

## THE ROLE OF ENVIRONMENTAL MANAGEMENT ACCOUNTING, TECHNOLOGY, AND OPERATIONS STRATEGY IN DRIVING CORPORATE INNOVATION

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### Abstract

The increase in industrial activity in various regions has brought changes both internally and externally. The fact of environmental pollution caused by manufacturing companies in Indonesia underscores the need for a business environment that is able to maintain its business processes and simultaneously implement strategies to maintain going concern and sustainable development. This research aims to develop a model or framework that integrates environmental management accounting, technology, and operating strategies as a way to optimize innovation within the company. The sampling technique used is purposive sampling. The sample size was 229 employees of frozen food companies in Balaraja District, Tangerang Regency. The analysis method used is multiple linear regression analysis using SPSS 25. Based on the results of the study, it shows that environmental management accounting has a significant positive effect on company innovation. Technology has a significant positive effect on company innovation. Operating strategy has a significant positive effect on the company's innovation.

Keywords: Environmental Management Accounting, Technology, Corporate Operations Strategy and Innovation.

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### 1. Introduction

Such rapid economic development has significant environmental implications, such as issues of global warming, eco-efficiency, and direct impacts on the environment from industrial activities. The increase in industrial activity in various regions has brought changes both internally and externally. The fact of environmental pollution caused by manufacturing companies in Indonesia underscores the need for a business environment that is able to maintain its business processes and simultaneously implement strategies to maintain going concern and sustainable development.

Although it contributes positively to the national economy, the business world also brings negative impacts, such as environmental damage due to waste and overexploitation of natural resources. In Tangerang Regency, especially in Balaraja sub-district, there are many environmental problems related to industrial activities. Examples are cases of environmental pollution that cause a decrease in water quality around the industry, as well as air pollution due to large vehicles used by frozen food factories.

Frozen food companies use storage technology that requires the use of large amounts of freon for cooling systems. Freon has the potential to damage the ozone layer and can pollute the environment if it leaks or is not disposed of properly. The use of water in the

company's operations also reaches a significant amount, both for washing raw materials, cleaning equipment, and liquid waste. However, excessive water intake can threaten the quality and quantity of water around the company. The use of gas heating technology in the frozen food production process can also produce greenhouse gas emissions, such as carbon dioxide and methane, which have a negative impact on the environment.

In addition, product packaging still often uses plastic, creating significant plastic waste. Organic and non-organic waste is also a problem that needs to be managed properly to prevent damaging water and soil pollution. Transportation of products from these companies requires large and heavy vehicles, which can cause air pollution and increase traffic, as well as harmful exhaust emissions in the face of the fact of environmental pollution caused by frozen food companies, a business approach is needed that is able to maintain business continuity while still paying attention to environmental impacts. Environmental management accounting is an important tool in measuring a company's environmental performance. By providing information on the environmental impact of business activities, environmental management accounting helps companies understand and manage the environmental impact of their operations.

In addition, environmental management accounting can also stimulate innovation in companies. This can help devise appropriate strategies to reduce environmental impact, cut costs, and improve overall efficiency. Management experts often underscore the importance of innovation in improving a company's competitiveness, with innovations that can change the way it operates, reduce environmental impact, and improve efficiency.

In addition to environmental management accounting as a company effort in facing competition. Strategy is also very important for the company. One type of strategy carried out by the company is an operating strategy. Where, the operation strategy is one way that can be developed by the company by utilizing factory operations to compete in the global market. Operations strategy can also show how operations activities can be directed to achieve the overall goals of the organization. With information related to relevant environmental impacts, it is expected to encourage a business to innovate, because by innovating, the company will get various benefits not only focusing on the market (externally), but also profits within the company itself (internal).

Innovation is key for companies to compete and survive in the modern economy. Although implementation requires large investments, good management needs to regulate these aspects, from costs to impacts on the environment and surrounding communities. With this approach, companies can achieve long-term success in line with the principles of sustainable development. Given that this innovation requires considerable costs, it is necessary to have a management that can regulate it from cost management to the impact on the surrounding environment.

Research Objectives Research in this study develops a model or framework that integrates environmental management accounting, technology, and operating strategies as a way to optimize innovation within the company.

