ANALYSIS OF GREEN ECONOMY CONTRIBUTION TO CONSUMER SATISFACTION INDEX

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ABSTRACT

This research investigates the effect of the Green Economy Index on the Consumer Satisfaction Index in Indonesia. The research problem addresses how green economic practices relate to consumer satisfaction levels, which is essential for sustainable development strategies. The objective is to determine whether a significant relationship exists between these indices. The research study uses statistical analysis methods, specifically the Pearson's correlation test, to assess data distribution and the strength of association between variables. Results indicate that both the Green Economy Index and the Consumer Satisfaction Index are normally distributed. While the correlation between the two is positive and strong, it is not statistically significant, likely due to the small sample size. Despite the lack of statistical confirmation, the trend suggests that as Indonesia's green economy grows, consumer satisfaction with products and services tends to increase. The conclusion emphasizes that while statistical significance was not achieved, the observed positive trend highlights the potential benefits of promoting green economic practices. This research implies that to enhance consumer satisfaction through green economy practices, strategic actions are required, including policy support, technological innovation, effective communication, and collaborative partnerships among stakeholders. These steps are critical to developing a sustainable economic model that supports both environmental goals and consumer well-being.

Keywords: green economy, consumer, satisfaction

INTRODUCTION

Customer satisfaction influences business sustainability, and companies must focus on providing maximum satisfaction to meet consumer expectations (Rusmadi, 2020). Consumer satisfaction is a complex concept that encompasses various factors, including product quality, price, service, and environmental impact. In the context of a green economy, consumer satisfaction is also influenced by their perception of the environmental benefits associated with products and services. Most customers consider environmentally friendly products to be of good quality and feel satisfied with these products, which leads to customer loyalty (B. Fabian, 2023). The analysis of the green economy's contribution to the consumer satisfaction index highlights the importance of considering environmental factors in consumer behavior. As the world transitions towards a more sustainable future, understanding the relationship between green economy practices and consumer satisfaction will be crucial for businesses and policymakers alike. The concept of a Green Economy is a multidimensional idea that

focuses on balancing and synergizing the economic and environmental dimensions, without overlooking social issues (Merino-Saum et al., 2020). A 2022 survey by Katadata Insight Center revealed that a significant portion of Indonesian citizen remain unfamiliar with the concept of a green economy. The findings, with 39.5% of respondents indicating a lack of understanding and exposure to the term, underscore the need for widespread education and awareness initiatives to promote green economy principles and practices among the Indonesian populace . This research delves into the intricate relationship between the green economy and consumer satisfaction, highlighting the importance of consumer perception and behavior in shaping a sustainable future. Consumer satisfaction, measured through the Consumer Satisfaction Index, represents the degree of contentment experienced by consumers with the products or services they utilize(Tjiptono & Chandra, 2016; Yadav & Pathak, 2017). Conversely, the Green Economy Index serves as a benchmark for evaluating the progress and effectiveness of Indonesia's economic transformation towards a greener, more environmentally conscious approach. The Green Economy Index (GEI) is a metric used to evaluate a country's or region's progress toward a sustainable economy that harmonizes environmental health, economic growth, and social well-being. The index generally considers various factors, such as resource efficiency, carbon emissions, renewable energy usage, waste management, and green jobs, to assess how well an economy integrates environmental objectives with economic policies.

The specific indicators within the GEI may vary by country or organization but typically cover areas like(Ansu-Mensah, 2021; Firmansyah, 2022; OECD, 2021; Rybalkin et al., 2021; Zain et al., 2023):

1. **Renewable Energy Adoption**: Measures the percentage of energy sourced from renewable resources.
2. **Carbon Emissions and Climate Impact**: Assesses carbon emissions and other pollutants that affect climate change.
3. **Resource Efficiency**: Evaluates how efficiently resources (e.g., water, minerals, forests) are utilized and conserved.
4. **Waste Management and Recycling**: Analyzes efforts to reduce, recycle, and properly manage waste.
5. **Green Jobs and Industry**: Tracks the creation of jobs and growth in sectors contributing to sustainability.

