

Sustainability Green Economy: Behavioral Accounting with Central Government

Viola Syukrina E Janros^{1*}, Handra Tipa¹, Haposan Banjarnahor¹, and Ita Mustika²

¹Faculty of Social Sciences and Humanities, Universitas Putera Batam, Indonesia

²Faculty of Economics and Business, Universitas Ibnu Sina, Indonesia

Abstract. This research aims to analyze the influence of Government, Industry Awareness, and Academics as indicators of Behavioral Accounting on the Sustainability Green Economy, with Central Government Regulation serving as a moderating variable. Behavioral Accounting is viewed as a framework to understand how regulatory, industrial, and academic factors affect sustainability-focused accounting decisions. In the context of the green economy, accounting functions not only as a financial reporting tool but also as a driver of environmental policies and sustainable business practices. The study employs a quantitative approach using moderated regression analysis. Data were gathered via surveys distributed to accountants, policymakers, and academics involved in sustainability reporting and policy in Kepulauan Riau. The findings show that Central Government Regulation moderates the relationship between Government Type and Sustainability Green Economy but does not moderate the link between Industry Awareness and Sustainability Green Economy. Furthermore, Government Type, Industry Awareness, and Central Government Regulation have significant direct effects on the Sustainability Green Economy, while academic factors do not. These results highlight the crucial role of government regulation in promoting industry awareness and the overall success of sustainability initiatives. The study provides valuable implications for governments, industries, and academia in developing policies and educational curricula that align with sustainability accounting and green economic goals.

1 Introduction

Batam City is a strategic national region located on the Indonesian border. Due to its proximity to Singapore and Malaysia, Batam has rapidly developed manufacturing, trade, and tourism sectors. Batam's rapid economic growth presents various sustainability challenges, such as increasing flooding, reduced green open spaces, and public facilities that are not yet inclusive and environmentally friendly. This indicates an imbalance between economic growth and environmental preservation, resulting in suboptimal implementation of a green economy at the regional level [1]. The success of a green economy depends heavily

* Corresponding author: viola@puterabatam.ac.id

on the synergy between three key stakeholders: local governments, industry players, and academic institutions. The government plays a role in creating and enforcing regulations, industry is responsible for implementing sustainability principles, and academia contributes knowledge and innovation to environmental policy. In research [2], it is explained that industrial awareness is needed to realize a sustainable green economy. Furthermore, research [3] explains the relationship between behavior and green economic sustainability. However, the relationship between these stakeholders is often hampered by a lack of coordination and support from the central government [4]. Therefore, the role of the central government as a moderating variable is crucial to analyze. National policies, fiscal incentives, and inter-regional oversight mechanisms can strengthen or weaken local synergies in realizing a sustainable green economy in Batam [5]. This research is crucial to understanding how coordination and the role of the central government can enhance the success of a green economy in this strategic region.

The government [6] has a central role in setting policy directions and regulations that support the achievement of sustainable development goals. Industry awareness of sustainability principles determines the level of adaptation of the business sector to the increasing environmental and social demands. Meanwhile, the academic world contributes through knowledge production, research, and human resource development that supports sustainability values. The Behavioral Accounting approach provides a new lens in understanding the dynamics of decision-making in the context of sustainability. Not only does it pay attention to the quantitative and technical dimensions of accounting information, it also looks at the cognitive, social, and value aspects that influence the behavior of economic actors. Within this framework, the three main actors of government, industry awareness, and academics are seen as important indicators that reflect the construction of behavior in driving the transition to a sustainable green economy [7].

However, the influence of the three actors cannot be separated from the context of applicable regulations. In this case, Central Government Regulations play a role as a potential moderation variable, because their existence can strengthen or even limit the influence of the behavior of these actors on the implementation of the green economy. Effective regulation can encourage collective behavior change in a more pro-environmental direction, while inconsistent or weak policies in enforcement can be an obstacle to achieving sustainability goals.

