

Investigating the Interplay Between Work Environment, Compensation, Empowerment, and Occupational Safety in Shaping Employee Productivity: A Study at Gagak Hitam Cigarette Production

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Abstract: The productivity of a company is measured by the performance of its employees. The company will always try to have employees who are highly dedicated and have good performance. Some efforts made by the company such as creating a good work environment, providing compensation according to employee work results, empowering employees, creating a work culture in accordance with the company's mission and vision, creating safe and healthy occupational safety & health. This study aims to analyze the influence of the work environment, compensation, empowerment, work culture, and occupational safety and health on the productivity of employees producing Gagak Hitam Bondowoso Cigarettes. This study uses a quantitative research method with a descriptive approach. The population in this study were employees at CV Roko Gagak Hitam Bondowoso . The number of samples in this study was 80 respondents. This study used a non-probability sampling technique. The analysis technique used is multiple linear regression analysis. The results of this study indicate that partially the variables of the work environment, compensation, empowerment, work culture, and occupational safety and health have a significant effect on the productivity of employees producing Gagak Hitam Bondowoso Cigarettes.

Key words: Work Environment, Compensation, Empowerment, Work Culture, Occupational Health and Safety, And Employee Productivity.



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1. Introduction

Source Power man until moment This Still become asset important for A company . This is because of success A company depends from source Power the humans in it . Every company own vision , mission and goals you want to achieve achieved . To reach objective is needed role source Power quality human beings . Source Power man quality formed by management management source Power good human being (Samahati, 2020) . Source Power human (HR) at the moment This Still become asset important for A company . Success the company is very dependent on quality source Power the human being he has . Every company own vision , mission and goals you want to achieve achieved .

On a company moment these are the employees or worker sued For give maximum productivity , in order to achieve the required production targets company . Therefore That Lots efforts made by the company use maintain productivity employees . Source Power man is one of the most decisive success whether or not continuity life a company Good That company private and company public Because man is element regulator and implementer from every activity company (Samahati, 2020) . Therefore that, every company sued For can organize and optimize source Power existing human beings in a way effective and efficient . The importance of manage source Power man this is to make it happen balance between need employee with abilities and goals a company .

One of the company objects that experienced productivity problems in achieving production is CV. Black Crow Rokok Bondowoso. The following explains the productivity data achieved over the past three years.

Table 1. 1 Black Crow Cigarette Production 2021-2023

Year	Bars Kretek	Filter Bar	Production Cigarette (Press)			Cigarettes (Sticks)			
			GKL	GOL D	GHF	Krete k	GH F	Krete k	GHF
2021	29,145,150	1,800,960	59,550	183,280	15,000	5,550	960	0.02%	0.05%
2022	2,645,890	180,360	5,843	16,186	1,500	2,410	360	0.09%	0.20%
2023	3,660,374	157,102	19,975	10,522	1,309	734	220	0.02%	0.14%

Source: CV. Black Crow Cigarettes Bondowoso (2024)

Based on table 1.1, it shows that the production of Gagak Hitam cigarettes has a productivity value that is still fluctuating. Like in 2022, the percentage of *rejected goods* reached 0.09%, this increased by 0.02% or 4 times from the previous year, namely 2021. The increase in *rejected goods* was caused by negligence or a decrease in employee performance which caused the value of *rejected goods* to increase. The main cause can be due to the influence of the work environment felt by employees, work compensation, employee empowerment, work culture, and occupational safety and health greatly affect the production of CV. Gagak Hitam cigarettes. These factors are interconnected, so if not addressed immediately, it will have a higher impact in the future, especially the production process of kretek cigarettes, which still uses manual human labor.