## **2. Theoretical Background**

### **2.1 Corporate Innovation**

Innovation according to Dewi (2020). is a driver of a new product, process or system that brings economic success to the company and social success to consumers and or users as well as communication and the wider environment. Basically, innovation is changing an ordinary situation for the better and varies based on the times. The innovation needed today may focus on the process and costs involved in producing these goods.

While innovation is "a system of organizational activities that transform technology from idea to commercialization". Innovation refers to the renewal of a new product, process and service (Ellita, 2018 ).

Meanwhile, according to Drucker, (2019). said that innovation is a necessity and must be disciplined. The concept of innovation has a long history and different understandings mainly based on competition between companies and different strategies implemented by the companies themselves. Basically, innovation is changing a situation for the better and varies according to the times. The innovation needed today may focus on the process and costs involved in producing these goods.

Based on some of the definitions above, there is a similarity, namely that innovation is one of the guarantees for companies or organizations in increasing their competitiveness. The company innovates to create a relationship between use value and higher prices (monetary value) of the products it produces for targeted consumers and / or users which in the end the product will not only benefit consumers and / or users but also for producers.

There are two types of fundamental corporate innovations, namely: (Putri, (2018), namely:

- a) Product innovation is the result of the development of new products by a company or industry, both existing and not. From old products that have reached saturation point in the market, an innovation is needed to replace the old product. This replacement can be in the form of a totally new replacement product or with the development of old products that are more modern and up to date so that it can continue to increase consumer desires in product purchase decisions.
- b) Process innovation is the act of introducing new production processes or new daily activities. Process innovation describes a change in the way of production or final services of an enterprise.

The measurement indicators for company innovation variables according to Dewi, (2020). are as follows:

- a) Design changes are modifications made to a product. Design change occurs at every stage in process innovation and product innovation
- b) Technical innovation is the modification of an existing process or the creation of a new one through a set of procedures from a widely developed field of knowledge or activity.
- c) Product development is a process and strategy that needs to be done by a company in developing product innovation, namely improving old products or adding to the usefulness of these products to the target market.

## 2.2 Environmental Management Accounting

Environmental Management Accounting is one of the sub-systems of environmental accounting which explains that a number of issues regarding the issue of quantifying the company's business impacts into a number of monetary units (Ikhsan, 2019).

Environmental management accounting as: Development of environmental management and overall economic performance as well as implementation of appropriate environment-to-practice accounting system relationships. While this includes reporting and auditing within some companies, environmental management accounting particularly involves cost life cycle, full cost accounting, profit assessment and strategy trust for environmental management (Putri, (2021).

Environmental management accounting can also be used as a measuring tool in environmental performance (Sulastrri, (2017). This is because for many organizations,

environmental cost management is a top priority, but the main reason is twofold. First, environmental regulations in countries are improving significantly, even more stringently, and the costs of complying can be a major goal. To meet this goal, costs for fulfillment must be measured and the underlying cause must be identified. Second, the success of solving environmental problems becomes a comparative issue. Business companies come to the conclusion that business goals and solving environmental problems are inseparable from each other.

Environmental Management Accounting indicators include (Ikhsan, (2019):

- a) Prevention costs are investments made in an effort to guarantee the confirmation required. Examples of preventive activities are evaluation of supplier selection, evaluation and selection of tools to control pollution, design of processes and products to reduce or eliminate waste, training employees, studying environmental impacts
- b) Environmental detection costs are the costs of activities carried out to determine whether products, processes and activities carried out in the company have met applicable environmental standards or not.
- c) Environmental internal failure costs are costs for activities carried out due to the production of waste and garbage, but not disposed of into the outside environment.
- d) Raw materials are staples or main materials that are processed in the production process into finished products.
- e) Waste is waste generated from a company's production process.

### 2.3 Technology

Technology can be understood as an effort to obtain a "product or service" carried out by humans by utilizing tools, processes and resources Haris (2021).

According to Hurley and Hutt, (2018). Product innovation is one of the impacts of rapid technological change and high product variation where the innovation will determine organizational performance.

Meanwhile, according to Gatignon and Xuereb, (2017). Measuring the good and bad of technology using 6 indicator items including:

- a) The degree of technological novelty refers to technological advances that occur over time.
- b) Ease of technology is the benefit obtained from the use of technology that can facilitate humans in carrying out activities and increase their efficiency and effectiveness.
- c) Technology security is essential to protect critical data and information from security threats, such as cyberattacks and identity theft.
- d) Technology reliability refers to the ability of a technology system to function consistently and without interruption over a specified period of time.
- e) Technology consistency is the ability of technology to function consistently and reliably over a long period of time.

