

# G-TRANE INFORMATION SYSTEM AND EMPLOYEES' PERFORMANCE AIR FREIGHT DEPARTMENT OF PT NISSIN TRANSPORT INDONESIA

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## ABSTRACT

*PT Nissin Transport Indonesia is a freight forwarding company in export and import sector. The main problem of the study is whether G-Trane information system and the employees' performance influence the productivity of air freight department. The aim of this study is to acknowledge and to analyse the influence of the used information system and the employees' performance towards the productivity of air freight department. The writer used three methods of collecting data; field research, questionnaire, and library research. Multiple regression analysis, multiple correlation, coefficient determining, as well as hypothesis testing research are used in this study. The result of this study is shown by the multiple linear regression equation of  $Y = 13.403 + 0.319.X_1 + 0.224.X_2$ , with the coefficient correlation of 0,64 and determining coefficient of 40,96%. The result of the hypothesis testing research also shows that  $F_{hitung} > F_{tabel}$  or  $4,55 > 3,8$ , which means  $H_0$  is rejected but  $H_a$  is accepted. It means there is a positive and significant influence of the G-Trane information system and the employees' performance towards Air Freight department's productivity.*

**Key words:** G-Trane information system, Employees Performance, Air Freight Department Productivity

## INTRODUCTION

A Freight forwarder provides many kinds of transportation facilities to transport goods from one place to another place. Ideally, there are some important aspects should be noted in order to be a big freight forwarding company. They are excellent services, handling accuracy and complete service facilities as the main supporting process. Especially in the business of air transportation cargo, the working process is very complex since it requires some crucial handling factors such as the speed, time accuracy and safety. Moreover, the process also needs to synergize with other parties like airlines operators, warehouse operators,

customs, port authority, PPJK, shipper, and consignee. Therefore, it is very important that a freight forwarding company build a good network with the whole concerned parties. As an organisation, a freight forwarding company is required to regularly develop the quality of human resources. Since today's competition is very tough, recruitment system could not be able to fulfil the company's needs. Though, the recruitment process is very selective, the company sometimes faces some problem afterwards. Ones' skill and capability will indicate the success of working performance. Accordingly, utilizing the performance of management as tools can also improve the

working performance. From this process, company may create a purposeful future plan. Thus, the scope of performance management includes analysing the working unit purpose as well as determining that the purpose is in line with the whole organisation's purpose, and analysing the employees' skill in order to assign the working unit properly. In a decision making process, a freight forwarding company depends on the use of information system a lot. The information system management is functioned to improve the data accessibility in order to get a punctual and accurate data. As an operational control, this system may help the activities run efficiently and effectively so that the productivity will be improved.

#### Problem Identification

- a. The imbalance of the number of shipment handling which is more than the capacity of the team worker in the import division of air freight.
- b. A susceptible team which is caused by the tight working load that the co-workers get difficulties in supporting each other.
- c. There are some mishandled shipments and sometimes the accounting department issues the invoice behindhand.
- d. In processing the data, *G-Trane* information system has not worked systematically.
- e. At the approval process of making invoice, a *G-Trane* system computes the data slowly.
- f. The *G-Trane* system users still find some difficulties in handling the errors happened during the process of settlement.
- g. The process of issuing the invoice will be repeated from the beginning if there is a mistake in inputting the data at the approval step.

- h. In shipment handling, some documents of export import which are sent from the operation team are sometimes misplaced or misinformed.
- i. In the decision making process, *G-Trane* system has not provided the information needed by the management.

#### The Purpose of the Research :

The purposes of this research are to acknowledge and to analyse the influences of *G-Trane* information system by referring to the criteria of system information management and the user's assessment. Moreover, this research is also aimed to assess the employees' performance of air freight department based on some indicators of performance management.