Given this context, the purpose of this study is to examine the impact of government actions, Industry Awareness, and Academics as indicators of Behavioral Accounting on Sustainability Green Economy, considering Central Government Regulations as a moderation variable. This research seeks to add conceptual insights to behavioral accounting literature related to sustainability, as well as a practical contribution to the formulation of public policies and institutional strategies that support the green economy in Indonesia.

2 Theoretical foundation

Behavioral accounting theory is an approach in accounting that pays attention to the influence of human behavior in the economic and accounting decision-making process[8]. This theory recognizes that accounting information is not only used rationally, but is also influenced by the perceptions, values, social pressures, and psychological factors of decision-makers. In the context of this study, the three main entities Government, Industry, and Academics are positioned as representations of collective behavior that reflect how sustainability principles are received, understood, and applied in economic processes[9].

Sustainability Development Theory. This theory emphasizes the importance of balancing economic, social, and environmental needs for current generations without sacrificing the needs of future generations (WCED, 1987). In the context of the green economy,

sustainability development is a normative framework that encourages each sector to internalize sustainability values in its activities. Behavioral accounting is a means to understand how these principles are translated into real actions by economic and policy actors.

Behavioral accounting is a branch of accounting that studies how human behavior affects processes, systems, and decision-making in accounting. It combines principles from psychology, sociology, and behavioral economics to understand how non-financial factors such as emotions, motivation, culture, social pressure, and cognitive bias affect accountants, managers, auditors, and other users of financial statements. The purpose of Behavioral Accounting is to understand how individuals and groups act in an accounting environment. Examine the influence of psychological and social factors in accounting decision-making and assess the effectiveness of accounting systems in dealing with human behavior.

The government plays a key driver in creating an environment that allows sustainability and a green economy to grow [10]. Without regulatory support, incentives, and public policies, the transition to a sustainability and green economy will be difficult to achieve. Industry awareness is an important foundation in realizing sustainability and a green economy. Without awareness from industry players, the transformation towards a green economy will be slow and ineffective. The government, media, educational institutions, and consumers also have a role in increasing industry awareness to be more responsible for the environment and society. Regulations from the central government are the backbone in forming an ecosystem that supports sustainability and the green economy. Without strong, fair, and consistent regulations, efforts towards sustainable development will not be effective.

3 Research methodology

This study uses a quantitative approach with a moderation regression analysis method to test the relationship between the variables studied. Data is collected through surveys to accountants, regulators, and academics who have a connection to sustainability practices in financial reporting and industry policy in Kepulauan Riau. The research type used a non-experimental, cross-sectional survey design, where data were collected at one point in time. Population: Accountants, regulators, and academics in the Riau Islands involved in financial reporting or industry policymaking related to sustainability. The sampling technique used was purposive sampling based on criteria such as professional relevance to sustainability practices. The number of respondents in this study was 100. Data Collection Procedures used Google Forms.

4 Analysis And Interpretation

This analysis is conducted to determine the extent to which exogenous variables affect endogenous variables. Specifically, this study will examine the degree of influence that variable X has on variable Y [11].

4.1 Convergence Validity Test

The outer model testing process begins with parameter estimation. Convergent validity is assessed by examining the loading factor of each construct. A loading factor greater than 0.7 is considered an ideal and valid indicator for measuring a construct. Values between 0.5 and 0.6 are still deemed acceptable, while indicators with loading factors below 0.5 should be removed from the model [10]. The loading factor values for each variable indicator, based on calculations using the PLS algorithm method, are presented as follows:

