The Influence of Internal Control of Raw Material Inventory and Production Process Planning on the Smoothness of the Production Process in the Production Department of PT. Hogy Indonesia Cibitung

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ABSTRACT

The purpose of this research is to find out the influence of internal control of raw material inventory and production process planning on the smoothness of the production process in the production department of PT. Hogy Indonesia Cibitung. This research applies a quantitative-causality approach. The measurement of research variables uses the Likert Scale for each statement developed from each indicator variable. The population in this study consists of employees in the Over All Drape department. The sample used in this research consisted of 56 respondents, and the sampling technique was non-probability sampling. Data analysis techniques applied in this research were statistical techniques such as validity and reliability tests for the questionnaire and multiple linear regression analysis with f-test and t-test for hypothesis testing. The study found that internal control of raw material inventory and production process planning have a positive influence on the smoothness of the production process in the Over All Drape department. Internal control of raw material inventory and production process planning together simultaneously have a positive influence on the smoothness of the production process in the Over All Drape department.

INTRODUCTION

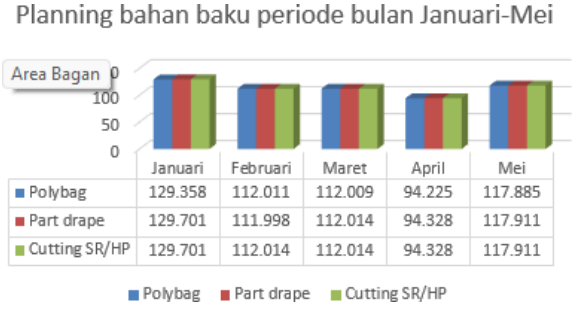
Raw materials are very important in running a production plan because they are one of the important elements in the procurement process. Therefore, raw materials are one of the components that must receive special attention during the production process.

Planning for the right raw material inventory greatly supports the smooth running of the production process. The smooth running of the production process is very important for the company because it greatly affects the level of sales and profits obtained by the company.

If the stock of raw materials is not available in the required amount, then this will have a negative impact on the company, namely affecting the company's profits. This is due to the costs incurred due to the company running out of stock which results in the loss of the opportunity to make a profit because consumer demand cannot be served, the production process is disrupted.

Internal control is the organizational plan and business methods that protect assets, provide accurate and reliable information, facilitate and improve operations.

Figure 1. organization, and encourage compliance with established practices (Arinda, 2022).



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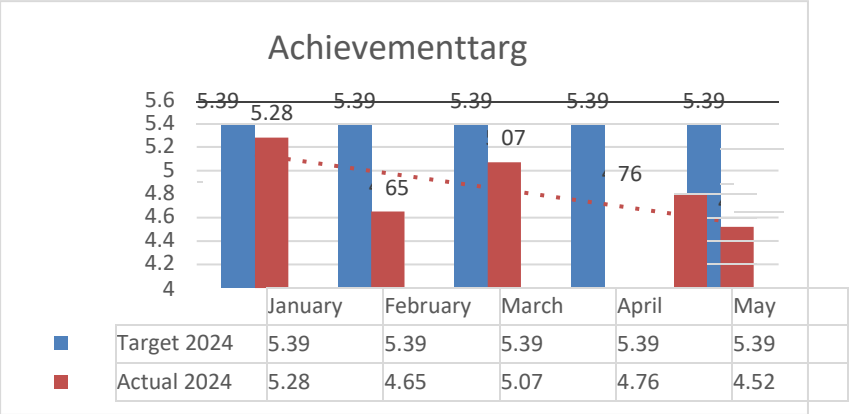
Based on Figure I.1, it shows that there is a difference between the raw materials for polybags, partdrape, and cutting in the period January - May which resulted in disruption in the production process.

Based on the results of observations before the research, the problems that occurred at PT. Hogy Indonesia in the Over All Drape Production Department were that there were often obstacles in the production process. One of them is from the raw materials that are late in being procured in the manufacture of partial raw materials by the polybag department, also the large number of HP/SR fabrics that are rejected due to the poor quality of the material, of course making the production process not smooth causing the daily output not to be achieved.