#### Research Method :

The population of the research is the employees (16 people) of air freight department of PT Nissin Transport Indonesia. The head office is in Tebet, South Jakarta while the operation office is in Cengkareng West Jakarta. For the sample, the writer used the calculation method from Slovin (Riduwan, 2008:65), which is:

$$N = 16 \text{ people; } d^2 = 5\% = 0,05$$
$$n = \frac{16}{16 \times 0,05^2 + 1}, \text{ and the result is } 15,38$$

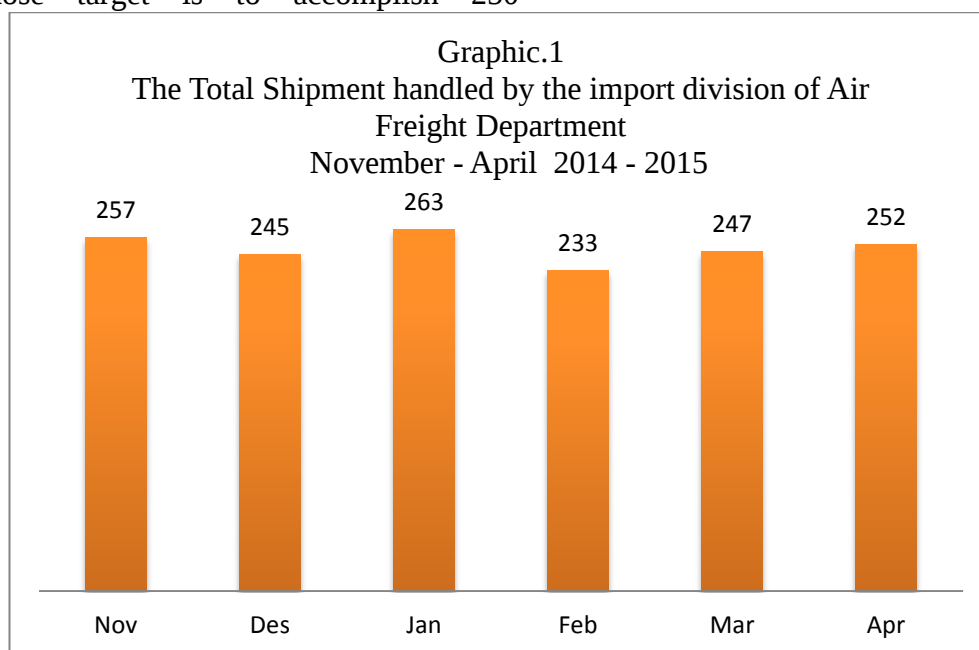
In order to strengthen the research, the writer took the whole sample of the population (16 respondents). For the data analysis, the writer used Multiple Regression Analysis, Multiple Value of Contribution Correlation, and Significance Test.

#### DISCUSSION OF THE RESULT

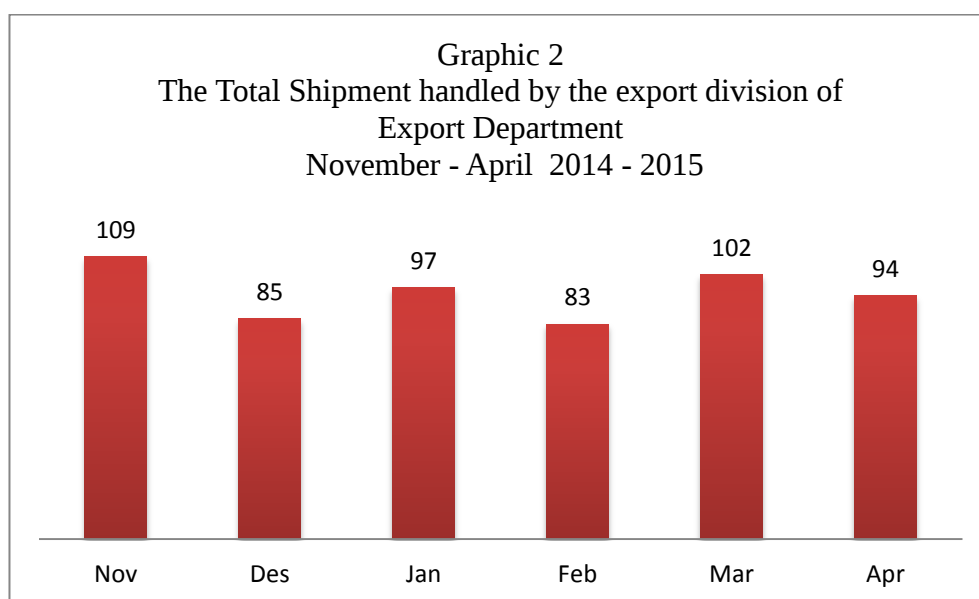
##### 1. The Number of the Shipment Handling

The following graphic is the data of the shipment handled by the export import division of air freight department for the period of November – April 2014 -2015. The first graphic below shows the total shipment handled by the import division. The division consists of five persons whose target is to accomplish 250

shipments every month. The data also shows the flows of the division's performance that is useful for the writer in analysing the influences of G-Trane System and the employees' performance in the stability of the department's productivity.