2. Materials and Methods

Based on the background and formulation of the problem that has been explained, this research can be classified as exploratory and conclusive, where conclusive research can be classified again into descriptive and casual research (Sugiyono, 2017:35). According to Sugiyono (2017:33) exploration and conclusiveness that is research that explains about connection between because effects on the variables that influence Hypothesis . Type of research is study quantitative and research data is the primary data obtained through employees and secondary data . While tool research used is analysis multiple linear regression so that can known the magnitude influence conflict role , conflict work and work stress to performance employees . The variables used in this study include:

1. Independent Variable (X)

Independent variables are variables that influence or cause changes or the emergence of dependent variables (Sugiyono, 2017:45). Independent variables in this study include:

a. Work Environment Variable (X1)

- b. Compensation Variable (X2)
- c. Empowerment Variable (X3)
- d. Work culture variable (X4)
- e. Occupational Safety and Health Variable (X5)
- 2. Dependent Variable (Y)

Dependent Variable is a variable that is influenced or that is the result, because of the existence of an independent variable (Sugiyono, 2017:45). The dependent/bound variable in this study is employee productivity (Y). Designing a research , known study explorative and conclusive , where study conclusive can be classified Again on study descriptive and casual (Sugiyono., 2017:35) . If you look at from the variables that is variable free and related , research This is study casuality . Research quality aiming measure strength connection between two variables or more , also shows direction connection between variable free and bound . With Primary Data Collection : Obtained through interviews and questionnaires and Secondary Data : Sourced from from related journals and articles with Topic research. Target study This is all over CV employees . Black Crow Cigarettes , Bondowoso . Samples that chosen as many as 80 respondents were CV. Black Crow Cigarettes employees . Technique of taking sample used in research This is *Saturation sampling / census* that is technique taking sample when all member population used as sample .

For Measurement and Analysis data state that questionnaire effective For data collection. Likert scale (1 = absolutely not agree, 10 = strongly agree) is used For measure perception consumers. Data is analyzed use approach quantitative and descriptive For understand productivity employee.

a. Instrument Testing

Validity Test : Ensure questionnaire in a way accurate measure the variables in question . Reliability Test : Using Cronbach's Alpha, where a value >0.06 indicates instrument the reliable.

b. Test A assumption Classic

Normality Test : Using probability plots For inspect data distribution . Multicollinearity Test : Assessing correlation between variable independent using the Variance Inflation Factor (VIF), where $VIF < 10$ indicates No There is multicollinearity. Heteroscedasticity Test : Using a scatter diagram For determine consistency variants.

c. Testing Hypothesis

T-Test: Testing significance the influence of each variable independent to decision purchase ($\bar{y} = 0.05$) d.

d. Coefficient Determination (R^2):

Adjusted R-square value represents the coefficient of determination (R^2). The extent to which the model can explain the variation in the independent variable is indicated by the adjusted *R-square* value, which takes a value between 0 and 1 ($0 < R^2 < 1$). A low *Adjusted R Square* value indicates that almost all the information needed to predict the variation in the dependent variable can be obtained from the information provided by the dependent variable (Ghozali, 2018: 166) .

3. Results

Validity Test Results **Table**

Variables	Item	R_{table}	R_{Count}	Sig	Caption
Work environment (X1)	X1.1	0.219	0.849	0,000	Valid
	X1.2	0.219	0.866	0,000	Valid
	X1.3	0.219	0.815	0,000	Valid

	X1.4	0.219	0.874	0,000	Valid
Compensation (X2)	X2.1	0.219	0.920	0,000	Valid
	X2.2	0.219	0.899	0,000	Valid
	X2.3	0.219	0.867	0,000	Valid
	X2.4	0.219	0.902	0,000	Valid
Empowerment (X3)	X3.1	0.219	0.874	0,000	Valid
	X3.2	0.219	0.926	0,000	Valid
	X3.3	0.219	0.900	0,000	Valid
	X3.4	0.219	0.825	0,000	Valid
Work Culture (X4)	X4.1	0.219	0.856	0,000	Valid
	X4.2	0.219	0.899	0,000	Valid
	X4.3	0.219	0.875	0,000	Valid
	X4.4	0.219	0.891	0,000	Valid
Occupational Safety and Health (X5)	X5.1	0.219	0.929	0,000	Valid
	X5.2	0.219	0.888	0,000	Valid
	X5.3	0.219	0.859	0,000	Valid
Employee Productivity (Y)	Y1. 1	0.219	0.789	0,000	Valid
	Y1.2	0.219	0.767	0,000	Valid
	Y1.3	0.219	0.708	0,000	Valid

Source: Obtained Primary Data, January, 2025

The table shows that the correlation between each indicator of the Work Environment variable (X1), Compensation (X2), Empowerment (X3), Work Culture (X4), Occupational Safety and Health (X5), and employee productivity (Y) shows that $R_{\text{count}} > R_{\text{table}}$ and $\text{Sig} < 0.05$. It can be concluded that all question *items* of the Work Environment variable (X1), Compensation (X2), Empowerment (X3), Work Culture (X4), Occupational Safety and Health (X5), and employee productivity (Y) are declared *valid*.

