Analysis of Factors Influencing Green Innovation at PT Cahari Wasista Insani DKI Jakarta

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Abstract: The article analysis of factors affecting green innovation at PT Cahari Wasista Insani DKI Jakarta is a literature review scientific article within the scope of management science and human resources. The purpose of this writing is to build a hypothesis of influence between variables which can later be used for further research within the scope of human resource management science. The research method used is descriptive qualitative. Data was obtained from previous studies relevant to this research and sourced from academic online media such as *publish or perish, google scholar*, garba digital reference and jurnal sinta. The results of this article are: 1) Use of environmentally friendly raw materials plays a role in green innovation; dan 2) Regulatory compliance plays a role in green innovation.

Keywords: Green Innovation, Use of Environmentally Friendly Raw Materials, Regulatory Compliance

INTRODUCTION

As a DKI Jakarta-based company, PT Cahari Wasista Insani is under pressure to implement green innovation, often known as environmentally friendly business practices. The term "green innovation" describes the creation and use of goods, services, or procedures that minimize adverse effects on the environment. Examples of such impacts include decreased waste, more effective energy use, or the use of ecologically friendly materials. For PT Cahari Wasista Insani, knowing the elements that affect their capacity to use green innovation is essential to the long-term prosperity of their business.

The intricacy of PT Cahari Wasista Insani's environmental and economic problems, as well as the chance to apply green innovation as a strategy for differentiation and competitive advantage, make this research significant. Climate change, limited availability of natural resources, and the demands of increasingly environmentally conscious consumers are all driving companies to look for new ways to operate more sustainably. However, implementing green innovation is not an easy task, and many internal and external factors can influence an organization's ability to do this.

The implementation of green innovation by PT Cahari Wasista Insani may be impeded

by internal reasons such as inadequate financial or technical resources, insufficient awareness and commitment from management and staff, or internal policies that are in opposition to sustainability initiatives. However, there are also outside variables that can also have a significant impact on how much a business can use green innovation, including market dynamics, stakeholder pressure, and government laws.

This study aims to provide PT Cahari Wasista Insani with significant insights into developing a successful sustainability strategy by identifying and assessing the elements that affect the company's ability to implement green innovation. PT Cahari Wasista Insani will be able to fulfill the increasing needs of the market, minimize their environmental effect, optimize their business processes, and guarantee the long-term viability of their operations in this way. Additionally, it is anticipated that this study will add to the body of knowledge on green innovation in academia and the variables affecting its application in Indonesian business settings, particularly in the corporate sector at DKI Jakarta's PT Cahari Wasista Insani.

Based on the background of the problem above, the problem formulation is obtained as follows: 1) Does the use of environmentally friendly raw materials play a role in green innovation at PT Cahari Wasista Insani DKI Jakarta? and 2) Does regulatory compliance play a role in green innovation at PT Cahari Wasista Insani DKI Jakarta?.

METHOD

Systematic Literature Review (SLR) and Library Research procedures are used to write Literature Review articles. These approaches are qualitatively assessed and can be found in online academic applications such as Mendeley and Google Scholar. The process of finding, evaluating, and analyzing all available research data with the aim of answering a specific research question is known as systematic literature review, or SLR. Literature review should be used consistently with methodological assumptions in qualitative analysis. Conducting a qualitative analysis is primarily justified by the exploratory nature of the research (Ali, H., & Limakrisna, 2013).

RESULTS AND DISCUSSION

Results

Based on the background, problem formulation and method, the results of this article are as follows:

Green Innovation

Green innovation is the process of creating and putting into practice innovative ideas, whether they take the shape of goods, services, or corporate procedures, with the goal of lessening adverse environmental effects and improving resource efficiency. In order to create a fully sustainable solution, the concept of green innovation considers not only economic concerns but also environmental and social aspects. It entails a comprehensive approach to business procedures, production methods, and product design that considers the full life cycle, from raw material consumption to disposal at the end. Using renewable or recycled raw materials, applying ecologically friendly technology, and managing waste and emissions responsibly are all common components of green innovation (Mariyamah & Handayani, 2020).

Indicators contained in green innovation include: 1) Reduction of Greenhouse Gas Emissions: This indicator counts the quantity of greenhouse gases released during business operations. Reducing greenhouse gas emissions can be a key sign of a business's dedication to environmentally sustainable practices and green innovation; 2) Energy Efficiency: This metric shows how much energy a business uses to generate a given amount of goods or services. One way to measure the amount of green innovation in a company's operations is to look at efforts to enhance energy efficiency, such as installing energy-saving equipment or improving energy management procedures; and 3) Consumer Response: The preferences and responses of

consumers for environmentally friendly goods and services are included in this indicator. An essential indicator of the effectiveness of PT Cahari Wasista Insani's green innovation projects is the degree of market demand or adoption for their new green products (Falih, 2023).