Source: Air Freight Department



Source: Air Freight Department

The second graphic shows the total shipment handled by export division of air freight department. The division consists of three persons whose target is to accomplish 95 shipments every month. As well as the import division, the export division is the focus of the research in which the writer used to find out the influences of the G-Trane system and the employees' performance to the stability of the department's productivity. Based on the respondents' classification and the data shipment analysis, the writer set 24 questions of questionnaire which are divided into three variables. There are eight questions refer to each variables. Likert Scale is used by the writer to measure the respondents' responses. The writer describes the problems' identification, the variables of G-Trane information system (X1), performance (X2) and productivity (Y), and the research object which is air freight department of PT Nissin Transport Indonesia in the next chapter.

## 2. G-Trane information system analysis (X1)

The statements of the G-Trane information system variables are divided into some dimensions based on the definition of the information system management; procurement, processing, storing, information distribution, decision making and the effectivity. In table 1, the tabulation and the recapitulation result of the questionnaire process of the G-Trane information system variable was taken from 16 respondents of the air freight department of PT Nissin Transport Indonesia. The whole respondents' responses towards the tested statements explain that G-Trane Information System has fulfilled the criteria of a good information system. However, it was found out that there are some important points need to be improved so that the system can work ideally.

Table 1: G-Trane Information System Recapitulation variable

| Statements        | The effects of G-Trane Information System |               |               |              |              |             |
|-------------------|-------------------------------------------|---------------|---------------|--------------|--------------|-------------|
|                   | SS                                        | S             | N             | TS           | STS          | TOTAL       |
| 1                 | 1                                         | 8             | 7             |              |              | 16          |
| 2                 | 2                                         | 5             | 8             | 1            |              | 16          |
| 3                 | 2                                         | 8             | 6             |              |              | 16          |
| 4                 | 3                                         | 9             | 1             | 3            |              | 16          |
| 5                 | 5                                         | 9             | 2             |              |              | 16          |
| 6                 | 3                                         | 9             | 4             |              |              | 16          |
| 7                 | 1                                         | 6             | 9             |              |              | 16          |
| 8                 | 2                                         | 7             | 4             | 3            |              | 16          |
| <b>Total</b>      | <b>19</b>                                 | <b>61</b>     | <b>41</b>     | <b>7</b>     | <b>0</b>     | <b>128</b>  |
| <b>Percentage</b> | <b>14,84%</b>                             | <b>47,66%</b> | <b>32,03%</b> | <b>5,47%</b> | <b>0,00%</b> | <b>100%</b> |

Source: Questionnaires Result Data

## 3. Employees' performance analysis

The statements of employees' performance variable are divided into some dimensions based on the definition of performance management;

purpose, communication, working assessment and feedback. Those dimensions are broken down to find the indicators to be changed into statements. Hereunder are the

recapitulation result and the tabulation of the questionnaire process for the variable of the effects of the employees' performance which was taken from 16 respondents of air freight department of PT Nissin Transport Indonesia. The whole respondents'

responses analysis of the tested statements explains that employees' performance of the air freight department has been optimal. However, there are some points should be undertaken so that the employees' performance could be optimised.