### 2.4 Operations Strategy

Strategy is essentially planning and management to achieve a goal. However, to achieve these goals, the strategy does not function as a road map that only shows directions, but must be able to show how operational tactics are (Effendy, (2017).

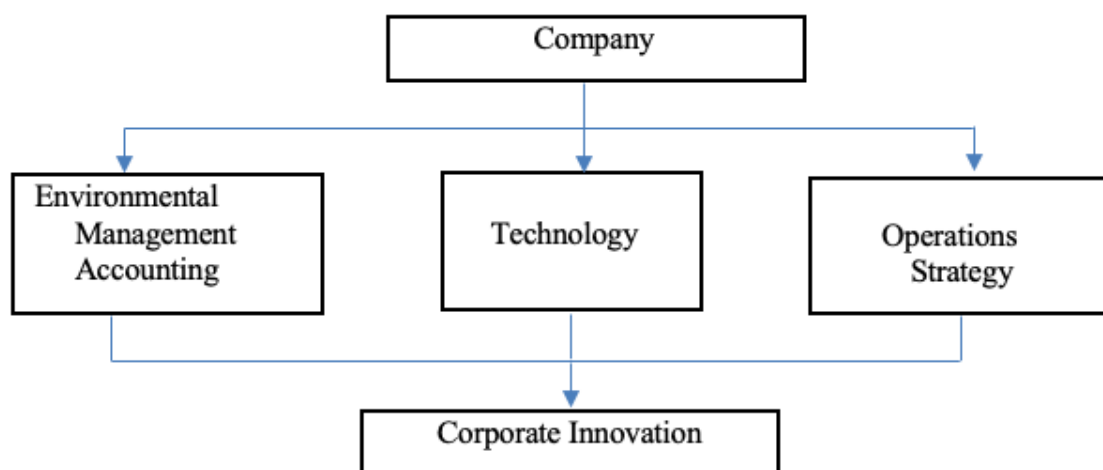
Meanwhile, according to Ja'far, (2019). Strategy is a tool to achieve goals. The main goal is for the company to be able to see objectively the internal and external conditions, so that the company can anticipate changes in the external environment. So, strategy deals with the plan that determines the direction of an organization to achieve its goals.

Operating strategy is an activity that converts raw materials and into other goods that have higher added value and competitiveness for the company's success in the long run. Operations strategy shows how operating activities can be directed to achieve the overall goals of the organization (Sulastri, (2017).

The indicators in the operating strategy in this study according to Ria and Deviarti, (2012. These include:

- a) Cost is a measurement (monetary), the amount of resources used for some purpose in management accounting.
- b) Quality is a dimension of operating competitiveness used in this study product durability.
- c) The stability of products and services can be defined as the ability of a formulation in a particular container/closure system to remain in the desired condition for a specified period of time
- d) A market opportunity is an opportunity or condition created in a market that allows a company to take profitable business actions or strategies
- e) Market development refers to changes or evolutions that occur in the market, such as changes in consumer trends and interests, the emergence of new products, and changes in market competition.
- f)

Based on the introduction and literature review, the research model can be drawn as follows:



**Figure 1.** Research Model

### 3. Methods

This study used a causal relationship research design. Causal research is research to determine the influence between one variable and another variable. This study aims to determine the influence of Environmental Management Accounting, Technology, and Operating Strategy on Company Innovation.

In this study the independent variables are Environmental Management Accounting, Technology, and Operation Strategy. While the dependent variable is Company Innovation. The type of data used in this study is primary data. Data is obtained directly from the original source and data collected specifically to answer research questions that are in accordance with the wishes of researchers through questionnaires to resource persons or respondents.

The population used as a sample in this study is the finance and production department of a frozen food company located in Balaraja District, Tangerang Regency as many as 534 employees. The sample in this study was drawn using the slovin formula resulting in a sample used by 229 employees.

While the research sample used the Purposive Sampling method. The data collection method in this study was carried out by field research (Field Research), namely by meeting directly the object of research and distributing questionnaires to respondents. The type of data used in this study is the type of primary data. Primary data are data obtained directly from the original source and data collected specifically to answer research questions that are in accordance with the wishes of researchers through questionnaires to resource persons or respondents, employees of the finance department and production department of frozen food companies in Balaraja District, Tangerang Regency.