Green innovation has been studied by several researchers, including: (Mariyamah & Handayani, 2020), (Falih, 2023), (Maulita, 2022).

Use of Environmentally Friendly Raw Materials

The technique of choosing, utilizing, and processing raw materials or resources that have a positive influence on the environment is known as the utilization of environmentally friendly raw materials. This idea motivates efforts to substitute raw materials that are more ecologically friendly and sustainable with those that come from less environmentally harmful sources, such as the burning of fossil fuels or the usage of hazardous chemicals. Natural fibers that break down quickly or wood from forests that are maintained sustainably are examples of renewable natural resources that can provide environmentally beneficial raw materials. This idea also includes the utilization of recycled or recycled raw resources, where waste from the production or consumption process is reprocessed into new raw materials, reducing the need for new natural resources and reducing the amount of waste entering the environment (Widodo & Qurniawati, 2016).

Indicators contained in use of environmentally friendly raw materials include: 1) Source of Raw Materials: The origin of the raw materials utilized in the production process is covered by this indication. Compared to raw materials derived from finite or non-renewable natural resources, those derived from recycled or renewable natural resources are thought to be more environmentally benign; 2) Utilization of Recycled Raw Materials: This metric evaluates the proportion of raw materials derived from recycled waste or recycled materials that are utilized in the production process repeat once more. The production method is more environmentally friendly the larger the amount of recycled raw materials employed; and 3) Carbon Footprint: This indicator calculates the quantity of greenhouse gases released during the extraction, processing, and distribution phases of the life cycle of raw materials. A lower carbon footprint suggests using raw resources that are better for the environment (Hanifah et al., 2019).

Use of environmentally friendly raw materials has been studied by several researchers, including: (Aziz et al., 2020), (Kamilia & Nawangsari, 2023), (Widodo & Qurniawati, 2016), (Hanifah et al., 2019), (Ramadhan et al., 2021).

Regulatory Compliance

Regulatory compliance describes how well a business, organization, or individual complies with the rules, laws, and guidelines established by the government or other regulatory bodies. This idea entails comprehending, putting into practice, and applying different legal and normative requirements that are relevant to different facets of life or economic activities. Numerous domains are covered by regulatory compliance, such as the financial sector, human rights, taxes, workplace health and safety, and ecology. This entails making certain that all actions and procedures taken by businesses or people adhere to the guidelines established by relevant laws and regulations. Regulatory compliance, which includes risk assessment, internal policy drafting, monitoring, reporting, and remedial action against infractions or non-conformities, is frequently a crucial component of strong corporate governance in the business world. In addition, regulatory compliance also plays an important role in ensuring transparency, accountability and trust from various stakeholders, including the government, investors, customers and the general public.

Indicators contained in regulatory compliance include: 1) Compliance Reporting: This indicator assesses the caliber and promptness of information submitted to regulatory bodies. Reports on finances, the environment, taxes, and occupational accidents and injuries fall under

this category; 2) Reaction to Regulatory Changes: This metric evaluates an organization's or business's capacity to react swiftly and successfully to modifications in relevant legislation. This entails keeping an eye on modifications to regulations, conducting effect analyses, and modifying policies and procedures to conform to new clauses; and 3) Sanctions and infractions: This indicator shows the quantity and kinds of regulatory infractions that businesses or organizations have made, along with the sanctions or remedial measures that have been implemented as a result of these violations.

Regulatory compliance has been studied by several researchers, including: (Maulita, 2022), (Priantoko et al., 2021), (Hari & Sari, 2020).

Relevant Previous Research Results

Reviewing related publications as a basis for formulating research hypotheses by describing previous research findings, highlighting similarities and differences with research proposals, as illustrated in table 1 below:

Table 1. Relevant Previous Research Results

No	Author (Year)	Research Results	Simmilarities with this article	Differences with this article	Basic Hypothesis
1	(Hanifah et al., 2019)	Green products and prices affect Tupperware product purchase decisions	The effect of using environmentally friendly raw materials or green innovation	The effect of price on purchasing decisions	H1
2	(Ramadhan et al., 2021)	The use of environmentally friendly materials in the dewadaru airport terminal building	The effect of using environmentally friendly raw materials	The locus of research was conducted at the Dewadaru Airport Terminal	H1
3	(Mariyamah & Handayani, 2020)	Green innovation affects the Company's performance. Environmental management accounting cannot moderate the relationship between green innovation and green process innovation on economic performance	The effect of regulatory policies on green innovation	The effect of regulatory policies on environmental management accounting	H2
4	(Maulita, 2022)	Regulatory pressure of international maritime organization rules affects positively and significantly on the shipping industry to innovate green technology on ships and innovation, and green technology affects positively and significantly on economic performance	The effect of regulatory compliance on green innovation	The effect of green technology on economic performance	H2