Reliability Test Results Table

Variables	Cronbach Alpha	Reliability	Information
Work environment (X1)	0.60	0.876	Reliability accepted
Compensation (X2)	0.60	0.919	Reliability accepted
Empowerment (X3)	0.60	0.903	Reliability accepted
Work culture (X4),	0.60	0.902	Reliability accepted
Occupational Safety and Health (X5 ((X5)	0.60	0.870	Reliability accepted
employee productivity (Y)	0.60	0.868	Reliability accepted

Source: Obtained Primary Data, January, 2025

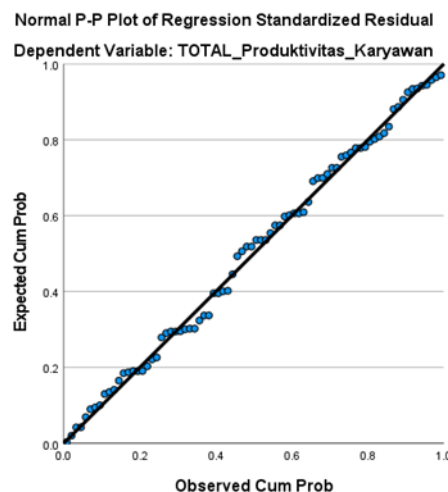
The table above shows that from the SPSS results, all variables resulting from the reliability test show a value of more than 0.60, so it is said to be reliable or consistent. This is in accordance with the statement of previous research, if the *Cronbach's Alpha value* > 0.60 then the questionnaire or survey is declared reliable or consistent, a reliable question is the respondent's answer, to the statement is consistent or stable over time.

Multiple Linear Regression Analysis **Table**

Model	Unstandardized Coefficients	
	B	Std. Error
(Constant)	0.312	0.678
Environment Work (X1)	0.137	0.058
Compensation (X2)	0.282	0.058
Empowerment (X3)	0.212	0.081
Culture work (X4),	0.518	0.082
Occupational Safety and Health (X5)	1,434	0.130

Source : Obtained Primary Data , January, 2025

Y is Employee Productivity, and the Y value has a *constant criterion* with a coefficient of 0.312, the coefficient value of the Work Environment (X₁) is 0.137 , the coefficient value of Compensation (X₂) is 0.282 , the coefficient value of Empowerment (X₃) is 0.212, the coefficient value of Work Culture (X₄) is 0.518, the coefficient value of Occupational Safety and Health (X5) is 1.434. All values obtained are obtained from the results of processing questionnaire data processed on a computer program, namely SPSS 27 (*Static Package for the Social Science*).

Normality Test Result **Image**

Source: Data processed by SPSS, January, 2025

From the image, it can be explained that the Standardized Residual is the dependent variable Y. The line shows that the points follow the diagonal line, so in the graph it can be said that the data is normally distributed, meaning that the regression model used in the study has a normal or near-normal data distribution, namely the distribution of statistical data on the diagonal axis of the normal distribution graph.

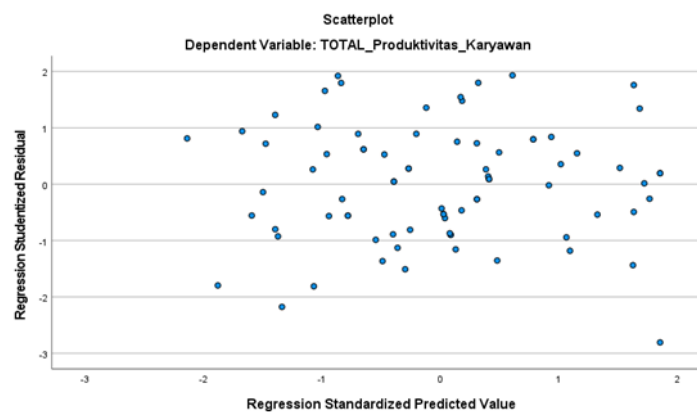
Multicollinearity Results **Table**

Variables	Cronbach Alpha	Reliability	Information
Work environment (X1)	0.60	0.876	Reliability accepted
Compensation (X2)	0.60	0.919	Reliability accepted
Empowerment (X3)	0.60	0.903	Reliability accepted