#### 4. Results and Discussion

##### 4.1 Descriptive Statistical Test

**Table 1.** Descriptive Statistical Test Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Financial Management Accounting	229	17.00	44.00	30.0349	4.54593
Technology	229	18.00	43.00	30.4585	4.67583
Operations Strategy	229	17.00	41.00	29.6943	4.59338
Corporate Innovation	229	23.00	50.00	36.3188	4.99725
Valid N (listwise)	229				

Source: Data processed

From the table above, it shows that the number of data samples (N) used and analyzed in this study are employees of the finance department and production department of frozen food companies in Balaraja District, Tangerang Regency as many as 229 employees.

Based on the processing of descriptive analysis data above, it can be described:

- a) Environmental Management Accounting (X1) is known that the minimum value for environmental management accounting variables is 17.00. The maximum value obtained based on the table above is 44.00. While the mean value obtained is 30.034 and the std value. The deviation obtained by 4,545 means that many respondents answered in the affirmative to the questions asked to examine environmental management accounting variables.
- b) Technology (X2) is known that the minimum value for the technology variable is 18.00. The maximum value obtained based on the table above is 43.00. While the mean value obtained is 30.458 and the std value. The deviation obtained by 4,675 means that many respondents answered in the affirmative to the questions asked to examine technological variables.
- c) Operation Strategy (X3) It is known that the minimum value for the operating strategy variable is 17.00. The maximum value obtained based on the table above is 41.00. While the mean value obtained is 29.694 and the std value. The deviation obtained by

4.593 means that many respondents answered in the affirmative to the questions asked to examine operating strategy variables.

- d) Company Innovation (Y) is known that the minimum value for the company's innovation variable is 23.00. The maximum value obtained based on the table above is 50.00. While the mean value obtained is 36.318 and the std value. The deviation obtained by 4,997 means that many respondents answered in the affirmative to the question asked to examine the company's innovation variables.

## 4.2 Data Quality Test Results

### 4.2.1 Validity Test

Based on the data processing in SPSS 25 software, the results of the validity test in this study were obtained as follows:

**Table 2.** Environmental Management Accounting Validity Test Results

Item	Corrected Item Total Correlation	R Table	Information
X1.1	0,358	0,129	Valid
X1.2	0,264	0,129	Valid
X1.3	0,310	0,129	Valid
X1.4	0,379	0,129	Valid
X1.5	0,210	0,129	Valid
X1.6	0,354	0,129	Valid
X1.7	0,335	0,129	Valid
X1.8	0,348	0,129	Valid
X1.9	0,313	0,129	Valid
X1.10	0,313	0,129	Valid

Source: Data processed

**Table 3.** Technology Validity Test Results

Item	Corrected Item Total Correlation	R Table	Information
X2.1	0,324	0,129	Valid
X2.2	0,417	0,129	Valid
X2.3	0,292	0,129	Valid
X2.4	0,338	0,129	Valid
X2.5	0,383	0,129	Valid
X2.6	0,371	0,129	Valid
X2.7	0,245	0,129	Valid
X2.8	0,336	0,129	Valid
X2.9	0,369	0,129	Valid
X2.10	0,249	0,129	Valid

Source: Data processed

**Table 3.** Operation Strategy Validity Test Results

Item	Corrected Item Total Correlation	R Table	Information
X3.1	0,310	0,129	Valid
X3.2	0,388	0,129	Valid
X3.3	0,190	0,129	Valid
X3.4	0,327	0,129	Valid
X3.5	0,362	0,129	Valid
X3.6	0,360	0,129	Valid
X3.7	0,314	0,129	Valid
X3.8	0,276	0,129	Valid
X3.9	0,441	0,129	Valid
X3.10	0,296	0,129	Valid

Source: Data processed

**Table 4.** Company Innovation Validity Test Results

Item	Corrected Item Total Correlation	R Table	Information
Y.1	0,174	0,129	Valid
Y.2	0,287	0,129	Valid
Y.3	0,265	0,129	Valid
Y.4	0,259	0,129	Valid
Y.5	0,233	0,129	Valid
Y.6	0,370	0,129	Valid
Y.7	0,342	0,129	Valid
Y.8	0,331	0,129	Valid
Y.9	0,367	0,129	Valid
Y.10	0,206	0,129	Valid
Y.11	0,255	0,129	Valid
Y.12	0,403	0,129	Valid

Source: Data processed

Based on the results of the validity test above, it is known that the total correlation value in the company's Environmental Management Accounting, Technology, Operation Strategy, and Innovation variables is above the value of R Table = 0.129, so it can be said that all statements on the four variables are declared valid.