Discussion

Based on the formulation of the problem and relevant previous research, the discussion in this article is:

1. The Role of Using Environmentally Friendly Raw Materials in Green Innovation

First, one major way to lessen the industrial process's negative environmental effects is to choose ecologically friendly sources for raw materials. Selecting raw materials made from recycled or renewable resources helps preserve the environment and our finite supply of natural

resources. Using sustainable raw materials also offers chances to lower greenhouse gas emissions and the carbon footprint left behind by a product's life cycle.

Second, a key tactic in green innovation is the utilization of recycled raw resources. Organizations can decrease their reliance on new raw materials, the amount of waste that ends up in landfills, and the amount of energy and natural resources needed for new manufacturing by recycling the raw materials from waste or used items. Additionally, it lessens carbon emissions by Sanctions and infractions: This indicator shows the quantity and kinds of regulatory infractions that businesses or organizations have made, along with the sanctions or remedial measures that have been implemented as a result of these violations.

Third, one of the main components of green innovation is carbon footprint management. The quantity of greenhouse gas emissions generated by a product during its entire life cycle—including during manufacture, shipping, usage, and disposal—is represented by its carbon footprint. Businesses can drastically lower the carbon footprint of their products by using recycled raw materials and using ecologically friendly raw materials. Environmental sustainability is enhanced and the effects of climate change are lessened as a result.

Green innovation processes, which are fueled by the use of ecologically friendly raw materials, ultimately lead to lower greenhouse gas emissions, energy efficiency, and consumer response. Reducing their carbon footprint and using more sustainable raw materials allows businesses to produce more ecologically friendly goods, use less energy during the course of their products' lives, and satisfy the needs of an ever-growing consumer base environmentally conscious consumers. In general, using ecologically friendly raw materials plays a critical role in promoting green innovation by lessening the negative effects of production processes on the environment, cutting greenhouse gas emissions, improving energy efficiency, and meeting consumer demand for more sustainably produced goods.

The use of environmentally friendly raw materials plays a role in green innovation, this is in line with research conducted by: (Nuva et al., 2019), (Hanifah et al., 2019), (Ramadhan et al., 2021).

2. The Role of Regulatory Compliance in Green Innovation

In the context of green innovation, regulatory compliance plays a critical role since it establishes the framework required to guarantee that production activities and business practices stay within the legal and normative bounds established to preserve sustainability and protect the environment. Compliance reporting serves as a crucial foundation for tracking and assessing the benefits that come from achieving Green Innovation goals, such as lowering greenhouse gas emissions and raising energy efficiency. A Green Innovation strategy must also include a quick and efficient response to evolving environmental legislation, allowing firms to modify their procedures and guidelines in response to new legal requirements. Moreover, regulatory compliance also helps to avoid infractions that could lead to fines and other unfavorable effects, therefore encouraging organizations to actively comply with applicable rules and standards.

Compliance with environmental regulations offers a strong foundation for fostering consumer trust and a positive image in the context of lowering greenhouse gas emissions, energy efficiency, and consumer response to goods and services. It also encourages the adoption of sustainable, creative solutions. As a result, adhering to regulations is not only required by law and morality, but it is also essential for developing a business climate that is resilient to changing environmental conditions and can adapt to new difficulties.

The regulatory compliance plays a role in green innovation, this is in line with research conducted by: (Maulita, 2022), (Priantoko et al., 2021), (Hari & Sari, 2020), (Susanto et al., 2023).

Conceptual Framework

Based on the problem formulation, relevant previous research and the results and discussion of the research above, including:

Figure 1. Conceptual Framework

Based on Figure 1 above, the use of environmentally friendly raw materials and regulatory compliance play a role in green innovation. Apart from the two independent variables above which play a role in the dependent variable (green innovation), there are other variables which play a role in green innovation, including:
1) Green Technology: (Ali et al., 2023), (Maulita, 2022), (Falih, 2023).
2) Management Commitment: (Riyanto et al., 2017), (Kristanto, 2015), (Wydyanto & Yandi, 2020), (Havidz & Gupron, 2019).
3) Collaboration and Partnership: (Hutomo et al., 2020), (Harahap & Ali, 2020), (Dante Manuel et al., 2023).

CONCLUSIONS

Based on the background of the problem, problem formulation, previous research, results and discussion above, the following research conclusions are obtained:
1. Use of environmentally friendly raw materials plays a role in green innovation.
2. Regulatory compliance plays a role in green innovation.

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