The Influence of Green Innovation, Corporate Social Responsibility, and the Work Environment in Increasing Competitiveness

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Abstract
The number of Tunas Honda branches in Bandar Lampung, initially 8, has decreased due to intensified competition. This research was conducted to examine how green innovation, corporate social responsibility, and the work environment influence competitiveness at Tunas Honda in Bandar Lampung. Employing a quantitative approach, data were gathered via an online questionnaire employing a Likert scale, with a population of 40 individuals selected through purposive sampling, representing the entire population. Analysis was conducted using multiple linear regression tests aided by SPSS version 20, alongside hypothesis tests such as the t-test and F-test. The results indicate that green innovation, corporate social responsibility, and the work environment significantly and positively impact competitiveness.

Keywords	*Green innovation, corporate social responsibility, work environment, competitiveness.*

INTRODUCTION

In the era of globalization, modern business challenges are not only limited to achieving financial profits. Society is increasingly aware of environmental and sustainability issues, and makes companies incorporate green innovation, corporate social responsibility, and attention to the work environment into their business strategies.

Green innovation involves various technologies and approaches that aim to inhibit negative effects on the environment while creating additional advantages for companies. Business continuity is now not only related to operational efficiency, but also to the ability to continue to innovate on an ongoing basis. In this context, green innovation is not only a moral obligation, but also a driver of company competitiveness in a market that is increasingly sensitive to environmental issues. Based on research (Dewi & Rahmianingsih, 2020). Green innovation is a strategic plan to achieve the company's strategic goals with the aim of reducing the impact of environmental damage.

Corporate Social Responsibility (CSR) is a company's ongoing dedication to being involved in efforts to ethically improve the economic, environmental and social aspects of local communities, while improving employee welfare. (Ayatunisa, 2022). Implementing sustainable CSR practices not only creates a positive reputation, but also increases the trust of customers, employees and other stakeholders. Therefore, CSR can be considered a long-term business strategy that can strengthen a company's position in global competition.

A beautiful and sustainable work environment not only creates good conditions for employee well-being, but also increases their productivity and creativity. Companies that are able to create an inclusive work culture, support employee development, and pay attention to work-life balance can attract and retain the best talent.

Developing products that are unique can be an effective strategy for companies to provide innovative products that satisfy all parties, including buyers who get products that

suit their needs and tastes, as well as companies that seek profits from product sales and maintain a positive reputation in the eyes of consumers. (Dunan et al., 2020).

There are 8 Tunas Honda branches in Bandar Lampung and each of them has their own challenges. Several challenges arise, including waste management and recycling. Tunas Honda has corporate social responsibility (CSR) which is an important benchmark in company activities. On Environmental Issues, the Tunas Honda company may be faced with challenges in reducing the environmental footprint of its production, managing waste, and implementing environmentally friendly product practices throughout its supply chain. Competition with new companies that focus exclusively on green technology and environmental innovation could be a challenge for the Tunas Honda company. Companies need to work together with other parties to improve infrastructure and technology that supports green innovation, not only that, but the Tunas Honda company also needs to prioritize the work environment of its employees starting from their safety and well-being at Tunas Honda.

To achieve competitive advantage, the integration of green innovation, corporate social responsibility and attention to the work environment needs to be carried out within the framework of a more holistic approach. Therefore, this research is intended to investigate the influence of green innovation, corporate social responsibility, and work environment on competitiveness at Tunas Honda in Bandar Lampung.

LITERATURE REVIEW
Green Innovation

Green innovation, or what is also known as green innovation, is a strategy that takes into account the consequences for the environment while improving economic performance through more efficient use of raw materials, saving energy, as well as creating new markets, and developing superior products to increase competitiveness. (Ar, 2012). According to(Fabiola & Khusnah, 2022)The public considers green innovation as a strategy that works for sustainable development with a focus on meeting consumer needs as well as responding to competitors' actions. Next, according to (Dewi & Rahmianingsih, 2020)Green innovation is a strategy that companies use to achieve strategic goals by implementing techniques, systems and practices aimed at preventing the impact of environmental damage. With green innovation, productivity can be optimized, and market opportunities can be created. With green innovation, productivity can be increased, and market opportunities can be created. Based on (Agustia et al., 2019), measuring green innovation uses an index consisting of two dimensions, namely Green Process Innovation and Green Product Innovation.

