ANALYSIS FACTORS AFFECTING IMPLEMENTATION OF RISK MANAGEMENT IN
THE JABODETABEK TRANSPORTATION MANAGEMENT AGENCY

Embun Prowanta¹, Indra Siswanti²*

¹Faculty of Economics and Business, Perbanas Institute, Indonesia
²Faculty of Economics and Business, Universitas Mercu Buana, Indonesia

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Abstract: The purpose of this study is to find out the effects of risk identification, risk mitigation, and risk monitoring to the implementation of risk management in the Jabodetabek Transportation Management Agency. The research design used in this study is quantitative research. The data used in this study were primary data and were collected from 105 respondents who were employees of the Jabodetabek Transportation Management Agency. The data collected were tested and processed by using SPSS 22 for Windows. The results of this study indicate that risk identification, risk mitigation, and risk monitoring have positive effects significant on the implementation of risk management in transportation management agency Jabodetabek.

Keywords: risk identification, risk mitigation, risk monitoring, implementation of risk management, risk management

1. Introduction

A risk awareness culture is very important in an organization. Whenever an organization faces possibilities of either profit or loss, it must consider and manage the risks (Kopia et.al., 2017). According (Global Corporate & Specialty SE, 2016), organizations face a variety of risks that may have an impact not only on the success of the organization, but also on business processes in the organization.

Risk management is very important to be applied in an organization to create a balance, develop and improve the organizational framework, evaluate and manage the uncertainties faced by the organization in order to create organizational value. Risk management is an architecture (principles, framework, and process) in order to manage risk effectively and efficiently (Prowanta, 2019).


SPIP maturity assessment at level 3 means that the organization has implemented internal control practices and is well documented. However, evaluation of internal control is carried out without adequate documentation. Some control weaknesses occur with a significant impact on the achievement of organizational goals (www.itjen.dephub.go.id).

The strategic and high risk functions in carrying out the duties and functions of integrated transportation management in the Jabodetabek area, the magnitude of the gap in developing better risk management implementation and for realizing good corporate governance, provide sufficient reasons for the Jabodetabek Transportation Management Agency to implement risk management effectively and efficient to minimize the possible risks that will occur in the future.

Some of the results of previous researchers related to the implementation of risk management, Kisaka (2013) stated that the implementation of risk management has a positive impact on companies such as increasing company value. Mostafa's research (2006) states that the implementation of risk management has an impact on company success by identifying risks, standardizing, planning risk management so as to implement effective risk management and also carry out good risk identification.
Research by Arnold et al. (2015) which states that risk management such as risk identification, risk mitigation, and risk management has a positive impact on risk implementation and is able to increase company flexibility. Likewise, the research results of Astuti (2018) which state that risk identification has a positive impact on risk management implementation, however, risk identification alone is not sufficient to be able to implement good risk management, so it is necessary to take other actions such as risk mitigation and risk monitoring.

**Research purposes**

1. To analyze the effect of risk identification on implementation risk management at the Jabodetabek Transportation Management Agency.

2. To analyze the effect of risk mitigation on the implementation of risk management in the Jabodetabek Transportation Management Agency.

3. To analyze the effect of risk monitoring on the implementation of risk management in the Jabodetabek Transportation Management Agency.

**2. Literature Review and Hypothesis Risk**

According to ISO 31000: 2018, risk is the impact of uncertainty to achieve company goals. Risks can be in the form of threats and can also be in the form of opportunities. Risk becomes a threat if a risk strategy is not implemented to the detriment of the company, so it is necessary to mitigate risks if a risk event occurs in the future.

Vaughan (1996) explains that risk is a condition where the possibility of a bad deviation from the expected or desired outcome. Feringa (2001) states that risk is the negative impact of vulnerable activities, by considering the probability and impact of these risks. In general, as the likelihood or consequences increase, the risk increases. Both should be considered in risk management (Kerzner, 2003).