#### 4.2.2 Reliability Test

Based on data processing in SPSS 25 software, reliability test results were obtained in this study as follows:

**Table 5.** Reliability Test Results

Variabel	Cronbach's Alpha	Information
Akuntansi Manajemen Lingkungan (X1)	0,560	Reliability
Teknologi (X2)	0,577	Reliability
Strategi Operasi (X3)	0,568	Reliability
Inovasi Perusahaan (Y)	0,548	Reliability

Source: Data processed

Based on the identification on the Cronbach Alpha item, it is known that the value obtained for Environmental Management Accounting (X1) is 0.560. For Technology (X2)



the value obtained is 0.577. For Operation Strategy (X3) the value obtained is 0.568. for Corporate Innovation (Y) the value obtained is 0.548. The values obtained from each of the above variables can be classified as medium reliability.

### 4.3 Classical Assumption Test Results

#### 4.3.1 Normality Test

In this study, the normality test used non-parametric statistical analysis, namely by looking at one sample Kolmogorov-Smirnov (K-S) to determine whether the variables in the research data showed normal or not. Here are the results of the Normality test in this study:

**Table 6.** Hasil Uji One Sample Kolmogorov-Smirnov Test (K-S)

One-Sample Kolmogorov-Smirnov Test					
		Management Accounting milieu	Technology	Operations Strategy	Company Innovation
N		229	229	229	229
Normal Parameters <sup>a,b</sup>	Mean	30,0349	30,4585	29,6943	83,0218
	Std. Deviation	4,54593	4,67583	4,59338	7,82733
	Most Extreme Differences	Absolute	0,053	0,064	0,075
	Positive	0,053	0,050	0,075	0,051
	Negative	-0,052	-0,064	-0,058	-0,057
Test Statistic		0,053	0,064	0,075	0,057
Asymp. Sig. (2-tailed)		0.43c	0.25c	0.43c	0.64c
a. Test distribution is Normal.					
b. Calculated from data.					
c. Lilliefors Significance Correction.					
d. This is a lower bound of the true significance.					

Source: Data processed

From the results of the normality test above, it shows the value of Asym. Sig. (2-tailed) for environmental management accounting variables has a value of 0.43, the value of Asym. Sig. (2-tailed) for the technology variable has a value of 0.25, the value of Asym. Sig. (2-tailed) for the operating strategy variable has a value of 0.43, the value of Asym. Sig. (2-tailed) for the company's innovation variable has a value of 0.64 with  $\alpha=0.05$ . This shows that the data is normally distributed.

#### 4.3.2 Multicollinearity Test

The Multicollinearity Test aims to test whether the regression model found a correlation between independent variables. A good regression model should not have correlations among independent variables. The Multicollinearity Test in this study was carried out by looking at tolerance and VIF values. This research model is said to have no symptoms of multicollinearity if the tolerance value

> 0.10 and VIF value < 10. The following can be seen the results of the multicollinearity test in the table, namely:

Table 7. Multicollinearity Test Results

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Environmental Management Accounting	0,994	1,007
	Technology	0,999	1,001
	Operations Strategy	0,995	1,005

a. Dependent Variable: corporate innovation

Source: Data processed

Looking at the results of the table above, it can be seen that the tolerance value generated for environmental management accounting variables is 0.994, technology is 0.999, and operating strategy is 0.995. And each VIF value shows that environmental management accounting is 1.007, technology is worth 1.001, and operating strategy is 1.005. It can be concluded that all independent variables in the regression model do not exist multicollinearity and are suitable for use in this study.

