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Analysis of Linear Regression Model with Backward Method For Application of Good Corporate Governance Principles at PT. Asuransi Jasa Indonesia Medan Branch Office

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ABSTRACT

Risk is one of the problems in human life that can make people feel uncomfortable. Various kinds of business that humans will be done by humans to be able to anticipate risks, one of which is by way of insurance. The development of insurance in Indonesia is inseparable from the performance of employee and a Good Corporate Governance system, so that State-Owned Enterprises (BUMN) implement Good Corporate Governance, such as at PT. Asuransi Jasa Indonesia Medan Branch Office. This research was conducted by giving questionnaires to the employees of PT. Asuransi Jasa Indonesia Medan Branch Office on April 1, 2022 at 12.30 WIB. In this study, there are two most influential factors, namely the independency factor and the fairness factor, so that the estimator equation model using the backward elimination method is $\hat{Y} = 7{,}868 + 0{,}187X_4 + 0{,}498X_5$ where X_4 is the independency factors and X_5 is the fairness factor.There are two factors that most affect the implementation of Good Corporate Governance principles at PT. Jasa Indonesia Medan Branch Office, namely independence (X_4) and fairness (X_5). Based on Pearson's (Pearson product moment) correlation between the dependent variable and the independent variable, a fairly close relationship is the relationship between employee performance to fairness and the value of 0.612. The point is that in this study, the company quite guarantees that every interested party will get almost the same treatment between one employee and the other.

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INTRODUCTION

Man always tries to predict what will happen at every step of his life. Man cannot afford to know clearly what will happen in the future. A definite occurrence is when humans have already experienced it. In these events, humans can experience some risks that no one can predict. Risks can make humans feel uncomfortable. In the event of a risk, it will cause harm to humans. Humans will do their utmost to anticipate possible risks by avoiding them and redirecting them to other parties.

Usually humans will divert that risk through insurance. According to (M. Nur Rianto ,2012:212) insurance is a protection mechanism for the responsible if they experience a future risk where the responsible will pay premiums to get compensation from the debtor. Therefore, insurance is essential in human life and can develop significantly to support the national development process. The development of insurance in Indonesia is inseparable from employee performance and good corporate governance system. This relationship resulted in companies, especially State-Owned Enterprises (BUMN) implementing Good Corporate Governance.According to (Dhian Indah Astanti ,2015) Good Corporate Governance is a principle that leads and controls companies to achieve equality between power and corporate authority in giving stakeholders responsibility both special and general.Yuspitasari, Hamdani, and Hakiem (2018) stated that GoodCorporate Governance is definitively a system that manages and controlscompany to create added value for allstakeholders.

Good corporate governance can provide a framework of reference that allows effective supervision, so that chechs and balances can be created in the company. Therefore, the implementation of good corporate governance needs to be supported by three closely related pillars, namely the state and community devices because there are two other roles played by external companies that must be obeyed and served so that the satisfaction of both parties can provide guarantees in the future. (Sifaul Qolbia, 2017)

Good Corporate Governance is one of the government activities that allows companies to grow and benefit over a long period of time. Good Corporate Governance is able to win both domestic and international business competitions, especially for companies that have been able to grow and open. Implementation needs to apply Good Corporate Governance principles so that it can be managed reliably, efficiently, and professionally without harming stakeholders.The most strategic aspects of supporting effective implementation of GCG are highly dependent on the quality, skill, credibility, and 4 integrity of the various parties that operate the corporate organization (Kaban, 2017)

In Indonesia, GCG is still weak. What happens to most companies in Indonesia, especially SOEs, is that they have not been able to carry out company management professionally. Even according to the results of the ACGA (Asian Corporate Governance Association) survey in 11 countries against foreign business operators in Asia in 2014 ranked Indonesia as the worst country in the corporate governance field. (Nurcahyani, 2013)In the field of statistics, one method that can be used to solve this problem is the backward elimination method. The backward elimination method is a good model-forming method. This method will use all known independent variables into the regression equation model first, then eliminate the variables that are claimed to be insignificant against the regression equation model.