Figure 2. Target Achievement



	January	February	March	April	May
Target 2024	5.39	5.39	5.39	5.39	5.39
Actual 2024	5.28	4.65	5.07	4.76	4.52

Source: Achievement of Over All Drape Department targets

Then, there are frequent shifts or changes in the raw material code which causes the fabric code to be changed and QC tests must be carried out again to see whether the product can run or not, whether the product is good or not, so that it takes a long time again and must be rescheduled.

In addition, in the planning of the production process for orders that are sent to the Non Heat Press (NHP) and machine sections, it is done randomly, not in accordance with the export schedule that determines the plan. This causes the process to not run smoothly because there are many obstacles. Based on the information that the author has collected in the field, that the discrepancy between the production plan target and the production realization is caused by delays in the procurement of raw materials and the inaccuracy of production process planning between the production schedule and the available raw materials.

LITERATURE REVIEW

ManagementLogistics

According to Irawan et al. (2024), logistics management is a series of decisions to manage goods optimally starting from planning needs, procurement or collection, moving, storing, to delivering distribution of goods to customers.

Internal Control

According to Mulyadi (2014) internal control includes organizational structure, methods and measures that are coordinated to protect organizational assets, check the accuracy and reliability of accounting data, encourage efficiency and encourage compliance with management policies.

Supply

According to Mulyadi (Akbar and Saifi, 2018) Inventory is an asset element that is stored for sale in normal business activities or goods that will be consumed in the production process that are sold.

Raw material

According to Masiyal Kholmi (2013: 29) raw materials are materials that form a large part of the finished product. Raw materials processed in manufacturing companies can be obtained from local purchases, imports or from their own processing.

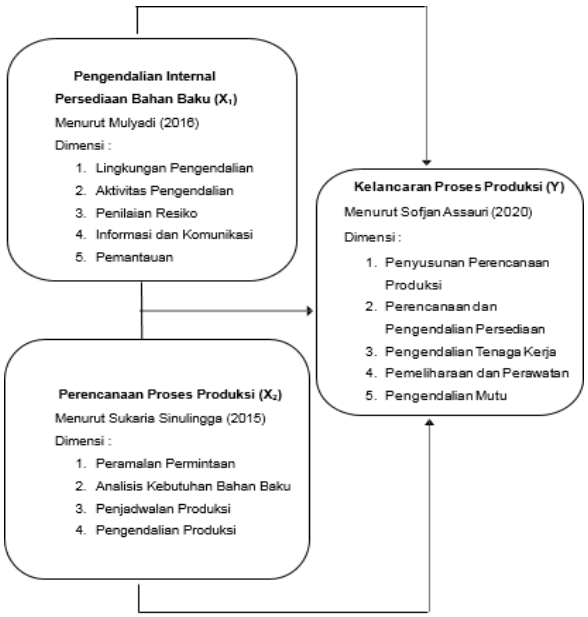
Production Process Planning

According to Sukaria Sinulingga (2015) production planning is an effort made to determine the steps that must be taken in the production process efficiently and effectively. In his view, production planning activities include analysis of raw material needs, demand forecasting, scheduling, and control to achieve optimal output.

Smooth Production Process

According to Heizer and Render (2014), production is the process of creating goods and services. Operations management is a series of activities that produce value in the form of goods and services by changing inputs into outputs.

Theoretical Framework



Gambar II. 1 Kerangka Teori

Hypothesis

Hypothesis is a temporary answer to a problem faced and needs to be tested for its truth with more complete and supporting data. This study was conducted to determine the application of the method. The following is the formulation of the hypothesis of this study:

H1 :There is a positive and significant influence between Internal Control of Raw Materials on the Smoothness of the Production Process of the Production Department of PT. Hogy Indonesia Cibitung.

H2 :There is a positive and significant influence between Production Process Planning on the Smoothness of the Production Process of the Production Department of PT. Hogy Indonesia Cibitung.

H3 : There is a positive and significant influence between Internal Control of Raw Material Inventory and Production Process Planning on the Smoothness of the Production Department's Production Process.Production Department of PT. Hogy Indonesia Cibitung.