#### 4.3.3 Heteroscedasticity Test

The heteroscedasticity test aims to detect the presence or absence of heteroscedasticity. A good regression model is one in which homoskedasticity or heteroscedasticity does not occur. Heteroscedasticity testing can be seen as follows:

**Table 8.** Heteroscedasticity Test Results

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,835	1,319		1,391	0,166
	Environmental Management Accounting	0,007	0,027	0,017	0,263	0,793
	Technology	0,036	0,026	0,094	1,409	0,160
	Operations Strategy	-0,003	0,026	-0,009	-0,131	0,896

a. Dependent Variable: Abs RES

Source: Data processed

From the results of the glacier test above, it is known that the Environmental Management Accounting variable has a significance value of 0.793, the Technology variable has a significance value of 0.160, and the operating strategy variable has a significance value of 0.896. The three variables have a significance value of more than 0.05, so it can be concluded that the accounting variables of environmental management, technology, and operating strategy do not occur heteroskedasticity.

#### 4.4 Hypothesis Test Results

##### 4.4.1 Multiple Linear Regression Analysis

In regression testing that shows the influence and measures the strength between three independent variables (X) on the dependent variable (Y). It can be seen that the results of SPSS data processing that produce output in the table are as follows:

**Table 9.** Multiple Linear Regression Test Results

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,880	2,590		3,042	0,003
	Environmental Management Accounting	0,681	0,052	0,395	12,997	0,000
	Technology	0,870	0,051	0,519	17,117	0,000
	Operations Strategy	0,950	0,052	0,557	18,332	0,000

a. Dependent Variable: Corporate Innovation

Source: Data processed

$$Y = \alpha + \beta_1 \text{ Environmental Management Accounting} + \beta_2 \text{ Technology} + \beta_3 \text{ Operations Strategy} + \varepsilon$$

$$Y = 7.880 + 0.681 \text{ Environmental Management Accounting} + 0.870 \text{ Technology} + 0.950 \text{ Operations Strategy} + \varepsilon$$

Based on the regression equation above, it can be seen that: (1) If the value of environmental management accounting variables (X1), Technology (X2), and Strategy (X3) is equal to zero (0), then the company's innovation is equal to the constant value, which is 7.880; (2) The regression coefficient of environmental management accounting of 0.681 means that environmental management accounting (X1) has a positive influence on company innovation (Y), namely every 1% increase in environmental management accounting variables affects company innovation by 68.1%; (3) The technology regression coefficient of 0.870 means that technology (X2) has a positive influence on company innovation (Y), that is, every 1% increase in technology variables will affect company innovation by 87%; (4) The operating strategy regression coefficient of 0.950 means that the operating strategy (X3) has a positive influence on company innovation (Y), that is, every 1% increase in operating strategy variables will affect company innovation by 95%.

#### 4.4.2 Statistical Test Results t

The significance test of the individual parameter (t) aims to find out whether the independent variable partially affects the dependent variable. The acceptance or rejection of the hypothesis in the t test is based on the following criteria:

- 1) If the significance  $\leq 0.05$  means that all independent variables have a significant effect on the dependent variable.
- 2) If the significance value  $\geq 0.05$ , it means that all independent variables have no partial effect on the dependent variable.

**Table 10.** Test Results t

Coefficients <sup>a</sup>					
Model		Standardized Coefficients		t	Sig.
		Beta			
1	(Constant)			3,042	0,003
	Environmental Management Accounting		0,395	12,997	0,000
	Technology		0,519	17,117	0,000
	Operations Strategy		0,557	18,332	0,000

a. Dependent Variable: corporate innovation

Source: Data processed

Based on the table above, the results of the t test between each independent variable and the dependent variable can be explained as follows:

- 1) The t value of the company's management accounting is 12.997 with a significance value of  $0.000 < \alpha = 0.05$ . This means that environmental management accounting has a significant positive effect on Company Innovation.
- 2) The value of t calculates the technology 17.117 with a value of significance value  $0.000 < \alpha = 0.05$ . This means that technology has a significant positive effect on the Company's Innovation.
- 3) The t value calculates the operating strategy 18.332 with a significance value of  $0.000 < \alpha = 0.05$ . This means that operating strategy has a significant positive effect on the Company's Innovation.