**Risk Identification**

Risk identification is the activity of identifying risks that may arise or occur in the future or identifying any events that hinder the achievement of company targets. Risk identification includes identifying processes, activities and activities that have the potential to harm the company (Prowanta, 2019).

The purpose of identifying risks is to compile a risk register consisting of all risks that must be managed by the company. The purpose of risk identification according to (Prowanta, 2019) is to produce a complete list of risks based on events that may support, increase, prevent, decrease, delay the achievement of goals.

Some of the factors that are considered in risk identification are (Prowanta, 2019):

a. The identification of risks must include the resources that are under the control of the company

b. The identification of risks should include examining the aspects of the specific consequences, including existing impacts and cumulative impacts

c. Risk identification must consider possible causes and scenarios that show consequences that can occur

d. All significant causes and consequences must be included in the identification of risks

e. Risk identification should include appropriate background information.
Risk Mitigation

Risk mitigation is part of risk management, where its position is the solution to solving a risk. Risk mitigation is accepting risk at a certain level by taking action to mitigate risks through improving control, process quality, and clear rules for the implementation of activities and risks (Idroes, 2011). International Standard Organization (ISO) 31000:2018 call risk mitigation a risk treatment. Risk treatment is a process of modifying risk so that it can be eliminated, reduced or has the least impact on the company.

The main objective of risk mitigation is to reduce the level of risk, both in terms of impact and probability in a tolerable direction (ISO 31000: 2018). Risk mitigation is carried out by compiling an action plan based on the root causes so that the potential for events and their impacts can be minimized.

Several methods of risk treatment include insurance, hedging, system purchases and competency development. Another alternative in risk treatment according to Prowanta (2019) is to share risks, reduce the probability and/or reduce the impact, avoid risks or cancel high-risk risk activities, and/or accept risks.

Monitoring Risk

Risk monitoring is carried out in all risk management processes, including the environment, business processes, stakeholders and strategies. Risk monitoring should be a planned part of risk management procedures. Risk monitoring is a continuous monitoring process to supervise, critical, observe or determine the status to identify the company from the level of performance required or expected. (Prowanta, 2019).

Risk monitoring must cover all aspects, procedures and objectives of risk management (Prowanta, 2019):

a. Ensure that monitoring is effective and efficient in both design and operation.

b. Obtaining further information to improve risk assessment.

c. Analyze and learn from events, changes, trends, successes and failures.

d. Detecting changes in the external and internal context, including changes in risk criteria and the risk itself that requires revision of risk treatment and priorities.

e. Identify emerging risks.

Risk Management Implementation

The meaning of implementation of risk management is the application and implementation of risk management within the organization. Assessing the effectiveness of risk management in supporting the organization in achieving its goals is carried out by referring to the results of achieving the main performance targets on strategic objectives. (Chifni dan Werawan, 2015).

According to ISO 31000: 2018, organizations must implement a risk management framework in their implementation, by:

a. Develop an appropriate plan, including time and resources;

b. Identify where, when, and how decisions are made across work units of the organization.

c. Modifying the applicable decision-making process;

d. Ensure that the arrangements for managing risk are clearly understood and practiced.

Risk management implementation must involve stakeholders and the awareness of the stakeholders themselves to manage risks. This can help the organization explicitly address uncertainty in decision making and ensure that
uncertainty is taken into account (Prowanta, 2019). Based on the description above, a research framework can be made as follows:

**Figure 1. Research Framework**

![Research Framework Diagram]

**Hypothesis**

The research hypothesis is as follows:

H1: Risk identification has a significant positive effect on risk management implementation  
H2: Risk mitigation has a significant positive effect on risk management implementation  
H3: Risk monitoring has a significant positive effect on risk management implementation

**3. Research Method**

**Research Design**

This study uses a quantitative approach using associative methods that aim to determine the effect of the independent variable and the dependent variable (Sugiyono, 2012). The operational variables in this study are shown in Table 1 below:

**Table 1 Operational Variables**

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>variable concept</th>
<th>Indicator</th>
<th>Scala</th>
</tr>
</thead>
</table>
| 1  | Risk Identification (X1) | Risk identification is the activity of identifying risks that arise or occur in the future or identify events that hinder the achievement of company goals. (Prowanta, 2019) | 1. The placement of human resources is in accordance with their competence  
2. The absorption of the budget has been carried out optimally  
3. Occupational Health and Safety (K3) equipment meets the needs of the Work Unit  
4. Public services that have been done are maximal  
5. Management of archives / files carried out in accordance with standards | Likert |
| 2  | Risk Mitigation (X2) | Risk mitigation is accepting risk at a certain level by taking action to mitigate risks through | 1. A map of human resource needs has been made in each work unit  
2. A budget absorption plan has been made in each Work Unit  
3. OHS equipment needs have been | Likert |
3. Risk Monitoring (X₃)

Risk monitoring is continuous monitoring processes to monitor, critically, observes or determines the status to identify the company of the required or expected performance level. (Prowanta, 2019).

1. Monitoring of employee performance is carried out every quarter
2. Monitoring has been carried out on a regular basis regarding the absorption of the budget in each Work Unit
3. OHS equipment monitoring has been carried out so that equipment needs can be met properly
4. A satisfaction survey has been conducted regarding prime public services
5. Monitoring of archive / file management in the Work Unit has been carried out

4. Implementation Management (Y)

Implementation of risk management is implementing risk management within the organization. Assessing the effectiveness of risk management in supporting the organization in achieving its objectives is carried out by referring to the results of the main performance targets on the strategic objectives of performance management. (Chifni dan Werawan, 2015).

1. The implementation of risks regarding employee performance is adequate.
2. The implementation of risks regarding the budget absorption target is adequate
3. Implementation of risks regarding compliance with K3 equipment is adequate
4. The implementation of risks regarding prime service is adequate
5. The risk implementation regarding records management is adequate

3.3. Population and Sample

The population in this study were 387 employees who worked in the Jabodetabek Transportation Management Agency, while the sample used in this study was a non-probability sampling technique with purposive sampling method of determining the sample, Sugiyono (2013). Based on the criteria, the researcher determined the criteria for the selected respondents as follows:
a. Are permanent employees of the Jabodetabek Transportation Management Agency.
b. Are employees who work at the head office.

Based on the above criteria, the research sample was obtained as many as 105 employees.

**Types and Data Processing Techniques**

The data used in this study are primary data obtained directly from the results of questionnaires distributed to employees of the Jabodetabek Transportation Management Agency. To strengthen the research results, the researchers also conducted in-dept interviews with risk owners (employees) with the aim that the authors could receive additional data and information based on experience in managing risks at the Jabodetabek Transportation Management Agency.

The data processing technique used in this study uses SPSS version 22 for windows with a significant level of 0.05 (5%) with a conclusion that if t is greater than (>\(t\) table or if the significant value is <0.05 then the hypothesis is accepted, with the meaning that the independent variable has a significant effect individually on the dependent variable and vice versa.

**4. Result**

**Validity Test**

The validity of the research instrument was tested by giving a questionnaire to 105 respondents who were tested on October 19, 2020 and using SPSS version 22 for windows to process the results of the questionnaire. Table 4.2 is a summary of the results of the validation test of the questionnaire items on each of the variables studied:

<table>
<thead>
<tr>
<th>Variable</th>
<th>No Item</th>
<th>Factor Loading</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Identification</td>
<td>IR1</td>
<td>0.680</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>IR2</td>
<td>0.675</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>IR3</td>
<td>0.644</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>IR4</td>
<td>0.685</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>IR5</td>
<td>0.772</td>
<td>Valid</td>
</tr>
<tr>
<td>RiskMitigation</td>
<td>MR1</td>
<td>0.766</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>MR2</td>
<td>0.721</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>MR3</td>
<td>0.611</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>MR4</td>
<td>0.644</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>MR5</td>
<td>0.721</td>
<td>Valid</td>
</tr>
<tr>
<td>RiskMonitoring</td>
<td>MOR1</td>
<td>0.810</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>MOR2</td>
<td>0.595</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>MOR3</td>
<td>0.718</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>MOR4</td>
<td>0.809</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>MOR5</td>
<td>0.869</td>
<td>Valid</td>
</tr>
<tr>
<td>Risk Management Implementation</td>
<td>PMR1</td>
<td>0.849</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>PMR2</td>
<td>0.746</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>PMR3</td>
<td>0.800</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>PMR4</td>
<td>0.833</td>
<td>Valid</td>
</tr>
</tbody>
</table>
The results of the validity test in Table 2 show that 20 questions for 4 variables, both independent and dependent, have valid results with the factor loading value being > 0.50 for each question so that it can be used to test variables, Risk Identification (X1), Risk Mitigation (X2), Risk Monitoring (X3), and Risk Management Implementation (Y), it can be concluded that all statements are valid.

Reliability Test

This study uses the Cronbach Alpha method to test reliability, if the results of the Cronbach Alpha are > 0.6, it can be concluded that the questionnaire is reliability. The results of the Cronbach Alpha test in this study are as follows:

Table 3. Reliability Test

<table>
<thead>
<tr>
<th>Research Instruments (Questionnaire)</th>
<th>Cronbach Alpha</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Identification</td>
<td>0.724</td>
<td>Reliable</td>
</tr>
<tr>
<td>Risk Mitigation</td>
<td>0.730</td>
<td>Reliable</td>
</tr>
<tr>
<td>Risk Monitoring</td>
<td>0.824</td>
<td>Reliable</td>
</tr>
<tr>
<td>Risk Management Implementation</td>
<td>0.867</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

The results of Table 3 show that the Cronbach Alpha value for all variables is > 0.6, which means that all variables of Risk Identification (X1), Risk Mitigation (X2), Risk Monitoring (X3), and Risk Management Implementation (Y) are reliable.

**t-test**

Table 4. t-test

<table>
<thead>
<tr>
<th>Coefficients*</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Unstandardized Coefficients</td>
<td>Standardized Coefficients</td>
<td>t</td>
<td>Sig.</td>
</tr>
<tr>
<td>Model</td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1. (Constant)</td>
<td>-0.760</td>
<td>.980</td>
<td>-0.776</td>
<td>.440</td>
</tr>
<tr>
<td>2. Risk Identification</td>
<td>0.195</td>
<td>.089</td>
<td>0.179</td>
<td>2.196</td>
</tr>
<tr>
<td>3. Risk Mitigation</td>
<td>0.328</td>
<td>.104</td>
<td>0.286</td>
<td>3.138</td>
</tr>
<tr>
<td>4. Risk Monitoring</td>
<td>0.499</td>
<td>.093</td>
<td>0.475</td>
<td>5.337</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Risk Management Implementation

Source: Processed Data
The results from table 4 can be summarized as follows:

1. The t value of the Risk Identification variable is 2.196> from the t table of 1.983 and a significance of 0.030 <0.05, it can be concluded that the Risk Identification variable has a positive and significant effect on Risk Management Implementation.

2. The t value of the Risk Mitigation variable is 3.138> from the t table of 1.983, and a significance of 0.02 <0.05, it can be concluded that the Risk Mitigation variable has a significant positive effect on Risk Management Implementation.

3. The t value of the Risk Monitoring variable is 5.337> from the t table of 1.983, and the significance of 0.000 <0.05, it can be concluded that the Risk Monitoring variable has a significant positive effect on Risk Management Implementation.