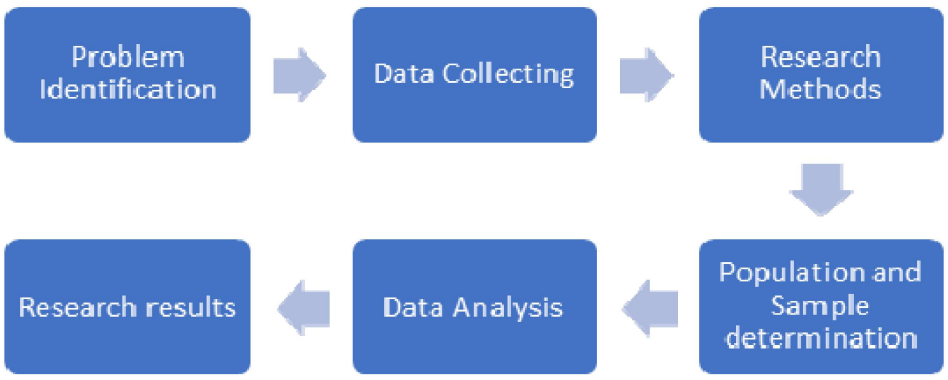
6. **Public Policy and Governance**: Assesses government policies and regulations that support sustainable practices.

The GEI provides policymakers, businesses, and researchers with a comprehensive view of a nation's or region's environmental and economic sustainability efforts, helping to guide decisions that promote a balance between economic development and ecological preservation.

METHODS

Distinct from research primarily focused on policy implementation for achieving a green economy, this study delves into analyzing the contribution of the green economy specifically to the consumer satisfaction index. This research not only sheds light on the relationship between the green economy and consumer satisfaction but also opens doors to identifying and seizing opportunities for fostering both green economy practices and enhanced consumer satisfaction. The research systematics can be shown below:

Table 1. Research Systematic



This research employed a time series data collection approach, spanning ten years from 2011 to 2020. The time series data was gathered from various sources to track trends and patterns over the specified period. The research employed a combination of statistical techniques to analyze the collected data and address the research questions. These techniques included: Shapiro-Wilk Test for Normality, The Shapiro-Wilk test is the most powerful test for assessing normality in statistical analysis(Khatun, 2021). the Shapiro-Wilk test was used to assess whether the data was normally distributed. This test is particularly useful for smaller

sample sizes. If the data was found to be non-normal, appropriate transformations or non-parametric tests were employed. Measures of Association: To measure the strength and direction of. the linear relationship between two variables, appropriate statistical measures of association were utilized. These measures could include Pearson's correlation coefficient.

RESULTS

A. Shapiro-Wilk Test

The Shapiro-Wilk test was conducted to assess whether the Green Economy Index (GEI) data was normally distributed. The results of the test are presented in Table 2

Table 2. Shapiro-Wilk Test Results for GEI

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Green Economy Index	.158	10	.200*	.951	10	.681

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The statistical value of 0.951 indicates the degree of proximity of the data distribution to the normal distribution. The closer the value in the test result is to 1, the closer the data distribution is to the normal distribution. The sig value (significance) of >0.05 i.e. 0.681 indicates the probability of normally distributed data. A significance value greater than 0.05 (significance level 95%) indicates that the data are statistically normally distributed. This is also supported by Figure 1. In the Q-Q Plot graph for the Green Economy Index variable, the data points follow a diagonal line pattern, it can be concluded that the data is normally distributed.

This conclusion is further corroborated by visual inspection in Figure 1. The Q-Q Plot for the Green Economy Index variable shows that the data points closely align with the diagonal line, indicating a pattern consistent with a normal distribution. The combination of both statistical indicators and the Q-Q Plot visual confirms the normality of the data distribution, validating its suitability for further parametric analysis.

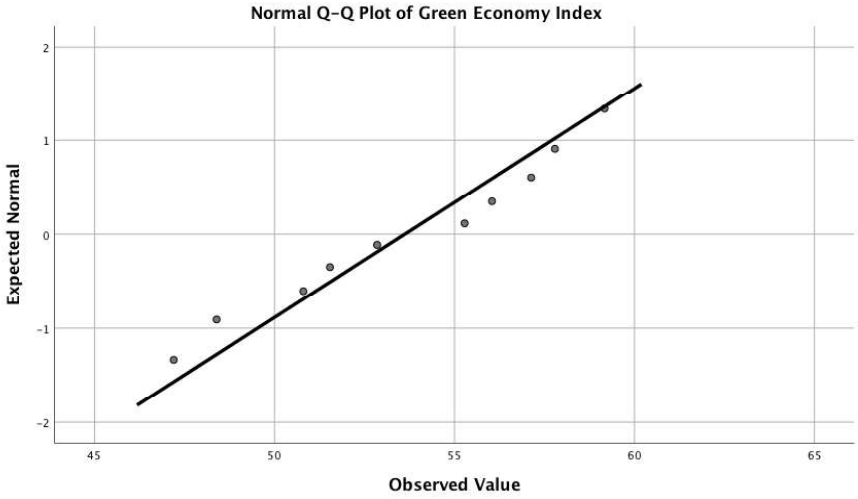


Figure 1

Q-Q Plot Graph

The Shapiro-Wilk test was conducted to assess whether the Consumer Satisfaction Index (CSI) data was normally distributed. The results of the test are presented in Table 3.