Green Product Innovation refers to products or services that have experienced significant improvements and are produced with environmental impact in mind (Robescu, 2010) By implementing environmentally friendly product innovations, companies show more attention to the environmental impacts produced by these products. Green Process Innovation according to (Robescu, 2010). Green Process Innovation is the implementation of new designs or significant improvements to production or delivery methods that take into account environmental impacts. Measuring green innovation includes two main indicators,

namely environmentally safe product innovation and environmentally friendly process innovation.

Based on studies conducted by (Li et al., 2019). Model (1) reveals a significant positive correlation between green innovation and competitiveness with the regression coefficient value of green innovation and competitiveness being 0.466, and significant at the 1% level. According to research (Nuryakin & Maryati, 2020). The statistical test results for H1a show that the path coefficient is 3.446 with a significance value of 0.000, confirming that green innovation has a positive and significant effect on competitiveness. Likewise, the statistical test for H1b produces a path coefficient of 3.688 with a significance value of 0.000. Based on findings from several previous studies, the first hypothesis in this research, namely H1 regarding the positive and significant influence of green innovation on competitiveness, is confirmed.

Understanding Corporate Social Responsibility

Corporate Social Responsibility (CSR) is an idea where companies voluntarily include responsibility for social and environmental aspects in their business activities and relationships with stakeholders, with the aim of achieving sustainable business success. There are four CSR indicators: CSR official tools, CSR related to the environment, CSR related to the workplace, and market CSR.Top of Form

Based on research (Boulouta & Pitelis, 2014), the results obtained using regression are a positive relationship and significant correlation between CSR and competitiveness (b = 0.16, p\0.10), so these results confirm Hypothesis 1 that CSR has a positive impact on competitiveness. According to (Gallardo-Vázquez & Sanchez-Hernandez, 2014) all path coefficients show positive results and are significant at the 0.001 level (***) and verify the relationship between CSR and competitiveness as H1 is statistically significant (t test ¼ 11.79, p < 0.001).

Referring to the previous research mentioned previously, the second hypothesis proposed in this research is H2: Corporate social responsibility has a positive and significant impact on competitiveness.

Understanding the Work Environment

Refers to (Darmadi, 2020)The work environment includes elements around employees that have an impact on the way they carry out their work, such as air conditioning systems, adequate lighting, and so on. Based on (Effendy & Fitria, 2019). The work environment involves interactions between individuals and coworkers who have higher, equal, or lower positions. Work environment indicators include aspects of lighting, work safety and comfort, physical conditions of the workplace, relations between employees and management, and the use of color. This all impacts how employees carry out their duties, including adequate ventilation and lighting systems.

Based on research results (Rožman et al., 2023)The research results show that there is a positive and significant effect of the work environment on competitiveness (IAWE → COMP = 0.781, p < 0.001). Based on previous research that has been mentioned, the third

hypothesis in this study is proposed as H3. The work environment has a positive effect and significantly increases competitiveness.

Understanding Competitiveness

Competitiveness comes from Latin which indicates business competition collaboration in order to seize market segments. The hypothesis characterizes intensity as the utilization of a value creation methodology by an organization, which is not carried out by competitors simultaneously and will not be quickly imitated (Anton et al., 2015). According to Kanter (Bismala et al., 2018) said "the key players in the global market are groups of people who have intangible wealth, namely concepts, competencies and connections". Concept refers to an explanation of the goals to be achieved, which differentiate the company from its competitors and become a very significant advantage. Competency includes the ability to manage a business, by combining skills and knowledge, enabling a company to anticipate various problems that may arise during its journey. Meanwhile, connection refers to the skills of businesspeople to connect to anyone, anywhere, and with advances in information technology, connections can be made globally, supporting rapid business development. Competitiveness indicators involve evaluating market performance and non-financial achievements.

Dimensions of Competitiveness

To survive and continue to develop in a fierce competitive environment, companies need to have competitive advantages that are at the core of their capabilities. This advantage will be the main weapon in overcoming intense competition. Based on Hamingand Numajamuddin (Bismala et al., 2018). These advantages reflect competitive benchmarks that manufacturing companies can determine, involving aspects such as quality, cost, delivery speed, delivery reliability and flexibility.