R2 Test (Determination Coefficient)

The determination coefficient test aims to determine the influence of the independent variable Risk Identification (X1), Risk Mitigation (X2), Risk Monitoring (X3), on the dependent variable Risk Management Implementation in the Jabodetabek Transportation Management Agency.

Table 5. R2 test

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.882</td>
<td>.778</td>
<td>.771</td>
<td>1.468</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant, Risk Identification, Risk Mitigation, Risk Monitoring)
Source: Processed Data

The results of Table 5 explain that the coefficient of determination is 0.771 or 77%, it can be explained that the variables of Risk Identification (X1), Risk Mitigation (X2), Risk Monitoring (X3) are able to influence Risk Management Implementation by 77%, while the remaining 23% influenced by other factors.

4.5. Discussion

Effect of Risk Identification on Risk Management Implementation

Based on the research results, it can be concluded that risk identification has a significant positive effect on the implementation of risk management and employees of the Jabodetabek Transportation Management Agency agree that risk identification is important to implement risk management in organizational work units. This means that risk identification which consists of 5 important aspects, including human resources, budget absorption, fulfillment of K3 equipment, public services, and documentation have an important influence and role before the organization is able to implement risk management.

The results of this study are consistent with the research of Mostafa (2006) which states that in order to implement effective risk management, it is necessary to carry out good risk identification. Research results by Arnold et al. (2015) stated that risk management such as risk identification, risk mitigation, and risk management has a positive impact on risk management implementation.

Effect of Risk Mitigation on Risk Management Implementation

Based on the research results, it can be stated that risk mitigation has a significant positive effect on risk management implementation and employees of the Jabodetabek Transportation Management Agency agree that risk mitigation is important to implement risk management in organizational work units. Risk mitigation, such as making a map of human resource needs in each work unit, making budget absorption planning, making K3 equipment needs, SOP for public services, and making archival instruments have been carried out and have had a positive and significant effect on risk management implementation in the Jabodetabek Transportation
Management Agency.

The results of this study are in accordance with Astuti's (2018) research which states that risk identification has a positive impact on risk management implementation. However, risk identification alone is not sufficient to be able to implement good risk management, so it is necessary to take other actions such as risk mitigation and risk monitoring. The results of Wijaya's research (2018), which states that risk mitigation has a positive or negative influence on the implementation of risk management in organizations.

Effect of Risk Monitoring on Risk Management Implementation

Based on the research results, it states that risk monitoring has a significant positive effect on the implementation of risk management and it can be concluded that the employees of the Jabodetabek Transportation Management Agency agree that risk monitoring is important to implement risk management in organizational work units. Risk monitoring, such as monitoring employee performance every quarter, monitoring budget absorption on a regular basis, monitoring K3 needs, public service satisfaction surveys, and monitoring records management has been carried out and has had a positive and significant effect on risk management implementation in the Jabodetabek Transportation Management Agency.

The results of this study are consistent with the research of Edozien (2013) which states that risk monitoring has a positive effect on risk implementation. The results of research by Kujawaski & Diana (2009) state that the risk identification that has been compiled in traditional risk management is conditional and not sufficient to help implement risk management effectively and efficiently in an organization, so it is necessary to carry out risk monitoring.

Conclusion

The results of this study concluded that the three independent variables, namely the variable risk identification, risk mitigation, and risk monitoring have a positive influence on the implementation of risk management in the Jabodetabek Transportation Management Agency. However, risk identification, risk mitigation, and risk monitoring must be objective and relevant to current conditions, in order to improve the quality of risk management implementation so that the Jabodetabek Transportation Management Agency is able to improve public services to achieve organizational goals.

Implementation of risk management is the key to managing risk effectively and efficiently. It is hoped that risk identification, risk mitigation and risk monitoring are not only used as risk documents, but also need to be implemented and communicated properly in order to create a risk culture for the work environment and added value to the organization as well as to make continuous improvements to organizational performance.

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