RESEARCH METHOD

This research is a quantitative research and survey method used in this research. Collection of data sources in this study is to use primary data. The primary data used in this research is the questionnaire of the employees of PT. Asuransi Jasa Indonesia Medan Branch Office collected. This research was conducted at PT. Asuransi Jasa Indonesia Medan Branch Office on April 1, 2022 at 12.30 WIB consisting of employees of PT. Asuransi Jasa Indonesia Medan Branch Office as many as 38 people and contract employees of PT. Asuransi Jasa Indonesia Medan Branch Office as many as 8 people. Therefore, the total population at PT. Asuransi Jasa Indonesia Medan Branch Office as many as 46 people. There are several ways to collect data, namely first, collecting reference material from books obtained, some teaching materials in lectures, national and international journals, and other sources. Second, collecting data by giving questionnaires to employees of PT. Asuransi Jasa Indonesia Medan Branch Office based on the principles of Good Corporate Governance.

RESULTS AND DISCUSSION

This research was conducted at PT. Asuransi Jasa Indonesia Medan Branch Office on April 1, 2022 at 12.30 WIB by giving questionnaires to 46 company employees.

Linear Regression Model with Matrix Approach

The following can be seen the value of the regression coefficient (β) as follows:

Tabel 1. Multiple Regression Coefficient

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Coefficients[a]

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1 (Constant)	8.056	1.948		4.136	.000		
Transparency (X1)	.069	.117	.117	.597	.554	.376	2.657
Accountability (X2)	-.078	.128	-.122	-.608	.547	.363	2.754
Responsibility (X3)	-.018	.176	-.016	-.101	.920	.549	1.822
Independency (X4)	.200	.121	.243	1.649	.107	.671	1.490
Fairness (X5)	.501	.197	.496	2.541	.015	.382	2.620

a. Dependent Variable: Kinerja Karyawan (Y)

So, the value of the regression coefficient is

$$\beta = \begin{bmatrix} 8{,}056 \\ 0{,}069 \\ -0{,}078 \\ -0{,}018 \\ 0{,}200 \\ 0{,}501 \end{bmatrix}$$

Where

$\beta_0 = 8{,}056$; $\beta_1 = 0{,}069$; $\beta_2 = -0{,}078$; $\beta_3 = -0{,}018$; $\beta_4 = 0{,}200$; $\beta_5 = 0{,}501$.

Multiple Regression Equation Model between Y and X_1, X_2, X_3, X_4, X_5

The stages are as follows:

1. Multiple Regression Coefficients

Table 2. Multiple Regression Equation Model between Y and X_1, X_2, X_3, X_4, X_5

Coefficients[a]

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1 (Constant)	8.056	1.948		4.136	.000		

Transparency (X1)	.069	.117	.117	.597	.554	.376	2.657
Accountability (X2)	-.078	.128	-.122	-.608	.547	.363	2.754
Responsibility (X3)	-.018	.176	-.016	-.101	.920	.549	1.822
Independency (X4)	.200	.121	.243	1.649	.107	.671	1.490
Fairness (X5)	.501	.197	.496	2.541	.015	.382	2.620

a. Dependent Variable: Kinerja Karyawan (Y)

From Tabel 2 it can be obtained the values of the multiple regression coefficients are as follows:

$$\beta_0 = 8{,}056;\quad \beta_1 = 0{,}069;\quad \beta_2 = -0{,}078;\quad \beta_3 = -0{,}018;\quad \beta_4 = 0{,}200;\quad \beta_5 = 0{,}501.$$

So that the multiple linear regression equation model that is formed is

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$
$$\hat{Y} = 8{,}056 + 0{,}069X_1 - 0{,}078X_2 - 0{,}018X_3 + 0{,}200X_4 + 0{,}501X_5$$

2. Testing the Significance of Multiple Regression

Table 3. ANOVA[a] between Y and X_1, X_2, X_3, X_4, X_5

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	62.874	5	12.575	5.779	.000[b]
	Residual	87.039	40	2.176		
	Total	149.913	45			

a. Dependent Variable: Kinerja Karyawan (Y)

b. Predictors: (Constant), Fairness (X5), Independency (X4), Responsibility (X3), Transparency (X1), Accountability (X2)

From Table 3 it can be seen that the $F_{count} = 5{,}779$ with a significant level $(\alpha) = 0{,}05$, while F_{table} value with a significant level $(\alpha) = 0{,}05$ is $F_{(k-1;n-k)} = F_{(6-1;46-6)} = F_{(5;40)} = 2{,}45$. Therefore $F_{hitung} > F_{tabel}$, it can be concluded that regeneration means.