This research was adopted from research (Padilla-Lozano & Collazzo, 2021) which researches corporate social responsibility, green innovation and causality competitiveness in the manufacturing sector. However, this study differs from previous research because it includes work environment variables, which were a limiting factor in those studies.(Padilla-Lozano & Collazzo, 2021).Below, the conceptual framework of the research can be seen in Figure 1.
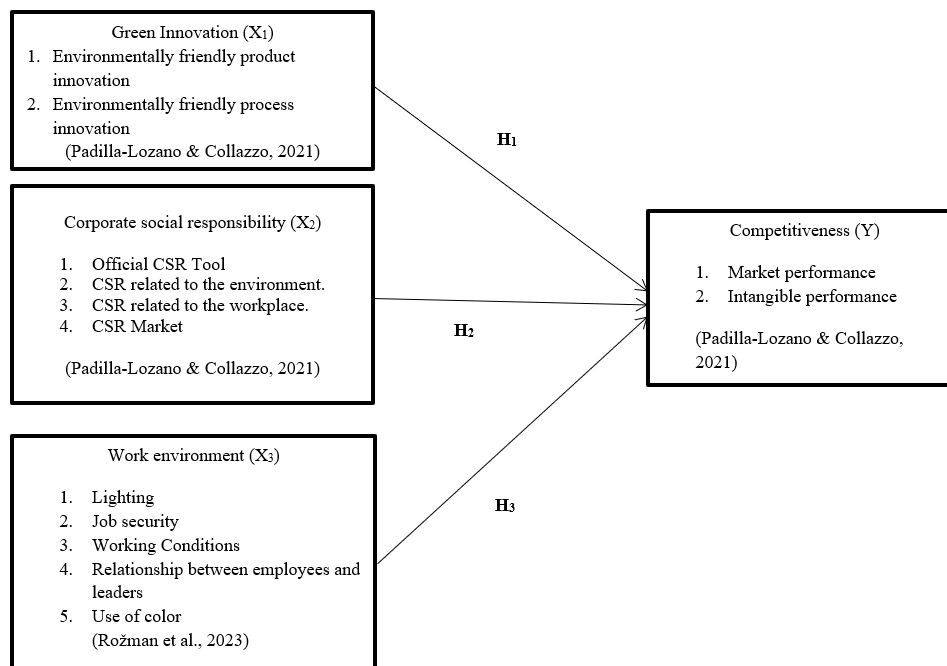
Figure 1. Research Conceptual Framework.
Source: Adoption from research(Padilla-Lozano & Collazzo, 2021),(Rožman et al., 2023)

METHOD

This research uses a quantitative approach with descriptive analysis. The independent variables include green innovation, corporate social responsibility, and work environment, while the dependent variable is competitiveness. Green innovation consists of 8 statements, corporate social responsibility consists of 12 statements, and competitiveness consists of 9 statements, which were adapted from previous research Top of Form (Padilla-Lozano & Collazzo, 2021) Furthermore, the work environment consists of 5 statement elements taken from research (Nur Adha, 2019). Even though Tunas Honda in Bandar Lampung has eight branches spread out, the sampling approach applied in this research was a purposive sampling technique. In this technique, the number of respondents as many as 40 comes from the entire population and is used as a sample.

RESULTS AND DISCUSSION

Based on the output from SPSS version 20 statistical software, descriptive analysis was carried out to describe the characteristics of respondents. Of the total 40 respondents, it was revealed that 47.5% of them were men, while the majority, namely 52.5%, were women. Before proceeding to the hypothesis testing stage, the steps that need to be taken include validity testing, reliability testing, normality testing, and classical assumption testing such as multicollinearity testing.

Validity test

Data quality testing, namely validity testing and reliability testing. The statement item is said to be valid if the calculated r value is above 0.312, where the value of 0.312 is obtained

from the sample size minus 2, the result is 38 and it is known that the r table is 0.312, while the statement item is said to be reliable if the variable value is ≥ 0.6. The results of the validity test and reliability test can be seen in Table 1 below.

Table 1. Data Quality Test

Statement Items	r_{count}	r_{table} (0.312)	*Cronbach Alpha* (≥ 0.6)	Information
Green Innovation (X1)			0.805	Reliable
X1.1	0.566	0.312		Valid
X1.2	0.793	0.312		Valid
X1.3	0.737	0.312		Valid
X1.4	0.720	0.312		Valid
X1.5	0.550	0.312		Valid
X1.6	0.652	0.312		Valid
X1.7	0.691	0.312		Valid
X1.8	0.510	0.312		Valid
Corporate Social Responsibility (X2)			0.835	Reliable
X2.1	0.664	0.312		Valid
X2.2	0.710	0.312		Valid
X2.3	0.481	0.312		Valid
X2.4	0.513	0.312		Valid
X2.5	0.503	0.312		Valid
X2.6	0.653	0.312		Valid
X2.7	0.716	0.312		Valid
X2.8	0.342	0.312		Valid
X2.9	0.549	0.312		Valid
X2.10	0.637	0.312		Valid
X2.11	0.598	0.312		Valid
X2.12	0.739	0.312		Valid
Work Environment (X3)			0.717	Reliable
X3.1	0.432	0.312		Valid
X3.2	0.732	0.312		Valid
X3.3	0.765	0.312		Valid
X3.4	0.789	0.312		Valid
X3.5	0.710	0.312		Valid
Competitiveness (Y)			0.791	Reliable
Y1	0.442	0.312		Valid
Y2	0.677	0.312		Valid
Y3	0.718	0.312		Valid
Y4	0.837	0.312		Valid
Y5	0.600	0.312		Valid

