Jurnal JURTEKSI Sinta-3.pdf

JURTEKSI (Jurnal Teknologi dan Sistem Informasi)
Vol. IX No 2, Maret 2023, hlm. 199 - 206
DOI: https://doi.org/10.33330/jurteksi.v9i2.1905
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

ISSN 2407-1811 (Print)
ISSN 2550-0201 (Online)

OPERATIONAL RISK ANALYSIS FOR MANPOWER (DRIVER) ON POSTAL NETWORK

Maniah[1*], Erna Mulyati[2], Dini Hamidin[3]
[1]Prodi D3 Manajemen Informatika, Fakultas Sekolah Vokasi, Universitas Logistik dan Bisnis Internasional
[2]Prodi D4 Logistik Bisnis, Fakultas Sekolah Vokasi, Universitas Logistik dan Bisnis Internasional
[3]Prodi D3 Teknik Informatika, Fakultas Sekolah Vokasi, Universitas Logistik dan Bisnis Internasional
email: maniah@ulbi.ac.id

Abstract: PT. Indonesian logistics posts have cooperation in the postal network field, namely cooperation in sending goods or shipments at a certain time, a certain amount from one point to another in accordance with a warrant from the partner. Components of the postal network include Manpower, vehicles, postal operational control, and operational costs. This study aims to examine the problems and roots of problems that cause risk potential for the risk of postal network components, especially in the manpower component (driver), and know how high the impact of the risk. The research method used in this study is qualitative and semi-quantitative methods by conducting case studies. Data collection was carried out by interview/FGD, and the distribution of questionnaires. The results showed that the risk of manpower is at high and very high levels. The results of the study will provide recommendations to the manpower component (driver) in the form of risk mitigation and can be used by companies in managing operational risk on postal networks, especially in the manpower component (driver).

Keywords: manpower; operational risk; postal network; risk mitigation.

Abstrak: PT. Pos Logistik Indonesia memiliki kerjasama dalam bidang Jaringan Postal, yaitu kerjasama dalam mengirimkan barang atau kiriman pada waktu tertentu, jumlah tertentu dari satu titik ke titik lain sesuai dengan surat perintah dari mitra. Komponen pada jaringan Postal meliputi: Man Power, Kendaraan, Pengendalian Operasional Postal, dan Biaya Operasional. Penelitian ini bertujuan untuk mengkaji permasalahan dan akar masalah yang menimbulkan potensi kejadian risiko pada komponen Jaringan Postal khususnya pada komponen manpower (driver) dan mengetahui seberapa tinggi dampak risikonya. Metode penelitian yang digunakan dalam penelitian ini adalah metode kualitatif dan semi kuantitatif dengan melakukan studi kasus. Pengumpulan data dilakukan dengan cara wawancara/FGD, dan penyebaran kuesioner. Hasil penelitian menunjukan bahwa risiko pada manpower berada pada level high dan very high. Hasil penelitian akan memberikan rekomendasi terhadap komponen manpower (driver) berupa mitigasi risiko dan dapat digunakan perusahaan dalam pengelolaan risiko operasional pada jaringan Postal khususnya pada komponen manpower (driver).

Kata kunci: jaringan postal; manpower; mitigasi risiko; risiko operasional.

JURTEKSI (Jurnal Teknologi dan Sistem Informasi) ISSN 2407-1811 (Print)
Vol. IX No 2, Maret 2023, hlm. 199 - 206 ISSN 2550-0201 (Online)
DOI: https://doi.org/10.33330/jurteksi.v9i2.1905
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

INTRODUCTION

Market instability, potential losses suffered by the company, and the emergence of crime in the transportation sector, all of these can pose a large potential risk for the logistics industry, so that the impact of this risk can be minimized, the company must implement risk management in the logistics sector [1]. Risk management can be interpreted as the steps taken starting from identifying, analyzing, assessing, controlling, avoiding, minimizing, or even eliminating risks that are likely to arise [2]. PT. Pos Logistik Indonesia manages the Postal network business by implementing 4 (four) main components, including Manpower, Vehicles, Postal Operational Control, and Operational Costs. The manpower component focuses on managing drivers with limitations: drivers are outsourced, and the recruitment system is carried out by the Branch Office. The current condition is that drivers do not have a clear job desk, driver skills are not standardized, and there is no recruitment standard, so this can result in drivers not having loyalty and integrity. This will certainly have an impact on the operational risk of the Postal network business owned by PT. Logistics Post, including drivers who lack discipline, drivers are less responsible, drivers commit fraud or theft, driver abilities are not standardized, there is a possibility of nepotism in recruitment, drivers become apathetic and have no enthusiasm to make improvements in improving their performance. Based on several incidents that often occur in the workforce component (drivers), are: "The theft of valuables on the Primary Post transportation route which resulted in billions of rupiah in losses for PT. Logistics Post, this is because the driver lacks Loyalty and Integrity". Based on the problems above, PT. Pos Logistik Indonesia considers it necessary to implement risk management and carry out risk analysis on the Postal network business, especially operational risk analysis is the risk caused by failures in the company's internal systems, failures in the systems or technology used, failures in human resource management or failures caused by external factors of the company [3], [4] on the Manpower component (driver) by taking into account the root causes and causes and observing several potential risks and causes of risk.