3. Testing Pearson Correlation and ANOVA

Table 4. Testing Pearson correlation between Y and X_1, X_2, X_3, X_4, X_5

Correlations

		Kinerja Karyawan (Y)	Transparency (X1)	Accountability (X2)	Responsibility (X3)	Independency (X4)	Fairness (X5)
Kinerja Karyawan (Y)	Pearson Correlation	1	.467**	.416**	.380**	.487**	.612**
	Sig. (2-tailed)		.001	.004	.009	.001	.000
	N	46	46	46	46	46	46
Transparency (X1)	Pearson Correlation	.467**	1	.737**	.569**	.403**	.708**
	Sig. (2-tailed)	.001		.000	.000	.005	.000
	N	46	46	46	46	46	46
Accountability (X2)	Pearson Correlation	.416**	.737**	1	.608**	.470**	.700**
	Sig. (2-tailed)	.004	.000		.000	.001	.000
	N	46	46	46	46	46	46
Responsibility (X3)	Pearson Correlation	.380**	.569**	.608**	1	.473**	.582**
	Sig. (2-tailed)	.009	.000	.000		.001	.000
	N	46	46	46	46	46	46
Independency (X4)	Pearson Correlation	.487**	.403**	.470**	.473**	1	.529**
	Sig. (2-tailed)	.001	.005	.001	.001		.000
	N	46	46	46	46	46	46
Fairness (X5)	Pearson Correlation	.612**	.708**	.700**	.582**	.529**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	46	46	46	46	46	46

**. Correlation is significant at the 0.01 level (2-tailed).

From Tabel 4 it can be seen that the value of the Pearson correlation coefficient is as follows:

a. The value of the Pearson correlation coefficient between Y and X_1 is 0,467, which means that the level of relationship between variabel Y and X_1 is moderate.

b. The value of the Pearson correlation coefficient between Y and X_2 is 0,416, which means that the level of relationship between variabel Y and X_2 is moderate.

c. The value of the Pearson correlation coefficient between Y and X_3 is 0,380, which means that the level of relationship between variabel Y and X_3 is low.

d. The value of the Pearson correlation coefficient between Y and X_4 is 0,487, which means that the level of relationship between variabel Y and X_4 is moderate.
e. The value of the Pearson correlation coefficient between Y and X_5 is 0,612, which means that the level of relationship between variabel Y and X_5 is strong.

Table 5. ANOVA between Y and X_1, X_2, X_3, X_4, X_5

ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Transparency (X1)	Between Groups	388.678	38	10.228	1.923	.083
	Within Groups	37.235	7	5.319		
	Total	425.913	45			
Accountability (X2)	Between Groups	330.398	38	8.695	1.868	.104
	Within Groups	32.580	7	4.654		
	Total	362.978	45			
Responsibility (X3)	Between Groups	117.267	38	3.086	2.150	.072
	Within Groups	10.059	7	1.437		
	Total	127.326	45			
Independency (X4)	Between Groups	208.867	38	5.497	3.540	.015
	Within Groups	10.872	7	1.553		
	Total	219.739	45			
Fairness (X5)	Between Groups	139.362	38	3.667	3.631	.005
	Within Groups	7.073	7	1.010		
	Total	146.435	45			

From Table 5 it can be seen that the smallest partial$F_{partial}$ with level $(\alpha) = 0{,}05$is 1,868 (variable X_2), while theF_{table} value with level$(\alpha) = 0{,}05$ is $F_{(k-1;n-k)} = F_{(6-1;46-6)} = F_{(5;40)} = 2{,}45$. Therefore the smallest partial$F_{partial} < F_{table}$ then the variable X_2comes out of the regression equation model.