Table 2: The Recapitulation of Employees' Performance Variable

| Statements | Employees' Performance Variable |        |        |       |       |       |
|------------|---------------------------------|--------|--------|-------|-------|-------|
|            | SS                              | S      | N      | TS    | STS   | Total |
| 1          | 3                               | 11     | 2      |       |       | 16    |
| 2          | 5                               | 10     | 1      |       |       | 16    |
| 3          | 6                               | 9      | 1      |       |       | 16    |
| 4          | 1                               | 9      | 6      |       |       | 16    |
| 5          | 4                               | 9      | 2      | 1     |       | 16    |
| 6          | 1                               | 4      | 7      | 4     |       | 16    |
| 7          | 8                               | 7      | 1      |       |       | 16    |
| 8          | 1                               | 5      | 8      | 2     |       | 16    |
| Total      | 29                              | 64     | 28     | 7     | 0     | 128   |
| Percentage | 22,66%                          | 50,00% | 21,88% | 5,47% | 0,00% | 100%  |

Source: Questionnaires Result Data

#### 4. Productivity Analysis of Air Freight Department

The writer divided the statements of productivity variable into two dimensions based on the definition theory of productivity; input and output. Both of the dimensions are broken down to find the

indicators that can be changed into statements.

Here is the recapitulation and tabulation of the questionnaire of productivity variable of the air freight department

Table 3 : Recapitulation of Productivity variable of Air Freight Department

| Statements | Air Freight Department's productivity |        |        |       |       |       |
|------------|---------------------------------------|--------|--------|-------|-------|-------|
|            | SS                                    | S      | N      | TS    | STS   | Total |
| 1          | 4                                     | 11     | 1      |       |       | 16    |
| 2          |                                       | 6      | 7      | 3     |       | 16    |
| 3          | 1                                     | 11     | 4      |       |       | 16    |
| 4          | 5                                     | 7      | 4      |       |       | 16    |
| 5          | 4                                     | 10     | 1      | 1     |       | 16    |
| 6          | 1                                     | 6      | 6      | 3     |       | 16    |
| 7          | 2                                     | 8      | 4      | 2     |       | 16    |
| 8          | 1                                     | 8      | 7      |       |       | 16    |
| Total      | 18                                    | 67     | 34     | 9     | 0     | 128   |
| Percentage | 14,06%                                | 52,34% | 26,56% | 7,03% | 0,00% | 100%  |

Source : Questionnaire Result Data

The analysis of the respondents' responses towards the tested statements shows that productivity level of air freight department is compatible with the management's plan. However, some important points still need to be improved in order to create a maximum result of the productivity.

5. The Analysis of the Influence of G-Trane Information System and the Employees' Performance towards the Productivity of Air Freight Department of PT Nissin Transport Indonesia

One of the purposes of this study is to acknowledge the influence of G-Trane Information System and the employees'

performance towards the productivity of air freight department of PT Nissin Transport Indonesia. The analysis process requires some steps of test before it is proceed to the regression calculation and correlation searching process of those three variables. In analysing the data, the writer used statistical descriptive testing to find the value of the mean, deviation standard minimum value, median, and the maximum value. The purpose of this statistical descriptive testing is to get the accurateness and the abnormalities level of the data.

Table 4 : The Statistical Descriptive Testing Result

|                            | Mean  | Std. Deviation | N  |
|----------------------------|-------|----------------|----|
| Department's productivity  | 29,88 | 2,247          | 16 |
| G-Trane Information System | 29,75 | 3,215          | 16 |
| Employee's Performance     | 31,19 | 2,588          | 16 |

Source: Questionnaire Result Data (SPSS 20.0)

The table shows that the standard deviation value is less than the average value of the mean for all variables. It means that all studied variables have normal and good data distribution.

1. Multicollinearity Testing

Multicollinearity Testing is applied to measure the indicators of the regression model whether there is a correlation between each independent variable. A good regression model must not have

correlation between each independent variable. This testing is applied by considering the matrix correlation value resulted during data process, the VIF value and the limit. The data analysed is free from multicollinearity if the matrix correlation value is not more than 0, 5. It is also applied if the VIF value is below 10 which assumed that the regression model does not have multicollinearity.