#### 4.4.3 F Test (Anova)

The f statistical test basically shows whether all independent or independent variables included in the model can be used to predict the dependent variable. The F significance test is carried out using a significance level of 0.05 with the following criteria for rejection or acceptance of the hypothesis:

- 1) If the significance value  $\leq 0.05$ , it means that all independent variables together affect the dependent variable.
- 2) If the significance value  $\geq 0.05$ , it means that all independent variables together have no effect on the dependent variable

**Table 11.** F Test Results

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11078,535	3	3692,845	287,470	.000b
	Residual	2890,356	225	12,846		
	Total	13968,891	228			

a. Dependent Variable: corporate innovation

b. Predictors: (Constant), strategi operasi, teknologi, akuntansi manajemen lingkungan

Sumber: Data diolah peneliti

Based on the table above, the F test value of 287.470 is greater than the F table of 2.644 with a significance value of 0.025 which when compared to the alpha value of 0.05 (5%) is smaller ( $0.025 \leq 0.05$ ) so it can be concluded that in this study the independent variables (environmental management accounting, technology, and operating strategy) together affect the dependent variable (Company Innovation).

#### 4.4.4 Test result of coefficient of determination

This test is carried out to measure how far the model is able to explain the variation of the dependent variable. The  $R^2$  value can be seen in the table below:

**Table 12.** Coefficient of Determination Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.891a	0,793	0,790	3,58414

a. Predictors: (Constant), Operations strategy, technology, environmental management accounting

Source: Data processed

Based on the results above, it is known that the value of Adjusted R Square ( $R^2$ ) is 0.790 or 79%, this shows that the change in the dependent variable caused by the independent variable is 79%, meaning that the influence of environmental management accounting, technology, and operating strategy on Company Innovation is 79%, while 21% is explained or influenced by other variables that are not used in this study.

#### 4.5 Discussion

Based on the results of data processing and interpretation of data in research, it can be concluded that the answers to the hypotheses that have been formulated are as follows:

##### 1) The Effect of Environmental Management Accounting on Company Innovation

The first hypothesis in this study states that environmental management accounting has a positive and significant effect on Company Innovation. The results of this study prove that the role of environmental management accounting has the potential for Company Innovation. This explains that environmental management accounting measured by prevention costs, environmental detection costs, environmental failure costs, raw materials, and waste has a positive and significant effect on the innovation of frozen food companies in Balaraja District, Tangerang Regency. This explains that environmental management accounting is related to corporate innovation, because effective cost prevention helps improve innovation and company performance.

The application of environmental detection fees helps companies respond appropriately to the market. The cost of environmental failure reinforces continuous innovation. The use of environmentally friendly raw materials and innovative waste management also have a positive impact on innovation and corporate image.

##### 2) The Influence of Technology on Company Innovation

The second hypothesis in this study states that technology has a positive and significant effect on Company Innovation. The results of this study prove that technology measured by the level of novelty, convenience, safety, reliability, and consistency of technology has a positive and significant effect on the innovation of frozen food companies in Balaraja District, Tangerang Regency. This explains that technology is related to corporate innovation, because technological novelty includes the use of ecommerce platforms to innovate global sales and create relevant products. The ease of technology facilitates the search for information and understanding of market trends. Technology security protects data and intellectual property with innovative technologies. Technology reliability and consistency ensure smooth, innovation-focused operations, influencing customer perceptions of the company.

##### 3) The Effect of Operations Strategy on Company Innovation

The third hypothesis in this study states that operating strategy has a positive and significant effect on Company Innovation. This proves that operating strategies measured by cost, quality, product/service stability, market opportunities, and market development have a positive and significant effect on frozen food company innovation in Balaraja District, Tangerang Regency. This explains that operating strategy is related to company innovation, because cost strategy optimizes operations and reduces costs. Quality improvement fuels innovation and competitive advantage. The stability of the product/service provides the foundation for innovation. Market opportunities drive new products/services or improvements. Market developments help adapt to change and support innovation.

## 5. Conclusion

The conclusions of this study are as follows: (1) Environmental management accounting has a positive effect on frozen food company innovation. The results of this study prove that the role of environmental management accounting has the potential for Company Innovation. This explains that environmental management accounting measured by prevention costs, environmental detection costs, environmental failure costs, raw materials, and waste has a positive and significant effect on frozen food company innovation in Balaraja District, Tangerang Regency. The results of this study prove that technology measured by the level of novelty, convenience, safety, reliability, and consistency of technology has a positive and significant effect on the innovation of frozen food companies in Balaraja District, Tangerang Regency; (2) Technology has a positive influence on frozen food company innovation. Operating strategy has a positive effect on frozen food company innovation. This proves that operating strategies measured by cost, quality, product/service stability, market opportunities, and market development have a positive and significant effect on frozen food company innovation in Balaraja District, Tangerang Regency.

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