Multiple Regression Equation Model between Y and X_1, X_3, X_4, X_5

The stages are as follows:

1. Multiple Regression Coefficients

Table 6. Multiple Regression Equation Model between Y and X_1, X_3, X_4, X_5

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	8.079	1.932		4.181	.000		
	Transparency (X1)	.039	.104	.066	.374	.711	.462	2.164
	Responsibility (X3)	-.042	.171	-.039	-.246	.807	.578	1.730
	Independency (X4)	.192	.120	.233	1.605	.116	.679	1.473
	Fairness (X5)	.471	.189	.465	2.487	.017	.409	2.446

a. Dependent Variable: Kinerja Karyawan (Y)

From Tabel 6 it can be obtained the values of the multiple regression coefficients are as follows:

$$\beta_0 = 8{,}079;\quad \beta_1 = 0{,}039;\quad \beta_3 = -0{,}042;\quad \beta_4 = 0{,}192;\quad \beta_5 = 0{,}471.$$

So that the multiple linear regression equation model that is formed is

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$
$$\hat{Y} = 8{,}079 + 0{,}039X_1 - 0{,}042X_3 + 0{,}192X_4 + 0{,}471X_5$$

2. Testing the Significance of Multiple Regression

Table 7. ANOVA[a] between Y and X_1, X_3, X_4, X_5

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	62.069	4	15.517	7.243	.000[b]
	Residual	87.844	41	2.143		
	Total	149.913	45			

a. Dependent Variable: Kinerja Karyawan (Y)
b. Predictors: (Constant), Fairness (X5), Independency (X4), Responsibility (X3), Transparency (X1)

From Table 7 it can be seen that the $F_{count} = 7{,}243$ with a significant level $(\alpha) = 0{,}05$, while F_{table} value with a significant level $(\alpha) = 0{,}05$ is $F_{(k-1;n-k)} = F_{(5-1;46-5)} = F_{(4;41)} = 2{,}60$. Therefore $F_{hitung} > F_{tabel}$, it can be concluded that regeneration means.

3. Testing Pearson Correlation and ANOVA

Table 8. Testing Pearson correlation between Y and X_1, X_3, X_4, X_5

Correlations

		Kinerja Karyawan (Y)	Transparency (X1)	Responsibility (X3)	Independency (X4)	Fairness (X5)
Kinerja Karyawan (Y)	Pearson Correlation	1	.467**	.380**	.487**	.612**
	Sig. (2-tailed)		.001	.009	.001	.000
	N	46	46	46	46	46
Transparency (X1)	Pearson Correlation	.467**	1	.569**	.403**	.708**
	Sig. (2-tailed)	.001		.000	.005	.000
	N	46	46	46	46	46
Responsibility (X3)	Pearson Correlation	.380**	.569**	1	.473**	.582**
	Sig. (2-tailed)	.009	.000		.001	.000
	N	46	46	46	46	46
Independency (X4)	Pearson Correlation	.487**	.403**	.473**	1	.529**
	Sig. (2-tailed)	.001	.005	.001		.000
	N	46	46	46	46	46
Fairness (X5)	Pearson Correlation	.612**	.708**	.582**	.529**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	46	46	46	46	46

**. Correlation is significant at the 0.01 level (2-tailed).

From Tabel 8 it can be seen that the value of the Pearson correlation coefficient is as follows:

a. The value of the Pearson correlation coefficient between Y and X_1 is 0,467, which means that the level of relationship between variabel Y and X_1 is moderate.
b. The value of the Pearson correlation coefficient between Y and X_3 is 0,380, which means that the level of relationship between variabel Y and X_3 is low.

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c. The value of the Pearson correlation coefficient between Y and X_4 is 0,487, which means that the level of relationship between variabel Y and X_4 is moderate.
d. The value of the Pearson correlation coefficient between Y and X_5 is 0,612, which means that the level of relationship between variabel Y and X_5 is strong.