Several studies that have been carried out previously are research that describes risk management models which include: risk identification, risk analysis/assessment, remedial, risk response planning, education, monitoring, aresponseond. [2]; further research aims to integrate risk management through a multitier risk management structure by examining every step of the risk management process at all levels of the organization [5]; The next research is a monitoring program for food safety hazards that is organized based on risk by developing a decision tree to rank chemical substances that may occur in food products [6]; and risk management research related to freight forwarding services, including HR management of business competition in freight forwarding services, delivery errors, damage to goods sent, theft or warehouse fire [7]. In addition, research related to operational risk assessment has been carried out on the offshore transportation system, by using the Hazard Identification (HAZID) technique this research can measure and assess the level of risk during offshore operations using a fuzzy logic model [4]. Research on ship systems is carried out to measure ship operational risks in ship safety, in this study an alternative dataset

JURTEKSI (Jurnal Teknologi dan Sistem Informasi) ISSN 2407-1811 (Print)
Vol. IX No 2, Maret 2023, hlm. 199 - 206 ISSN 2550-0201 (Online)
DOI: https://doi.org/10.33330/jurteksi.v9i2.1905
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

is used (actual failure scenarios from ships) [8]. Furthermore, there is research on operational risk analysis that concentrates on operational risk for business process management using the COSO framework which aims to assess operational risk by measuring risk factors in each activity, and for the whole process [9]. In contrast to previous research, the problem of this research is how high the level of risk is in the manpower (driver)?, and the purpose of this study is to apply risk management and conduct risk analysis in the Pos network business, in particular the operational risk analysis [10] on the Manpower (driver) component by taking into account the root causes and causes as well as looking at several potential risks and causes of risks. The output of this study will provide recommendations that are interpreted as a risk mitigation effort for PT. Indonesian Logistics Post.

METHOD

The research method approach used in this study is a mixture of qualitative and semi-quantitative approaches. Qualitative/descriptive approach, namely a research approach that uses investigative strategies such as narrative, phenomenology, ethnography, grounded theory studies, or case studies [11]. The qualitative approach is exploratory, it can be in the form of a concept or phenomenon that needs to be explored further because only a few studies have been conducted on the concept. While in the semi-quantitative research method, the researcher calculates the value which is then included in the qualitative research variable, but the value obtained is a value that is not absolute. The steps used in this study refer to the steps in qualitative research methods, namely:

1. Select and formulate the problem.
2. Gather relevant materials.
3. Determine the setting and research subject.
4. Define strategy and develop instruments.
5. Collecting data
6. Data analysis

To get optimal results and have a valid and generally accepted basis, we present this solution based on references from previous research. While the model in this study uses the Postal Network model [12] that have been applied to the object of this research, as shown in Images 1 and 2.

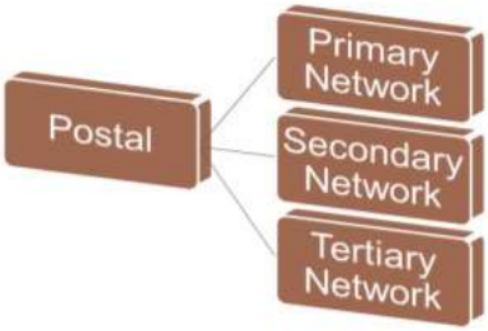

Image 1. Postal Network [12]

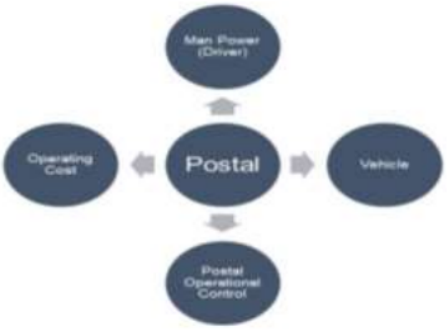

Image 2. Postal Component [12]

JURTEKSI (Jurnal Teknologi dan Sistem Informasi)
Vol. IX No 2, Maret 2023, hlm. 199 - 206
DOI: https://doi.org/10.33330/jurteksi.v9i2.1905
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi
ISSN 2407-1811 (Print)
ISSN 2550-0201 (Online)

Based on Image 1, the Postal network can be divided into 3 (three), namely: Primary Network (Transport/vehicle movement between provinces), Secondary Network (Transportation/vehicle movement between Cities/Regencies within one Province/Regional), and Tertiary Network (Transport movement between sub-districts within one district). Image 2 shows the components of Postal consisting of: Manpower (Driver), Vehicle, Postal Operational Control, and Operational Costs.