RESEARCH METHODS

A. Research methods

This study uses quantitative research methods. Quantitative research according to Sugiyono (2019) is a method used in conducting research in a particular population or sample. This type of research is a causal (cause-effect) research between variables.

B. Operational Variables

1. Internal Control of Raw Material Inventory (X1)

Internal control of raw material inventory is important because inventory is everything that can affect production and the main source of income for the company. In this case, Internal Control of Raw Material Inventory is measured using the dimensions proposed by Mulyadi (2016), namely (1) Control environment, (2) Control activities, (3) Risk assessment, (4) Information and communication, (5) Monitoring.

2. Production Process Planning (X2)

Production planning is an important process in the operational management of a company. Production Process Planning is measured using the dimensions proposed by Sukaria Sinulingga (2015), namely: 1) Demand Analysis, 2) Determination of Raw Material Requirements, 3) Production Scheduling, 4) Production Control.

3. Smooth Production Process (Y)

Smoothness is the state of smoothness of (something) development which is very dependent on the facilities, manpower and costs available.smoothness of production process is measuredwith the dimensions proposed by Sofjan Assauri (2020), namely: 1) Planning Preparation, 2) Planning and Inventory Control, 3) Maintenance and Care, 4) Labor, 5) Quality Control.

C. Data collection technique

In an effort to obtain the data and information needed by researchers in this study, data collection activities use several techniques as follows:

1. Observational Study

   Observation is a data collection technique by means of direct observation of the research object, namely by the researcher seeing and working directly at PT. Hogy Indonesia Cibitung.

2. Questionnaire Method

   A questionnaire is a data collection technique that is done by giving a set of written questions or statements to respondents to be answered. Researchers use a Likert scale.

D. Sampling Techniques

The sampling technique used in this study is using a purposive sampling approach. According to Sugiyono, purposive sampling is a sampling technique with certain considerations. The criteria used as samples in this study are employees starting from leaders as policy makers, to subordinates who know and are directly involved in production.

E. Data Analysis Techniques

The data analysis method in this study is a study that uses quantitative descriptive. The results of the data collection are then processed so that the information that occurs is easier to interpret and further analyzed in accordance with the form of discussion analysis techniques used. There are two important things in the questionnaire, namely, validity and reliability. An instrument can be declared valid if it can measure what is desired and can reveal data from the variables that have been studied accurately.

RESEARCH RESULTS AND DISCUSSION

A. Validity Test

According to Ghazali (2018) "Validity testing is used to measure the validity of a questionnaire. The criteria for determining the validity of a questionnaire are as follows:

1. If r count > r table then the statement is declared valid.
2. If r count < r table then the statement is declared invalid.

Table 1. Validity Test Results

Tabel Uji Validitas

Variabel	Item Pertanyaan	R Tabel	R Hitung	Keterangan
Pengendalian Internal Persediaan Bahan Baku (X1)	1	0,263	0,558	Valid
	2	0,263	0,471	Valid
	3	0,263	0,452	Valid
	4	0,263	0,439	Valid
	5	0,263	0,543	Valid
	6	0,263	0,407	Valid
	7	0,263	0,595	Valid
	8	0,263	0,438	Valid
	9	0,263	0,521	Valid
	10	0,263	0,596	Valid
	11	0,263	0,622	Valid
	12	0,263	0,404	Valid
Perencanaan Proses Produksi (X2)	1	0,263	0,566	Valid
	2	0,263	0,639	Valid
	3	0,263	0,566	Valid
	4	0,263	0,548	Valid
	5	0,263	0,570	Valid
	6	0,263	0,633	Valid
	7	0,263	0,635	Valid
	8	0,263	0,557	Valid
Kelancaran Proses Produksi (Y)	1	0,263	0,384	Valid
	2	0,263	0,466	Valid
	3	0,263	0,601	Valid
	4	0,263	0,633	Valid
	5	0,263	0,449	Valid
	6	0,263	0,755	Valid
	7	0,263	0,650	Valid
	8	0,263	0,575	Valid
	9	0,263	0,542	Valid
	10	0,263	0,543	Valid
	11	0,263	0,458	Valid

B. Reliability Test

Reliability test in this study was used to determine whether the data collection tool showed a level of accuracy, level of accuracy, stability or consistency in revealing certain symptoms. Alpha values between 0.80 - 1.0 are categorized as good reliability, values 0.60 - 0.79 are categorized as acceptable reliability and if the alpha is less than 0.60 it is categorized as poor reliability.