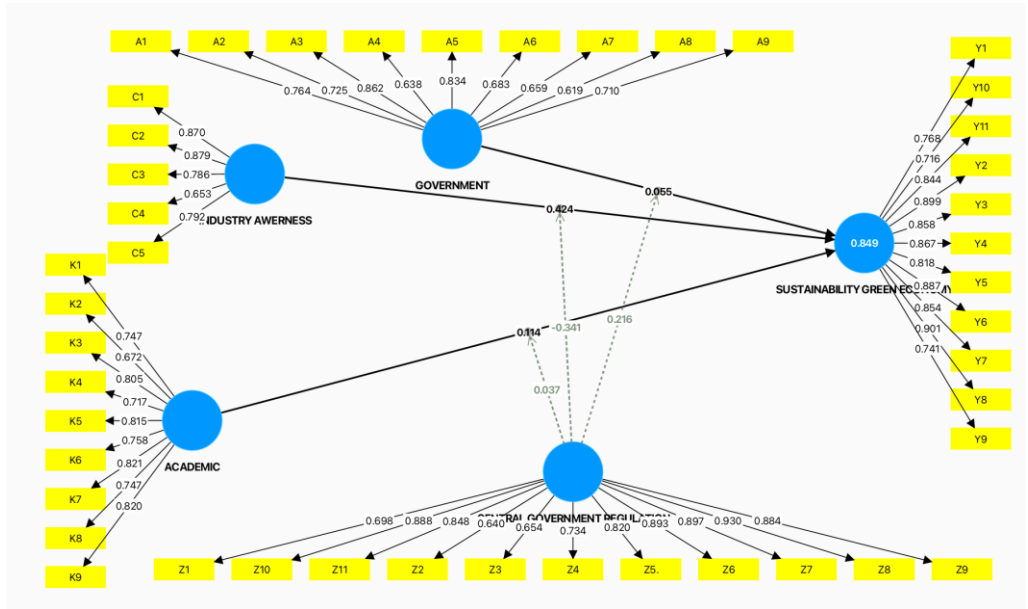


Fig. 1. Validity Test by Outer Loading.

4.2 Reliability Testing

Construct reliability in PLS can be assessed using two approaches: Cronbach's Alpha and Composite Reliability. A latent variable is considered to have high reliability if both Cronbach's Alpha and Composite Reliability values exceed 0.70.

Table 1. Constuct Reliability and Validity

	Government	Industry Awerness	Academic	Central Government	Sustainability Green Economy
Cronbach's Alpha	0,952	0,875	0,877	0,902	0,877
ρ_A	0,962	0,886	1,004	0,932	1,008
Composite Reliability	0,977	0,900	0,902	0,923	0,920

Source: PLS processed (2024)

Based on the data processing results, the Cronbach's Alpha and Composite Reliability values for each variable exceed 0.7, indicating that all latent variables meet the reliability criteria.

4.3 Moderation Testing

The moderation test was carried out to test whether central government regulation is significant in moderating academic, government and industry awerness towards sustainable green economy.

Table 2. Construct Reliability and Validity

	Standard Deviation (STDEV)	T Statistics	P Values	Conclusion
Central Government Regulation*Academic-> Sustainability Green Economy	0,074	0,498	0,309	Rejected
Central Government Regulation*Government-> Sustainability Green Economy	0,085	4,064	0,020	Accepted
Central Government Regulation*Industry Awerness-> Sustainability Green Economy	0,162	2.101	0,018	Accepted

The findings of this study indicate that central government regulation is variable, which moderates the type of government and Industry awareness to the sustainability green economy. Central government regulation is variable which does not moderate industry awerness towards sustainabi,lity green economy.

4.4 Hypothesis Testing

Hypothesis testing was conducted by examining the t-statistic values obtained through the bootstrapping procedure. A hypothesis is considered accepted (supported) if the t-statistic exceeds 1.96 at a 5% significance level one-tailed [12].

Table 3 t-Statistics Values

	Standard Deviation (STDEV)	T Statistics	P Values	Conclusion
Academic-> Sustainability Green Economy	0,090	1,216	0,104	Rejected
Central Government Regulation-> Sustainability Green Economy	0,083	4,064	0,000	Accepted
Government -> Sustainability Green Economy	0,087	2,026	0,046	Accepted
Industry Awerness -> Sustainability Green Economy	0,106	4.002	0,000	Accepted

Source: PLS processed (2024)

Based on the table above, Central Government Regulation and Government and Industry Awareness have a significant influence on the Sustainability of the Green Economy. In contrast, the Academic variable does not have a significant effect on the Sustainability of the Green Economy.