RESULT AND DISCUSSION

Based on the root of the problem in this study, researchers can categorize there are 3 (three) causes for the occurrence of these problems, namely:

1. Compensation is not as expected (Driver's employment status as a PHL or a vendor contract providing labor services so that some of their salaries do not match the UMR.
2. There are environmental factors; Driver recruitment is carried out by each branch office so there is no standard SOP.
3. There is no career development for Drivers.

Next, the researcher compiles a risk register that contains Potential Risk Events, Causes of Risk Occurrence, Probability of Possibility of Occurrence of Risk, and Impact of Risk based on the problems that arise in Manpower (driver), as shown in Table 1.

Table 1. Risk Register for Manpower (Driver)

Potential Risk Events	Causes of Risk	Result of Risk Events	Probability	Risk Impact	Score
Driver's employment status as a PHL or a vendor contract providing labor services so that some of their salaries do not match the UMR	1. Drivers are less disciplined	The departure time of the vehicle is not on time, so postal items are late. **(R1)**	Often occur (4)	High (4)	16
	2. Drivers are irresponsible	1. The goods received are not in accordance with the manifest (delivery list), the goods are received in damaged condition **(R2)**	Rarely happening (2)	Low (2)	4
		2. Goods received in less / more condition **(R3)**	Often occur (4)	High (4)	16
		3. Goods received in damaged condition **(R4)**	Often occur (4)	High (4)	16
	3. Drivers commit fraud or theft	1. The company received a claim for compensation for the loss of partners' belongings **(R5)**	Often occur (4)	High (4)	16

JURTEKSI (Jurnal Teknologi dan Sistem Informasi) ISSN 2407-1811 (Print)
Vol. IX No 2, Maret 2023, hlm. 199 - 206 ISSN 2550-0201 (Online)
DOI: https://doi.org/10.33330/jurteksi.v9i2.1905
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

Potential Risk Events	Causes of Risk	Result of Risk Events	Probability	Risk Impact	Score
		2. Corporate image becomes bad in the eyes of partners **(R6)**	cur (4)	(4)	16
		3. The company has to deal with the law which results in material and immaterial losses **(R7)**	Often occur (4)	High (4)	
Driver recruitment is carried out by each branch office so there is no standard SOP.	1. Driver capabilities are not standardized	1. Drivers do not obey traffic signs **(R8)**	Might happen (3)	Medium (3)	9
		2. Reckless drivers on the highway **(R9)**	Might happen (3)	Medium (3)	9
		3. The car broke down on the road because the driver didn't check it regularly **(R10)**	Might happen (3)	Medium (3)	25
		4. The car is dirty and not maintained because the driver doesn't want to clean it **(R11)**	Almost definitely happens (5)	Very high (5)	6
		5. The driver had an accident on the road **(R12)**	Might happen (3)	Low (2)	
	2. The possibility of nepotism in recruitment	1. Low quality drivers **(R13)**	Often occur (4)	High (4)	16
		2. Drivers are always a source of trouble **(R14)**	Might happen (3)	Medium (3)	9
		3. Drivers are hard to lay off **(R15)**	Might happen (3)	Medium (3)	
There is no career development for Drivers	Drivers become apathetic and have no enthusiasm to make improvements to improve their performance.	1. Drivers are not excited at work **(R16)**	Often occur (4)	High (4)	16
		2. Drivers become lazy so the quality of work becomes low **(R17)**	Often occur (4)	High (4)	16
		3. Drivers are apathetic when there are changes for improvement **(R18)**	Often occur (4)	High (4)	16

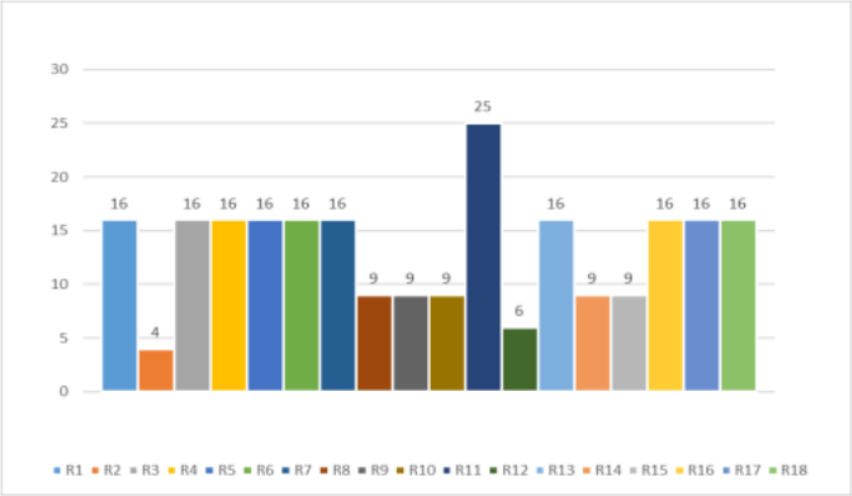

Image 3. Composition of Risk Value on Manpower (Driver)

Based on the score shown in Table 1 above, then we can see the definition of the range of the score.