Work culture (X4),	0.60	0.902	Reliability accepted
Occupational Safety and Health (X5)	0.60	0.870	Reliability accepted
employee productivity (Y)	0.60	0.868	Reliability accepted

Based on the table above, it can be seen that all independent variables have a tolerance value of more than 0.1 and a VIF value of less than 10. Meanwhile, according to (Ghozali, 2018), the cutoff value commonly used to indicate multicollinearity is a tolerance value of less than 10 or equal to a VIF value of more than 0.1. The conclusion is that there is no multicollinearity, multicollinearity is a linear relationship between independent variables, meaning that if there is no multicollinearity, the regression model does not have any correlation between independent variables or independent variables.

Image of Heteroscedasticity Test Results



Source: Data processed by SPSS, January, 2025

Based on Figure 4.3, it can be seen that the points are above and below the number 0 on the Y axis randomly. It can be concluded that there is no heteroscedasticity in the regression model. This is in accordance with the statement according to (Ghozali, 2018) if there is no clear pattern, and the points are spread above and below the number 0 on the Y axis, then there is no heteroscedasticity, heteroscedasticity means efficient and accurate, meaning that if the research results do not have heteroscedasticity then the regression model, there is no difference in residual variance from one observation to another.

t-Test Results Table

Variables	t-Table	t-Count	Sig.
Work environment (X1)	1,664	2,359	0.02
Compensation (X2)	1,664	4,849	<0.00
Empowerment (X3)	1,664	2,615	0.01
Work culture (X4),	1,664	6,320	<0.00
Occupational Safety and Health (X5)	1,664	10,995	<0.00

Source: Processed Primary Data, January 2025

Based on table 4.12 above, the t-test results can be explained as follows:

- H1: Does the work environment have a significant effect on the work productivity of employees producing Black Gagak Cigarettes in Bondowoso?

From the results of the t-test, it shows that the work environment variable has a significance value of $0.021 < 0.05$ (= 5%) so H_0 is rejected and H_1 is accepted. So it can be interpreted that the work environment variable has a significant effect on the work productivity of employees of the Black Crow Cigarette production in Bondowoso.

- b. H_2 : Does compensation have a significant effect on the work productivity of employees producing Gagak Hitam Bondowoso cigarettes?

From the results of the t-test, it shows that the Compensation variable has a significance value of $0.000 < 0.05$ (= 5%) so H_0 is rejected and H_2 is accepted. So it can be interpreted that the Compensation variable has a significant effect on the work productivity of employees of the Black Crow Cigarette production in Bondowoso.

- c. H_3 : Does empowerment have a significant effect on the work productivity of employees in the production of Black Gagak Cigarettes, Bondowoso?

From the results of the t-test, it shows that the Empowerment variable has a significance value of $0.011 < 0.05$ (= 5%) so H_0 is rejected and H_3 is accepted. So it can be interpreted that the Empowerment variable has a significant effect on the work productivity of employees of the Black Gagak Cigarette production in Bondowoso.

- d. H_4 : Does work culture have a significant influence on the work productivity of employees producing Black Gagak Cigarettes in Bondowoso?

From the results of the t-test, it shows that the Work Culture variable has a significance value of $0.000 < 0.05$ (= 5%) so H_0 is rejected and H_4 is accepted. So it can be interpreted that the Work Culture variable has a significant effect on the work productivity of employees of the Black Gagak Cigarette production in Bondowoso.

- e. H_5 : Does Occupational Safety and Health have a significant effect on the work productivity of employees producing Black Gagak Cigarettes in Bondowoso?