Table 9. ANOVA between Y and X_1, X_3, X_4, X_5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Transparency (X1)	Between Groups	388.678	38	10.228	1.923	.083
	Within Groups	37.235	7	5.319		
	Total	425.913	45			
Responsibility (X3)	Between Groups	117.267	38	3.086	2.150	.072
	Within Groups	10.059	7	1.437		
	Total	127.326	45			
Independency (X4)	Between Groups	208.867	38	5.497	3.540	.015
	Within Groups	10.872	7	1.553		
	Total	219.739	45			
Fairness (X5)	Between Groups	139.362	38	3.667	3.631	.005
	Within Groups	7.073	7	1.010		
	Total	146.435	45			

From Table 9 it can be seen that the smallest partial $F_{partial}$ with level $(\alpha) = 0{,}05$ is 1,923 (variable X_1), while the F_{table} value with level $(\alpha) = 0{,}05$ is $F_{(k-1;n-k)} = F_{(5-1;46-5)} = F_{(4;41)} = 2{,}60$. Therefore the smallest partial $F_{partial} < F_{table}$ then the variable X_1 comes out of the regression equation model.

Multiple Regression Equation Model between Y and X_3, X_4, X_5

The stages are as follows:

1. Multiple Regression Coefficients

Table 10. Multiple Regression Equation Model between Y and X_3, X_4, X_5

Coefficients[a]

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1 (Constant)	7.984	1.896		4.212	.000		
Responsibility (X3)	-.025	.163	-.023	-.153	.879	.623	1.605

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Independency (X4)	.192	.119	.232	1.615	.114	.679	1.472
Fairness (X5)	.509	.157	.503	3.231	.002	.578	1.730

a. Dependent Variable: Kinerja Karyawan (Y)

From Tabel 10 it can be obtained the values of the multiple regression coefficients are as follows:

$$\beta_0 = 7{,}984; \quad \beta_3 = -0{,}025; \quad \beta_4 = 0{,}192; \quad \beta_5 = 0{,}509.$$

So that the multiple linear regression equation model that is formed is

$$\hat{Y} = \beta_0 + +\beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

$$\hat{Y} = 7{,}984 - 0{,}025X_3 + 0{,}192X_4 + 0{,}509X_5$$

2. Testing the Significance of Multiple Regression

Table 11. ANOVA[a] between Y and X_3, X_4, X_5

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	61.770	3	20.590	9.811	.000[b]
	Residual	88.143	42	2.099		
	Total	149.913	45			

a. Dependent Variable: Kinerja Karyawan (Y)
b. Predictors: (Constant), Fairness (X5), Independency (X4), Responsibility (X3)

From Table 11 it can be seen that the $F_{count} = 9{,}811$ with a significant level $(\alpha) = 0{,}05$, while F_{table} value with a significant level $(\alpha) = 0{,}05$ is $F_{(k-1;n-k)} = F_{(4-1;46-4)} = F_{(3;42)} = 2{,}83$. Therefore $F_{hitung} > F_{tabel}$, it can be concluded that regeneration means.

3. Testing Pearson Correlation and ANOVA

Table 12. Testing Pearson correlation between Y and X_3, X_4, X_5

Correlations

		Kinerja Karyawan (Y)	Responsibility (X3)	Independency (X4)	Fairness (X5)
Kinerja Karyawan (Y)	Pearson Correlation	1	.380**	.487**	.612**
	Sig. (2-tailed)		.009	.001	.000
	N	46	46	46	46
Responsibility (X3)	Pearson Correlation	.380**	1	.473**	.582**
	Sig. (2-tailed)	.009		.001	.000
	N	46	46	46	46
Independency (X4)	Pearson Correlation	.487**	.473**	1	.529**
	Sig. (2-tailed)	.001	.001		.000
	N	46	46	46	46
Fairness (X5)	Pearson Correlation	.612**	.582**	.529**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	46	46	46	46

**. Correlation is significant at the 0.01 level (2-tailed).

From Tabel 12 it can be seen that the value of the Pearson correlation coefficient is as follows:

a. The value of the Pearson correlation coefficient between Y and X_3 is 0,380, which means that the level of relationship between variabel Y and X_3 is low.

b. The value of the Pearson correlation coefficient between Y and X_4 is 0,487, which means that the level of relationship between variabel Y and X_4 is moderate.

c. The value of the Pearson correlation coefficient between Y and X_5 is 0,612, which means that the level of relationship between variabel Y and X_5 is strong.