Tabel 3. Shapiro-Wilk Test Results for CSI

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Indeks Kepuasan Konsumen	.161	10	.200*	.926	10	.413

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The statistical value of 0.926 indicates the degree of proximity of the data distribution to the normal distribution. The closer the value on the test result is to 1. The sig (significance) value of >0.05 which is 0.413 indicates the probability of normally distributed data. A significance value greater than 0.05 (significance level 95%) indicates that the data are statistically normally distributed. This is also supported by Figure 2. In the Q-Q Plot graph for the Consumer Satisfaction Index variable, the data points follow the pattern of diagonal lines, it can be concluded that the data is not normally distributed.

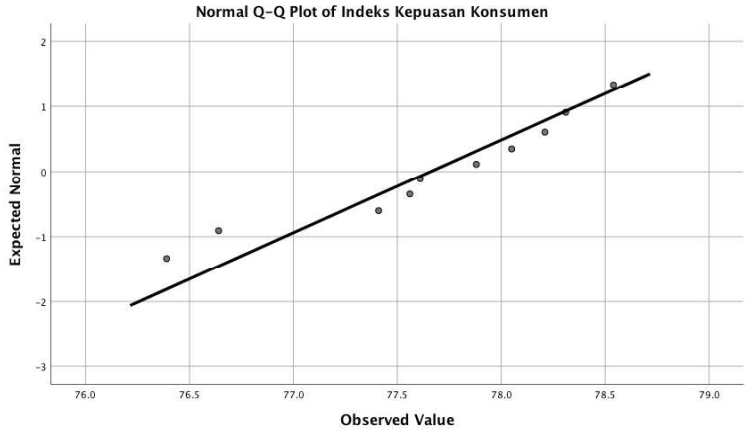


Figure 2. Q-Q Plot graph for the Consumer Satisfaction Index

B. Pearson Correlation Test

The next step in the analysis involves employing the Pearson correlation test to assess the strength and direction of the relationship between two variables. This test is particularly useful for examining linear relationships between continuous or interval-scale variables.

Table 4. Pearson's Correlation Test Result

Correlations

		Indeks Kepuasan Konsumen	Green Economy Index
Indeks Kepuasan Konsumen	Pearson Correlation	1	.333
	Sig. (2-tailed)		.347
	N	10	10
Green Economy Index	Pearson Correlation	.333	1
	Sig. (2-tailed)	.347	
	N	10	10

Based on the output in Table 4. obtained a correlation coefficient number of 0.333 shows that there is a positive relationship between the Green Economy Index and the Consumer Satisfaction Index, a positive relationship illustrates the direction of the relationship between two variables that the higher the Green Economy Index, the higher the consumer satisfaction index. It is known that the significance value (Sig.) of 0.347>0.05 means that there is an insignificant relationship between the Green Economy Index variable and the Consumer Satisfaction Index.

DISCUSSION

This research offers initial insights into the potential link between a thriving green economy and consumer satisfaction in Indonesia. While the data suggests a positive relationship between the Green Economy Index (GEI) and the Consumer Satisfaction Index (CSI), the current analysis indicates this association may not be statistically significant, possibly due to limitations in sample size. However, the Pearson'scorrelation test hints at a connection – as the green economy strengthens, consumer satisfaction might also rise. Further research with larger samples and potentially qualitative methods could provide a clearer picture of this relationship and its underlying mechanisms. Despite the potential limitations in statistical significance, the study offers valuable insights through the Pearson'scorrelation test. This test hints at a potential connection between a stronger green economy and rising consumer satisfaction. In simpler terms, as Indonesia progresses towards a more environmentally sustainable economy, consumers might become increasingly satisfied with the products and services available. This initial observation paves the way for further investigation.

To gain a deeper understanding of this potential link, future research could explore several avenues. Firstly, employing a larger sample size could strengthen the analysis and provide more robust evidence for the relationship between GEI and CSI. Additionally, incorporating qualitative research methods would be beneficial. Interviews or focus groups could provide valuable insights into the underlying mechanisms at play. By understanding how a green economy might influence consumer satisfaction on a personal level, researchers could build a more comprehensive picture of the connection.

Overall, this research offers a springboard for further exploration into the intriguing relationship between a green economy and consumer satisfaction in Indonesia. While the initial findings suggest a positive association, the need for more robust evidence through larger sample sizes and qualitative methods is evident. By delving deeper into this connection, policymakers can gain valuable insights into how green economy initiatives might not only benefit the environment but also contribute to enhanced consumer satisfaction and overall well-being.

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