5 Results Of Analysis

5.1 Academic Affect Sustainability Green Economy

The results of the study show that academic has no effect on the sustainability of the green economy. Although the issue of climate change and sustainability[13] is increasingly urgent, many study programs, especially at the undergraduate (S1) level, have not systematically integrated materials on sustainability or green economy into the curriculum. This results in a low student understanding of the principles of sustainable development. Lack of readiness of graduates to face the challenges of energy transition and green economy. In areas such as Batam, many students undergo college while working in the industrial sector. However, there is no academic support system (such as structured internship programs or industry issue-based final projects) that links their work experience to sustainability learning. This is a great opportunity that has not been taken advantage of. Universities as scientific institutions should be strategic partners for the business world in realizing green transformation. However, the reality is that collaboration between universities and companies in environmentally friendly projects is still very limited. There is no strong incentive for lecturers and students to conduct applied research in the field of green innovation.

5.2 Central Government Regulation Affects Sustainability Green Economy

The results of the study show that central government regulations have an effect on sustainability and the green economy because these regulations have structural, legal, and operational forces that are able to encourage changes in behavior[14] and practices in various sectors, including industry, accounting, and education. The central government has strong legal authority to set standards and obligations, such as carbon emission reporting, waste management, environmental tax incentives and disincentives. Accountants and regulators, as technical implementers, immediately feel the impact because they are obliged to adjust the company's financial and operational statements according to these regulations. A real example: Carbon tax policies or ESG reporting obligations set by the Ministry of Finance and the OJK.

In industrial areas such as the Riau Islands (Batam, Bintan, Karimun), many foreign and local companies operate, and central regulations determine the environmental standards they must comply with. This regulation is the basis for operational decision-making, for example in investment in environmentally friendly technology or ISO 14001 certification.

5.3 Government Affect Sustainability Green Economy

The results of this study show that government has a significant effect on the sustainability of the green economy. This is due to the fact that The government has the authority to make and enforce regulations that regulate industrial practices. In the Riau Islands, which are industrial and free trade areas (FTZ), the government can require the use of renewable energy, impose emission and waste standards and provide incentives for companies that practice green economy principles. The government can provide fiscal support, such as tax deductions for companies that apply environmentally friendly technology, subsidies for investments in energy-saving equipment or waste recycling, and green financing through state-owned enterprises or regional banks. This makes companies more economically motivated to apply green economy principles.

In the Riau Islands, as a strategic and cross-border industrial area, the government is a key actor in creating an ecosystem that supports a sustainable green economy, through regulations, incentives, supervision, and infrastructure[15].

5.4 Industry Awareness Affect Sustainability Green Economy

This study results reveal that government plays a significant role in sustainability of the green economy. This is because governments can set environmental policies such as carbon taxes, incentives for renewable energy, and emission regulations that encourage companies and communities to switch to environmentally friendly practices. The government can allocate a budget to build infrastructure that supports the green economy such as environmentally friendly public transportation and renewable energy[4]. The government has the power to encourage collaboration between the public and private sectors and support research and innovation in environmentally friendly technologies. Through education programs and public campaigns, the government can increase public awareness of the importance of sustainable development.

6 Research Implications

1. **The Key Role of Government in Green Economy Sustainability**
These findings confirm that regulation from the central government and government support in general have an important role to play in driving the transition to a green economy. This shows that public policies, fiscal incentives, and environmental regulatory enforcement are strategic factors that must be continuously strengthened to create sustainable development.
2. **Industry Awareness as a Driving Factor**
The significant influence of Industry Awareness indicates that the industrial sector is beginning to show concern for environmentally friendly practices. This is an opportunity to expand green economy initiatives through public-private partnerships, the application of clean technologies, and the development of industry standards that support sustainability.
3. **The Need to Strengthen the Role of Academics**
The insignificant influence of the academic sector shows that there is a gap between the world of education and the implementation of green economy policies. This implies the need for increased collaboration between academia, government, and industry. Curriculum adjustments to be more responsive to sustainability issues and increase the contribution of applied research that can be used in policy formulation.
4. **Evidence-Based Policies**
The government needs to use the results of this research as a basis for designing more targeted policies, especially in optimizing the role of actors who have been proven to have a great influence on the sustainability of the green economy.

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