Statement Items	r_{count}	r_{table} (0.312)	*Cronbach Alpha* ($\geq$ 0.6)	Information
Y6	0.475	0.312		Valid
Y7	0.507	0.312		Valid
Y8	0.720	0.312		Valid
Y9	0.557	0.312		Valid

Source: SPSS Output (2023).

Table 1 shows that all items state the green innovation variable located in *range* 0.510-0.793, thus all green innovation variables are declared valid. Then, all corporate social responsibility variable statement items are in the range 0.342-0.739, thus all corporate social responsibility variables are declared valid. Furthermore, all work environment variable statement items are in the range 0.432-0.789, thus all work environment variables are declared valid. Finally, all the competitiveness variable statement items are in the range 0.442-0.837, thus all competitiveness variables are declared valid. The conclusion is that all questionnaire items from the variable's green innovation, corporate social responsibility, work environment and competitiveness are valid and can be used for hypothesis testing.

Reliability Test

The reliability test shown in Table 1 shows that all variables are declared reliable because based on SPSS version 20 output, the reliability test value for the green innovation variable is 0.805, the reliability test value for the corporate social responsibility variable is 0.835, the reliability test value as a work environment variable amounts to 0.717, and the reliability test value for the competitiveness variable is 0.791. The conclusion is that all questionnaire items from the variable's green innovation, corporate social responsibility, work environment and competitiveness are reliable and can be used for hypothesis testing.

Normality test

Normality tests were also carried out using the Kolmorogov Smirnov test. The statement item in the questionnaire is declared normal if the Asymp value. sig. (2-tailed) is greater than 0.05 and based on test results using SPSS version 20, a value of 0.652 was obtained. Thus, it can be concluded that all elements of the questionnaire are related to the variable's green innovation, corporate social responsibility, work environment, and power. competition has a normal distribution, so it can be used for hypothesis testing.

Multicollinearity Test

In this research, the classic assumption test carried out is the multicollinearity test using SPSS version 20. There is no indication of multicollinearity if the tolerance value is > 0.100 and the VIF value is < 10.00. The SPSS output results show that the tolerance value for the green innovation variable is 0.217, exceeding 0.100, and the VIF value is 4.607, below 10.00. The tolerance value of the corporate social responsibility variable has a value of 0.233 and a VIF value of 4.298. Meanwhile, the work environment variable has a

tolerance value of 0.330 and a VIF value of 3.032. Therefore, it was concluded that there were no signs of multicollinearity in all the variables used in this research.

Regression Test

After completing the data quality test and classic assumption test, the next step is to carry out a regression test as documented in Table 2 below.

Table 2. Regression Test of Green Innovation on Competitiveness

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,627	2,413		1,918	,063
	Green Innovation	,951	,079	,891	12,103	,000

a. Dependent Variable: Competitiveness.

Table 2 shows that the constant value is 4.627 and green innovation is 0.951, reflecting the role of green innovation (X1) on competitiveness (Y) of 0.951. This states that green innovation will have a positive impact on competitiveness. Therefore, the multiple regression equation can be expressed with the following regression equation Y = 4.627 + 0.951X1 + e.

Table 3. Regression Test of Corporate Social Responsibility on Competitiveness

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,223	2,943		1,435	,159
	Corporate social responsibility	,649	,065	,852	10,043	,000

a. Dependent Variable: Competitiveness.

Table 3 shows that the constant value is 4.223, corporate social responsibility is 0.649 reflects the role of corporate social responsibility (X2) on competitiveness (Y) of 0.649. This states that corporate social responsibility will have a positive impact on competitiveness. Therefore, the multiple regression equation can be expressed with the following regression equation Y = 4.223 + 0.649X2 + e.