Table 13. ANOVA between Y and X_3, X_4, X_5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Responsibility (X3)	Between Groups	117.267	38	3.086	2.150	.072
	Within Groups	10.059	7	1.437		
	Total	127.326	45			
Independency (X4)	Between Groups	208.867	38	5.497	3.540	.015
	Within Groups	10.872	7	1.553		
	Total	219.739	45			
Fairness (X5)	Between Groups	139.362	38	3.667	3.631	.005
	Within Groups	7.073	7	1.010		
	Total	146.435	45			

From

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Table 13 it can be seen that the smallest partial $F_{partial}$ with level $(\alpha) = 0{,}05$ is 2,150 (variable X_3), while the F_{table} value with level $(\alpha) = 0{,}05$ is $F_{(k-1;n-k)} = F_{(4-1;46-4)} = F_{(3;42)} = 2{,}83$. Therefore the smallest partial $F_{partial} < F_{table}$ then the variable X_3 comes out of the regression equation model.

Multiple Regression Equation Model between Y and X_4, X_5

The stages are as follows:

1. Multiple Regression Coefficients

Table 14. Multiple Regression Equation Model between Y and X_4, X_5

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	7.868	1.717		4.583	.000		
	Independency (X4)	.187	.114	.227	1.645	.107	.720	1.388
	Fairness (X5)	.498	.139	.492	3.572	.001	.720	1.388

a. Dependent Variable: Kinerja Karyawan (Y)

From Tabel 14 it can be obtained the values of the multiple regression coefficients are as follows:

$$\beta_0 = 7{,}868; \quad \beta_4 = 0{,}187; \quad \beta_5 = 0{,}498.$$

So that the multiple linear regression equation model that is formed is

$$\hat{Y} = \beta_0 + \beta_4 X_4 + \beta_5 X_5$$

$$\hat{Y} = 7{,}868 + 0{,}187 X_4 + 0{,}498 X_5$$

2. Testing the Significance of Multiple Regression

Table 15. ANOVA[a] between Y and X_4, X_5

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.721	2	30.861	15.047	.000[b]
	Residual	88.192	43	2.051		
	Total	149.913	45			

a. Dependent Variable: Kinerja Karyawan (Y)

b. Predictors: (Constant), Fairness (X5), Independency (X4)

From Table 15 it can be seen that the $F_{count} = 15{,}047$ with a significant level $(\alpha) = 0{,}05$, while F_{table} value with a significant level $(\alpha) = 0{,}05$ is $F_{(k-1;n-k)} = F_{(3-1;46-3)} = F_{(2;43)} = 3{,}21$. Therefore $F_{hitung} > F_{tabel}$, it can be concluded that regeneration means.

3. Testing Pearson Correlation and ANOVA

Table 16. Testing Pearson correlation between Y and X_4, X_5

Correlations

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		Kinerja Karyawan (Y)	Independency (X4)	Fairness (X5)
Kinerja Karyawan (Y)	Pearson Correlation	1	.487**	.612**
	Sig. (2-tailed)		.001	.000
	N	46	46	46
Independency (X4)	Pearson Correlation	.487**	1	.529**
	Sig. (2-tailed)	.001		.000
	N	46	46	46
Fairness (X5)	Pearson Correlation	.612**	.529**	1
	Sig. (2-tailed)	.000	.000	
	N	46	46	46

**. Correlation is significant at the 0.01 level (2-tailed).

From Tabel 16 it can be seen that the value of the Pearson correlation coefficient is as follows:

a. The value of the Pearson correlation coefficient between Y and X_4 is 0,487, which means that the level of relationship between variabel Y and X_4 is moderate.
b. The value of the Pearson correlation coefficient between Y and X_5 is 0,612, which means that the level of relationship between variabel Y and X_5 is strong.

Table 17. ANOVA between Y and X_4, X_5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Independency (X4)	Between Groups	208.867	38	5.497	3.540	.015
	Within Groups	10.872	7	1.553		
	Total	219.739	45			
Fairness (X5)	Between Groups	139.362	38	3.667	3.631	.005
	Within Groups	7.073	7	1.010		
	Total	146.435	45			

From Table 17 it can be seen that the smallest partial $F_{partial}$ with level $(\alpha) = 0{,}05$ is 3,540 (variable X_4), while the F_{table} value with level $(\alpha) = 0{,}05$ is $F_{(k-1;n-k)} = F_{(3-1;46-3)} = F_{(2;43)} = 3{,}21$. Therefore the smallest partial $F_{partial} > F_{table}$, the variable X_4 does not come out of the regression equation model.