Table 5 : Multi-collinear is indicated by the VIF value

| Model                        | Correlations |      | Collinearity Statistics |       |
|------------------------------|--------------|------|-------------------------|-------|
|                              | Partial      | Part | Tolerance               | VIF   |
| (Constant)                   |              |      |                         |       |
| 1 G-Trane information system | ,437         | ,373 | ,669                    | 1,494 |
| Employees' performance       | ,265         | ,211 | ,669                    | 1,494 |

Source: Questionnaire result data (SPSS 20.0)

The table shows there was not found any multicollinearity in this research model. It is indicated by the VIF value which is less than 10 and the *tolerance* is more than 0, 1. Therefore, this regression model is worth to be used to predict the correlation of G-Trane information system and employees' performance towards the air freight department's productivity.

## 2. Normality Testing

Normality Testing is applied to examine a regression model's dependent and independent variable whether they have normal distribution. A good regression model is the one which has normal or almost normal distribution. According to the data sample (n=16), the condition is indicated by this figure 3

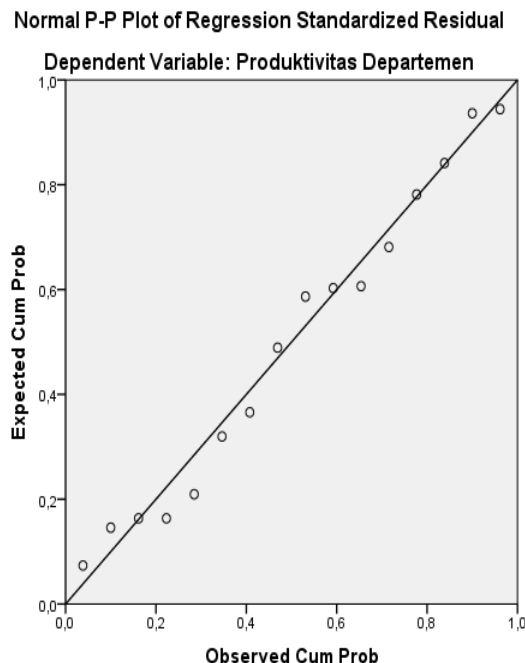


Figure 3: normality testing

a. Source: Questionnaire Result data (SPSS 20.0) Calculation

b. Regression Hereunder is the result of data processing taken by SPSS 20.0

Table 6 : Regression Calculation Result

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics |          |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|----------|
|       |                   |          |                   |                            | R Square Change   | F Change |
| 1     | ,640 <sup>a</sup> | ,410     | ,319              | 1,854                      | ,410              | 4,515    |

Source: Questionnaire Result Data (SPSS 20.0)

Determinant coefficient is used to see the percentage of dependent variable variation (air freight department's productivity) which is examined by the independent variable.

The determinant coefficient value (Adjusted  $R^2$ ) is 0,319. It means, independent variable variation indicated the air freight department's productivity by 31, 9% and the rest of 68,1% is indicated by other untested factors. Through the research model that shows variation change of the air freight department's productivity variables, therefore, the linear regression model equation is considered good that it can value the air freight department's productivity in the future. Hypothesis testing is conducted to see the accurateness of the regression model. The coefficient determination ( $R^2$ ) is applied to see

whether there is a perfect corelation shown by the changing of independent variable followed by the dependent variable in similar proportion. The test is based on the value *R Square* ( $R^2$ ). The coefficient determination value is about 0 to 1. The small value of the  $R^2$  means the independent variables can only examine the variation of dependent variable limitlessly.

c. Multiple Regression Analysis

This analysis is used to measure the influence of G-Trane Information System and employees' performance towards the air freight department's productivity. According to the problem limitation and the hyphotheses stated previously, the result of the data processing is shown in table 17.

Table 7 : The Constants Value and Prediction Directed Value

| Model                        | Unstandardized Coefficients |            | Standardized Coefficients | T     |
|------------------------------|-----------------------------|------------|---------------------------|-------|
|                              | B                           | Std. Error | Beta                      |       |
| (Constant)                   | 13,403                      | 5,947      |                           | 2,254 |
| 1 G-Trane Information system | ,319                        | ,182       | ,456                      | 1,752 |
| Employees' performance       | ,224                        | ,226       | ,258                      | ,990  |

Source: Questionnaire result Data (SPSS 20.0)

The table shows multiple linear regression model as follows;

$$Y = 13.403 + 0.319.X_1 + 0.224.X_2$$

Note:

