one year, using or producing environmentally friendly products, participating in marketing program exhibitions organized by BRI in one year, business waste management, and energy efficiency.

Table 4. Descriptive Statistical Analysis

Criteria	Before Joining Cluster	After Joining Cluster	Change
Omzet/bulan			
Average	Rp 3.022.308	Rp 6.180.769	Rp 3.158.462
Minimum	Rp 950.000	Rp 23.000.000	Rp 1.350.000
Maximum	Rp 15.000.000	Rp 40.000.000	Rp 25.000.000
Number of employees			
Average	1,077	1,538	0,462
Minimum	0	0	0
Maximum	10	20	10
Monthly Expenditure Range			
Average	Rp 1.814.615	Rp 3.594.231	Rp 1.779.615
Minimum	Rp 500.000	Rp 1.100.000	Rp 600.000
Maximum	Rp 5.000.000	Rp 10.000.000	Rp 5.000.000
Become a BRILink Agent			
Yes	0	2	2
No	13	11	-2
Using QRIS / EDC			
Yes	0	11	11
No	13	2	-11
How many times to attend training			
Rata-rata	0	10	10
Using/Producing Environmentally Friendly Products			
Yes	0	8	8
No	13	5	-8
Attending Exhibition/Program			
Yes	0	10	10
No	13	3	-10
Business Waste Management			
Yes	0	12	12
No	13	1	-12
Energy Efficiency			
All Cashless Transactions, Brimo	0	10	10
Mayoritas Cashless, Brimo	0	3	3
No changesn	0	1	1
Regularly deposit money into the bank, the majority of financial transactions use cash	13	0	-13

Table 4 illustrates the comparison between the conditions of micro-businesses before and after joining the BRI Business Cluster Program. Several criteria are measured, including monthly turnover, number of employees, monthly expenditure range, participation in the BRI-Link program, use of QRIS/EDC, frequency of attending entrepreneurship training, use or production of environmentally friendly products, participation in exhibitions or marketing programs, business waste management, and energy efficiency. After joining the program, the average monthly

turnover increased from Rp 3,022,308 to Rp 6,180,769, with the minimum increasing from Rp 950,000 to Rp 2,300,000 and the maximum from Rp 15,000,000 to Rp 40,000,000. The average number of employees also increased from 1.077 to 1.538, indicating business expansion. Average monthly expenditure rose from Rp 1,814,615 to Rp 3,594,231.

Table 4 also shows significant improvements in various aspects of micro-businesses after joining the BRI Business Cluster Program. The number of businesses becoming BRI-Link agents increased from 0 to 2, and the use of QRIS/EDC rose from 0 to 11 businesses. All respondents attended entrepreneurship training 10 times a year after the program, compared to never before. The use or production of environmentally friendly products increased from 0 to 8 businesses, and participation in BRI exhibitions increased from 0 to 10 businesses. Business waste management saw a significant change, with 12 businesses starting waste management after the program, compared to none before. Energy efficiency also improved, with 10 businesses conducting all transactions cashlessly using Brimo and 3 businesses primarily cashless, compared to all cash transactions previously. These analysis results reflect the program's success in promoting business growth and environmental sustainability through the implementation of a green economy.

The triangulation of data in this study combines the results of linear regression analysis and descriptive statistics. The regression model indicates that micro-business growth (X) has a significant influence on environmental sustainability (Y). With a regression coefficient of 0.405, each one-unit increase in micro-business growth enhances environmental sustainability by 0.405 units. The ANOVA test results, with an F value of 15.179 and a p-value of 0.002, indicate that the model is significant at the 95% confidence level. The R Square value of 0.580 shows that 58% of the variability in environmental sustainability is explained by this model, while the remaining 42% is influenced by other factors not examined in this study.

Descriptive analysis reveals significant improvements in various aspects of micro-businesses after joining the BRI Business Cluster Program, such as monthly turnover, number of employees, monthly expenditure, use of QRIS/EDC, participation in entrepreneurship training, use of environmentally friendly products, and business waste management. The average monthly turnover increased from Rp 3,022,308 to Rp 6,180,769, the number of employees from 1.077 to 1.538, and monthly expenditure from Rp 1,814,615 to Rp 3,594,231. The use of QRIS/EDC increased from 0 to 11 businesses, and participation in entrepreneurship training reached 10 times a year after the program. These results reflect the program's success in promoting business growth and environmental sustainability through the implementation of a green economy.

4. Conclusion

This study successfully demonstrates that the BRI Business Cluster Program has a significant impact on micro-business growth and environmental sustainability through a green economy approach. Through linear regression analysis, it was found that micro-business growth has a positive and significant influence on environmental sustainability. This result is supported by the ANOVA test, which shows that the regression model used is significant. Additionally, descriptive analysis also reveals significant improvements in various aspects of micro-businesses after joining the program, such as increased monthly turnover, number of employees, and the use of financial technology like QRIS/EDC. Overall, the results of this study affirm the success of the BRI Business Cluster Program in promoting business growth and environmental sustainability through the application of green economy principles.

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