Estimator Formation

The stages are as follows:

1. Estimator Equation in Backward Elimination Method
   Of the five independent variables, there are only two variables included in the estimator equation model, namely variables X_4 and X_5. The estimator equation model of the variables X_4 and X_5 is as follows:

$$\hat{Y} = \beta_0 + \beta_4 X_4 + \beta_5 X_5$$

$$\hat{Y} = 7{,}868 + 0{,}187 X_4 + 0{,}498 X_5$$

2. Coefficient of Determination
   The value of the coefficient of determination formed from the backward elimination method is as follows:

Table 18. Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.648[a]	.419	.347	1.475

a. Predictors: (Constant), Fairness (X5), Independency (X4), Responsibility (X3), Transparency (X1), Accountability (X2)

In Table 18 there is a large value of the coefficient of determination which is 0,419 or 41,9% and these results come from

$$R^2 = (r)^2 \times 100\%$$
$$R^2 = (0{,}648)^2 \times 100\%$$
$$R^2 = 0{,}419 \times 100\%$$
$$R^2 = 41{,}9\%$$

3. Residu Analysis
   The estimator equation formed from the backward elimination method can use tables to be able to analyze residues. The results of the residual analysis can be seen in Table 19.

Table 19. Correlation Coefficient of Rank Spearman and Residues

No.	Y	$\hat{Y}$	e_j	$Rank\,\hat{Y}$	$Rank\,e$	d	d^2
1	15	17,235	-2,235	19	41	-22	484
2	16	17,235	-1,235	19	34	-15	225
3	20	19,650	0,3499	3	18	-15	225
4	18	19,430	-1,430	6	38	-32	1024
5	18	18,660	-0,657	10	29	-19	361
6	20	19,594	0,406	4	17	-13	169
7	16	18,283	-2,283	12	43	-31	961
8	18	15,441	2,560	39	3	36	1296
9	14	16,265	-2,265	31	42	-11	121
10	19	17,699	1,301	15	9	6	36
11	19	20,112	-1,112	2	32	-30	900
12	18	19,319	-1,319	7	37	-30	900
13	17	17,291	-0,291	17	27	-10	100

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14	17	19,164	-2,164	9	40	-31	961
15	17	19,506	-2,506	5	44	-39	1521
16	18	17,942	0,058	13	20	-7	49
17	18	17,489	0,511	16	16	0	0
18	17	16,750	0,250	28	19	9	81
19	16	17,112	-1,112	25	32	-7	49
20	20	19,252	0,748	8	13	-5	25
21	13	15,667	-2,667	38	45	-7	49
22	20	18,338	1,662	11	8	3	9
23	16	15,262	0,738	42	14	28	784
24	29	20,278	8,722	1	1	0	0
25	16	17,235	-1,235	19	34	-15	225
26	16	17,235	-1,235	19	34	-15	225
27	17	15,093	1,907	43	6	37	1369
28	18	17,004	0,996	26	11	15	225
29	17	17,941	-0,941	14	31	-17	289
30	17	15,270	1,730	41	7	34	1156
31	17	15,041	1,959	44	5	39	1521
32	18	16,806	1,194	27	10	17	289
33	18	17,155	0,8446	24	12	12	144
34	16	16,176	-0,176	32	23	9	81
35	16	15,394	0,606	40	15	25	625
36	14	14,667	-0,667	45	30	15	225
37	19	16,411	2,589	29	2	27	729
38	17	17,213	-0,213	23	24	-1	1
39	16	15,988	0,012	35	21	14	196
40	18	15,700	2,300	37	4	33	1089
41	13	16,012	-3,012	34	46	-12	144
42	14	15,724	-1,725	36	39	-3	9
43	17	17,249	-0,249	18	25	-7	49
44	16	16,276	-0,276	30	26	4	16