Y : Air freight department's productivity

X<sub>1</sub> : G-Trane Information system

X<sub>2</sub> : Employees' performance

The regression model results a constants value of 13,403. It proves that there is a correlation between the G-Trane Information System, employees' performance and air freight department's productivity in the operational activity of the company. The positive coefficient regression XI of 0,319 shows that 1% of G-Trane information system with the assumption that the other variables are fixed that a change happened through the department's productivity about 0,319% in the same direction. However, the employees' performance has positive coefficient regression of 0,224, when there is 1% change of the employees' performance with the assumption that other variables are fixed, so that there will be productivity's change of 0,224% in the same direction. Therefore, it can be assumed that the influence of G-Trane information system and the employees' performance towards the air freight department's productivity is strong and high. There is a simultaneous contribution or KP  $(R_{X1.X2.Y})^2 \times 100\% = 0,64^2 \times 100\% = 40,96\%$  and the rest is indicated by the other untested variables. In a significant level  $(\alpha) = 0,05$ , it is achieved  $F_{tab} = 3,8$  after the calculation of  $F_{cal} > F_{tab}$  or  $4,55 > 3,8$ , so that  $H_0$  is rejected and  $H_a$  is accepted. It means there is a significant correlation between the G-Trane Information System and employees' performance towards the air freight department's productivity of the PT Nissin Transport Indonesia.

## CONCLUSION

G-Trane Information System has fulfilled the criteria of a good information system.

However, there are still found some important points to be undertaken as they need to be improved. Some of them are the potential failures and the misinformation discovered in the shipping documents either the export or the import. Those are caused by the massive handling documents especially the import documents while other tasks are in line. Moreover, the employees need longer time in checking the information of the documents. The information of the documents process of export and import is conducted manually, for example, the input of the cost details of the export import service activities. This process takes longer time; even some miscalculation is sometimes experienced in the invoice making. G-Trane system contribution in the activities of improving the operational performance of the billing team either the export or import division is considered insignificant. Nevertheless, in the meeting that is held by the air freight department, the information provided by G-Trane is always used as a reference in order to control the shipping progress. It shows the progress, of which shipping process is done, which ones need approval, and which ones experienced a failure, even it also shows the shipping process is uncompleted. Learning and applying G-Trane system is quite easy. The users are assisted by an easy and simple tools feature; therefore, the process of inputting data into the system can be done fast and easily. However, according to the system users' observation, users sometimes experienced difficulties in fixing the failures in processing information. One of the reasons of the difficulties is because there is no clear guidance provided in the users' guidance book about the steps and procedures on fixing such kinds of failures. The employees' performance of air freight department has been optimal. Though, there are some important points need to be undertaken so that the employees' performance keeps well. The points need to be

Improved are the team's working achievement. It was proved by an observation that air freight department is frequently uncompleted the shipment monthly tasks. Consequently, in the end period of the accounting report, some old shipment tasks are still recorded in the proceeded month. Moreover, it is found sometimes that there are uncompleted shipment tasks from the previous two months. The main factor of this problem is the crowded tasks to be completed. The employees thought that their performance can be optimised, while the assessment was only taken from their latest working achievements. The assessments made by the respondents towards the employees' working achievement were not exactly correct since they were actually in a stressed condition. The air freight department's productivity has been in accordance with the managements' plan. Though there are some important points need to be improved. They are the team capacity will be improved if the number of the employees is increased. The existing number of the employees is susceptible for the crowded operational working load. Failures frequently happen in the shipment process and cause a longer time to finish the job. At the closing month, the operational working load becomes more hectic and it causes many shipment handling failures since the employees' conscientiousness is decreased. From the simplest to the fatal failures happened, such as, inputting a wrong number of the bill in invoice. In fact, every shipment is completed in time. For example in import division, shipment handling is processed according to the length of the expenditures. The shipment process has been arranged neatly though if it has got the SPJK or SPJM, it is not a problem. However, the problem is when the new uncompleted shipment process is getting more crowded, it will cause an increase of the import division's working load and that it will make higher time pressure for the employees. Though the employees' presences are good, it still needs to

be evaluated by the air freight department. Based on the observation, when one of the staff is absent, the team's working flows is interfered and it becomes unstable.

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