From the results of the t-test, it shows that the Occupational Safety and Health variable has a significance value of $0.000 < 0.05$ (= 5%) so H_0 is rejected and H_5 is accepted. So it can be interpreted that the Occupational Safety and Health variable has a significant effect on the work productivity of employees in the production of Gagak Hitam Bondowoso Cigarettes.

Determination Result Image

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.987 ^a	.974	.972	1.03809	2.155

a. Predictors: (Constant), TOTAL_Kesehatan_dan_Keselamatan, TOTAL_Lingkungan_Kerja, TOTAL_Kompensasi, TOTAL_Pemberdayaan, TOTAL_Budaya_Kerja

b. Dependent Variable: TOTAL_Produktivitas_Karyawan

Based on the results of the analysis that can be seen in table 4.13, the results of the multiple determination coefficient (R^2) were obtained as 0.972, this means that 97.2% of changes in employee productivity are due to the Work Environment, Compensation, Empowerment, Work Culture, and Occupational Safety and Health, while the remaining 6.5% is caused by other variables that are not included in the regression equation created, such as the variables Facilities, Education, and Salary.

4. Discussion

Findings study This show existence strong relationship between environment work , compensation , empowerment , culture work and safety and health Work with productivity

employee production as proven by the high R value of 0.974. This is show that factors the in a way collective play role important in to form productivity employee production . The R Square value of 0.972 is increasing confirm that 97% of the variation in productivity employee production can explained by variables independent , while the remaining 3% influenced by factors external outside coverage of this model .

1. Variables Environment Work influential positive and significant to productivity employee production in the company Black Crow cigarettes Bondowoso . Environment comfortable , safe and supportive work , such as provision adequate facilities and a conducive atmosphere , can increase motivation and performance employees . this relate with Munir, et al (2024) and Nugroho, et al (2025) that Employees who feel appreciated and working in good condition tend show more productivity high . Findings This confirm importance attention managerial to aspect environment Work For push results optimal work .
2. Variables Compensation influential positive and significant to productivity employee production in the company Black Crow cigarettes Bondowoso . Giving fair and competitive compensation , including salary and benefits , can increase motivation employee For Work more harder and more efficient . it relate with studies from Widyabakti , et al (2022) and Wijayantini & Safitri, R. (2022) that Employees who feel valued through a worthy reward tend own level satisfaction more work high , which in turn contribute to the improvement productivity . Findings This emphasize the importance of an effective compensation strategy as factor key in push performance employees in the company .
3. Variables Empowerment influential positive and significant to productivity employee production in the company Black Crow cigarettes Bondowoso . Giving autonomy and opportunity to employee For take decision in work they increase sense of responsibility responsibility and involvement . this relate with studies from Hasanah, et al (2023) that Empowered employees feel more appreciated and motivated For give contribution the best , which has an impact straight to the upgrade productivity . Findings This confirm that an effective empowerment strategy can be one of key in increase performance employees in the company .
4. Variables Culture Work influential positive and significant to productivity employee production in the company Black Crow cigarettes Bondowoso . Culture strong work , which includes values collaboration , innovation and commitment to quality , creating supportive environment Spirit work and cooperation between employees . When employees feel connected with culture company , they more motivated For reach objective together and contribute in a way maximum . Findings This emphasize importance development culture positive work as factor determinant in increase productivity employee .
5. Variables Occupational Health and Safety influential positive and significant to productivity employee production in the company Black Crow cigarettes Bondowoso . Implementation practice good safety and attention to health employee create environment safe and comfortable work , so that reduce risk injuries and illnesses . Employees who feel safe and healthy tend more focused and productive in operate task they . Findings This confirm that investment in safety and health Work is step important For increase performance and productivity employees in the company .

5. Conclusion

Findings the show that Health and safety Work is the most influential factor to productivity employee production Black Crow Cigarettes Bondowoso . This is highlight attention to safety and health Work participate support productivity with create a sense of security in a place Work . Limitations in study This only done in one company , so that results No can generalized to other industries , and there are Lots other variables that can influence productivity , but No investigated

in studies this . Future research can involving more Lots company from various sector For generalization results , blending questionnaire with interview deep or observation For get richer data . In addition to study other factors such as satisfaction work , motivation intrinsic , and impact technology to productivity employees and do longitudinal study for monitor change productivity along time and impact from policies implemented .

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