Table 4. Work Environment Regression Test on Competitiveness Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8,956	2,788		3,213	,003
	Work environment	1,283	.144	,823	8,924	,000

a. Dependent Variable: Competitiveness

Table 4 shows that the constant value is 4.627, the work environment is 0.951 reflects the role of the work environment (X3) on competitiveness (Y) of 0.951. This states the work environment will have a positive impact on competitiveness. Therefore, the multiple regression equation can be expressed as the following regression equation Y= 4.627 + 0.951X3 + e.

Table 5. Coefficient of Determination

Variable	t test			F test			R2	Adjusted R2
	Tcount	Table	Sign	Fcount	Ftable	Sign		
Green Innovation -> Competitiveness	12,103	2,208	0,000	146,485	2,866	0,000	0.794	0.789
Corporate Social Responsibility -> Competitiveness	10,043	2,208	0,000	100,856	2,866	0,000	0.726	0.719
Work Environment -> Competitiveness	8,924	2,208	0,000	79,629	2,866	0,000	0.677	0.668

Source: SPSS Output (2023).

Table 5 shows that the adjusted R^2 value is 0.789, meaning that the influence of green innovation on competitiveness is 78.9%, while 21.1% is caused by other independent variables not included in this research. Then, the adjusted R^2 value is 0.719, meaning that the influence of corporate social responsibility on competitiveness is 71.9%, while 28.1% is influenced by other independent variables that are not included in this research. Furthermore, the adjusted R^2 value is 0.668, meaning that the influence of the work environment on competitiveness is 66.8%, while 33.2% is influenced by other independent variables not examined in this research.

The Effect of Green Innovation on Competitiveness

The research findings show that the first hypothesis (H1) is confirmed, which states that Green Innovation (X1) has a significant impact on competitiveness. Tests show that Green Innovation (X1) has a positive and significant influence on competitiveness, with a significant value of 0.000, lower than the α value set at 0.05. Therefore, it can be concluded that Green Innovation (X1) contributes positively and significantly to the competitiveness

of PT Tunas Honda in Bandarlampung. These findings are consistent with the results of previous research by(Padilla-Lozano & Collazzo, 2021)which states that the impact of Green Innovation is positively related to the level of competitiveness.

The Influence of Corporate Social Responsibility on Competitiveness

Research shows that the second hypothesis (H2) is proven correct, which states that Corporate Social Responsibility (X2) has a major impact on the level of competitiveness. The analysis results show that Corporate Social Responsibility (X2) contributes positively and significantly to competitiveness, with a significance value reaching 0.000, which is lower than the α value set at 0.05. Therefore, it can be interpreted that Corporate Social Responsibility (X2) makes a significant and positive contribution to the competitiveness of PT Tunas Honda in Bandarlampung. This finding is consistent with the results of previous research(Padilla-Lozano & Collazzo, 2021)which states that the influence of corporate social responsibility has a positive influence on competitiveness.

The Influence of the Work Environment on Competitiveness

Based on the research results, the third hypothesis (H3) was proven correct, which states that the Work Environment (X3) has a significant impact on the level of competitiveness. The test results show that the Work Environment (X3) has a significant positive impact on competitiveness, with a significant value of 0.000, lower than the α value set at 0.05. Therefore, it can be concluded that the Work Environment (X3) makes a positive and significant contribution to the competitiveness of PT Tunas Honda in Bandarlampung. These findings are consistent with the results of previous research by(Rožman et al., 2023)which shows that the influence of the work environment has a positive impact on competitiveness.

CLOSING
Conclusion

Based on the results of analysis from research regarding the impact of Green Innovation, Corporate Social Responsibility and the Work Environment on Competitiveness, the conclusions are as follows:

1. Green Innovation has a positive and significant impact on Competitiveness.
2. Corporate Social Responsibility has a positive influence on Competitiveness.
3. The work environment has a positive and significant impact on competitiveness.

Suggestion

Based on the research results, several suggestions were obtained that could be implemented by companies, including:

1. In relation to green innovation, companies are advised to carry out environmental audits to identify areas in the company that can be improved in terms of energy efficiency, waste management and use of natural resources.

2. In connection with corporate social responsibility, companies are advised to facilitate balance between work life and personal life of employees. This can include flexibility in working hours and employee wellness programs.

3. Regarding the work environment, companies are advised to ensure a comfortable and safe physical work environment. This includes good lighting, adequate ventilaui and workspace design that supports well-being.

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