The results of the reliability test show that the Cronbach's Alpha value for the Internal Control of Raw Material Inventory (X1) variable is 0.731, Production Process Planning (X2) is 0.731, and Production Process Smoothness (Y) is 0.766. According to the criteria, each value of the variable is greater than 0.60, so the results of the distributed questionnaire have a good level of reliability, or in other words the data from the distributed questionnaire is reliable or can be trusted.

C. Normality Test

According to Yuwanto and Halim (2017) "the normality test is used to determine whether the sample from the population is normally distributed or not." In this normality test, the Liliefors test is used by looking at the significant value in Kolmogorov-Smirnov.

The testing criteria are as follows

1. If the significance ≥ 0.05 then the data is normally distributed.
2. If the significance ≤ 0.05 then the data is not normally distributed.

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Table 2. One-Sample Kolmogorov-Smirnov TestTest

		Unstandardized Residual
N		56
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2.48444486
Most Extreme Differences	Absolute	.081
	Positive	.061
	Negative	-.081
Test Statistic		.081
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Sumber : Data diolah menggunakan SPSS Versi.25

D. Correlation Coefficient Test

Table 3. Correlation Coefficient Test Results

Correlations				
		Pengendalian Internal Persediaan Bahan Baku	Perencanaan Proses Produksi	Kelancaran Proses Produksi
Pengendalian Internal Persediaan Bahan Baku	Pearson Correlation	1	.678**	.676**
	Sig. (2-tailed)		.000	.000
	N	56	56	56
Perencanaan Proses Produksi	Pearson Correlation	.678**	1	.708**
	Sig. (2-tailed)	.000		.000
	N	56	56	56
Kelancaran Proses Produksi	Pearson Correlation	.676**	.708**	1
	Sig. (2-tailed)	.000	.000	
	N	56	56	56
**. Correlation is significant at the 0.01 level (2-tailed).				

Based on Table 3. Results of the Correlation Coefficient Test of Internal Control of Raw Material Inventory (X_1) on the smoothness of the production process (Y) produces a Pearson correlation value of 0.676 with significance value of 0.000 or less than 0.01, it can be concluded that Internal Control of Raw Material Inventory (X1) towards Smooth Production Process (Y) has a strong correlation level. While Production Process Planning (X2) towards Smooth Production Process.

Production (Y) produces a Pearson correlation value of 0.708 with a significance value of 0.000 or less than 0.01, so it can be concluded that Production Process Planning (X2) on Production Process Smoothness (Y) has a sufficient level of correlation.

E. Coefficient of Determination Test

Table 4. Results of the Determination Coefficient Test

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.756[a]	.572	.556	2.53089
a. Predictors: (Constant), Perencanaan Proses Produksi, Pengendalian Internal Persediaan Bahan Baku				
b. Dependent Variable: Kelancaran Proses Produksi				

Based on Table 4. The results of the Determination Coefficient Test obtained the Adjusted R Square value for the influence of Internal Control of Raw Material Inventory (X1) and Production Process Planning (X2) on the Smoothness of the Production Process (Y) of 0.572. This shows that the percentage of the influence of the independent variables of Internal Control of Raw Material Inventory (X1) and Production Process Planning (X2) on the dependent variable of the Smoothness of the Production Process (Y) is 57.2% while the remaining 42.8% is influenced by other factors not examined in this regression model.

F. Multiple Linear Regression Test

Table 5. Multiple Linear Regression Test Results

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	8.697	4.754		1.829	.073		
	Pengendalian Internal Persediaan Bahan Baku	.355	.119	.363	2.970	.004	.540	1.851
	Perencanaan Proses Produksi	.597	.158	.462	3.778	.000	.540	1.851
a. Dependent Variable: Kelancaran Proses Produksi								

Sumber : Data diolah menggunakan SPSS Versi.25

From the regression equation above, it can be concluded as follows: a = The constant value (a) is 8.697, meaning that if the independent variables, namely Internal Control of Raw Material Inventory and Production Process Planning, have a value of zero, then the Smoothness of the Production Process has a value of 8.697.