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45	16	16,102	-0,102	33	22	11	121
46	14	14,335	-0,336	46	28	18	324
	Total		0				15.382
	Rata-Rata		0				334,39

a. Assumption (i): the average residual equals zero
From Table 19 it can be seen that the average residual value of e_j is 0, then the assumption statement (i) is fulfilled.
b. Assumption (ii): variance (e_j) = variance (e_k) = σ^2
The proof of this assumption can be done with the Rank Spearman test.
a) Spearman Rank Test

$$r_s = 1 - \frac{6\sum d^2}{n(n^2-1)}$$

$$r_s = 1 - \frac{6 \times 15.382}{46[(46)^2-1]}$$

$$r_s = 1 - \frac{92.292}{46(2.116-1)}$$

$$r_s = 1 - \frac{92.292}{46 \times 2.115}$$

$$r_s = 1 - \frac{92.292}{97.290}$$

$$r_s = 1 - 0,948$$

$$r_s = 0,052$$

b) Find the calculated value

$$t_{hitung} = \frac{r_s\sqrt{n-2}}{\sqrt{1-r_s{}^2}}$$

$$t_{hitung} = \frac{0,052 \times \sqrt{46-2}}{\sqrt{1-(0,052)^2}}$$

$$t_{hitung} = \frac{0,052 \times \sqrt{44}}{\sqrt{1-0,002704}}$$

$$t_{hitung} = \frac{0,052 \times 6,63324958071}{\sqrt{0,997296}}$$

$$t_{hitung} = \frac{0,3449289782}{0,99864708481}$$

$$t_{hitung} = 0,345$$

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From the calculation above, it is known that $n = 46$with a significant level $(\alpha) = 0{,}05$, the value t_{count} of is 0,345 while the value of t_{table} is $t_{table} = t_{(\alpha/2;n-k)} = t_{(0{,}05/2;46-6)} = t_{(0{,}025;40)} = 2{,}02108$. Therefore, $t_{count} < t_{table}$ the assumption statement (ii) is fulfilled.

c. Assumptions (iii): covariance $(e_j, e_k) = 0; j \neq k$

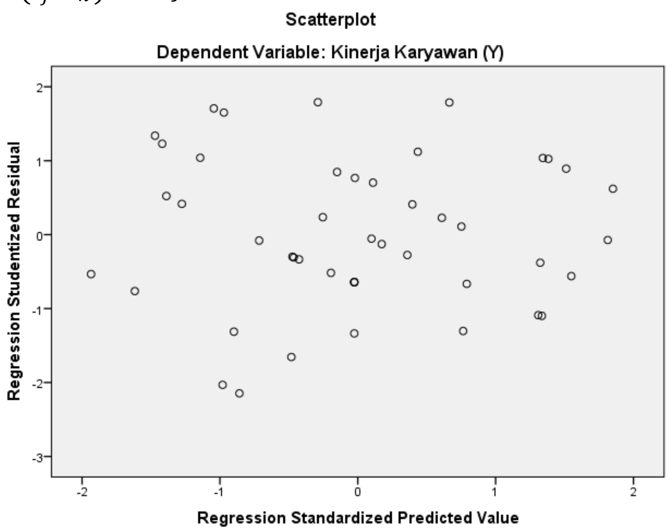

Figure 1. Heteroscedasticity Test

In Figure 1 the distribution of the points above and below or around zero does not form a particular pattern or flow, so it can be concluded that there is no heteroscedasticity. Thus, the assumptions are met and the regression model can be used to predict the variables that have the greatest influence on the application of the principles of Good Corporate Governance at PT. Asuransi Jasa Indonesia Medan Branch Office.

Conclusions

Based on the results and discussion, it can be concluded that from the five factors, namely transparency (X_1), accountability (X_2), responsibility (X_3), independency (X_4) and fairness (X_5) there are two factors that most influence the application of the principles of Good Corporate Governance at PT. Asuransi Jasa Indonesia Medan Branch Office, namely independency (X_4) and fairness (X_5) with the regression equation model is $\hat{Y} = 8{,}056 + 0{,}069X_1 - 0{,}078X_2 - 0{,}018X_3 + 0{,}200X_4 + 0{,}501X_5$ and based on Pearson correlation (Pearson product momen), a fairly close relationship between the dependent variable and the independent variable is the relationship between employee performance and fairness with a value of 0,612.

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