$b1$ = The regression coefficient value of the Raw Material Inventory Internal Control variable is positive, which is 0.355. This shows that every 1% increase in the Raw Material Inventory Control variable will increase Production Process Planning by 35.5%, assuming other variables have fixed values.

$b2$ = The regression coefficient value of the Production Process Planning variable is positive, which is 0.597. This shows that every 1% increase in the Production Process Planning variable will increase the Smoothness of the Production Process by 59.7%, assuming other variables have fixed values.

G. T-test

According to Ghazali (2017) "The t-test or partial test aims to determine whether there is an influence of each independent variable individually on the dependent variable.

Table 6. T-Test Results

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	8.697	4.754		1.829	.073		
	Pengendalian Internal Persediaan Bahan Baku	.355	.119	.363	2.970	.004	.540	1.851
	Perencanaan Proses Produksi	.597	.158	.462	3.778	.000	.540	1.851
a. Dependent Variable: Kelancaran Proses Produksi								

Sumber : Data diolah menggunakan SPSS Versi.25

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H. F Test

Simultaneous test or statistical f test in hypothesis testing which aims to find out whether Independent variable Internal Control of Raw Material Inventory ($X_{1)}$ and Production Process Planning (X2) simultaneously have an influence on the dependent variable of Production Process Smoothness.

Table 7. F Test Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	454.068	2	227.034	35.444	.000[b]
	Residual	339.486	53	6.405		
	Total	793.554	55			
a. Dependent Variable: Kelancaran Proses Produksi						
b. Predictors: (Constant), Perencanaan Proses Produksi, Pengendalian Internal Persediaan Bahan Baku						

Sumber : Data diolah menggunakan SPSS Versi.25

Research Location And Schedule

The location of this research was conducted at PT. Hogy Indonesia Cibitung which is located in the MM 2100 Industrial Area, Block M3 No.1, Jalan Lombok Cikarang Barat, Gandamekar, Bekasi Tim., Bekasi Regency, West Java 17520. The research period was carried out for 5 (five) months starting from March 2024 to July 2024.

Discussion

There is a positive influence between Internal Control of Raw Material Inventory ($X_{1)}$ on the Smoothness of the Production Process (Y). The influence of Internal Control of Raw Material Inventory (X1) on the Smoothness of the Production Process (Y) is 0.457 or 45.7%. While the remaining 54.3% is influenced by other factors that are not examined in this study.

There is a positive influence between Production Process Planning (X2) on the Smoothness of the Production Process (Y). The influence between Production Process Planning (X2) on the Smoothness of the Production Process (Y) is 0.501 or 50.1%. While the remaining 49.9% is influenced by other factors that are not examined in this study.

There is a positive and significant influence between Internal Control of Raw Material Inventory (X1) and Production Process Planning (X2) on the Smoothness of the Production Process (Y). The F statistic result of 35.444 for a probability of 0.05 (5%) obtained an F table of 3.17 and a significant value of 0.0000 <0.05, this shows that F count> F table (35.444> 3.17), so it can be concluded that Internal Control of Raw Material Inventory (X1) and Production Process Planning (X2) together have a significant influence on the Smoothness of the Production Process (Y).

CONCLUSION

Based on the results of the study on the influence of Internal Control of Raw Material Inventory ($X_{1)}$ and Production Process Planning (X2) on Production Process Smoothness (Y) can be concluded as follows

There is a positive influence between Internal Control of Raw Material Inventory (X1) on the Smoothness of the Production Process (Y) of 0.457 or 45.7% while the remaining 54.3% is influenced by other factors that were not examined in this study.

There is a positive influence between Production Process Planning (X2) on the Smoothness of the Production Process of 0.501 or 50.1% while the remaining 49.9% is influenced by other factors not examined in this study.

There is a positive influence between Internal Control of Raw Material Inventory (X1) and Production Process Planning (X2) on the Smoothness of the Production Process (Y) of 0.572 or 57.2% while the remaining 42.8% is influenced by other factors that were not examined by the researcher.

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