Table 2. Risk Impact Definitions [13]

Qualitative Value	Semi-Quantitative Values	Risk Code	Description
Very High	21-25	R11	**Very high** risk means that a threat event could be expected to have multiple severe or catastrophic adverse effects on organizational operations, organizational assets, individuals, other organizations, or the Nation.
High	16-20	R1, R3-7, R13, R16-18	**High risk** means that a threat event could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, individuals, other organizations, or the Nation
Medium	10-15		**Medium risk** means that a threat event could be expected to have a serious adverse effect on organizational operations, organizational assets, individuals, other organizations, or the Nation
Low	6-9	R8-10, R12, R14-15	**Low risk** means that a threat event could be expect to have a limited adverse efect on organizational operations, organizational assets, ndividuals, other organizations, or the Nation
Very Low	1-5	R2	**Very low** risk means that a threat event could be expected to have a negligible adverse effec on organizational operations, organizational assets, individuals, other organizations, or the Nation.

The results of this study indicate that there are as many as 18 (eighteen) risks that are likely to appear in the manpower component (driver) in the postal network. The risk that has the highest score is **R11** (the car is dirty and not maintained because the driver doesn't want to clean it). Image 3 shows that the position of the risk level in the manpower (driver) lies more at the high and very high levels, so it is necessary to make risk mitigation, especially on high and very high risk.

CONCLUSION

Based on the risk factors for manpower (drivers) discussed in this study, it is known that the manpower risk value is relatively at a high risk level. This needs to be followed up by the company so that this high risk can be reduced by making these drivers more professional. Professional drivers have good knowledge and can drive the vehicle safely and comfortably.

In addition, companies can carry out risk mitigation which aims to reduce the level of risk that may arise, including the company can make a driver recruitment policy or standard that explains the awareness and responsibility of drivers towards their profession, and explains good driving skills, and finally the company can conduct regular driver training and outreach regarding work safety.

ACKNOWLEGMENTS

We would like to thank the University of Logistics and International Business (ULBI) campus institution for funding this research.

Especially to the Rector of ULBI, D3 Informatics Management Study Program, D4 Business Logistics, and D3 Informatics Engineering.

BIBLIOGRAPHY

[1] A. N. Jonar, “Manajemen Risiko Pada Industri Logistik,” 2019.

[2] D. Gonzalez, “Risk Management Digital Style,” *Manag. Online Risk*, pp. 1–24, 2015, doi: 10.1016/b978-0-12-420055-5.00001-3.

[3] M. F. A. Nazir and M. N. H. Ryandono, “Manajemen Risiko Operasional pada Lembaga Amil Zakat Nasional,” *Ekon. Syariah Teor. dan Terap.*, vol. 6, no. 11, pp. 2236–2251, 2019.

[4] N. Abdussamie, A. Zaghwan, M. Daboos, I. Elferjani, and A. Mehanna, “Operational risk assessment of offshore transport barges,” *Ocean Eng.*, vol. 156, no. March, pp. 333–346, 2018, doi: 10.1016/j.oceaneng.2018.03.006.

[5] M. Metheny, “Risk management [6],” *Br. Dent. J.*, no. 6, pp. 185–210, 2017, doi: https://doi.org/10.1016/B978-0-12-809710-6.00006-8.

[6] E. D. van Asselt, M. Y. Noordam, M. G. Pikkemaat, and F. O. Dorgelo, “Risk-based monitoring of chemical substances in food: Prioritization by decision trees,” *Food Control*, vol. 93, no. March, pp. 112–120, 2018, doi:

2).1016/j.foodcont.2018.06.001.
[7] R. Vikaliana, "Faktor-Faktor Risiko Risiko Dalam Perusahaan Jasa Pengiriman," *J. Logistik Indones.*, vol. 1, no. 1, pp. 68–76, 2017, doi: 10.31334/jli.v1i1.128.
[8] A. Aziz, S. Ahmed, F. Khan, C. Stack, and A. Lind, "Operational risk assessment model for marine vessels," *Reliab. Eng. Syst. Saf.*, vol. 185, no. January, pp. 348–361, 2019, doi: 10.1016/j.ress.2019.01.002.
[9] A. K. Jallow, B. Majeed, K. Vergidis, A. Tiwari, and R. Roy, "Operational risk analysis in business processes," *BT Technol. J.*, vol. 25, no. 1, pp. 168–177, 2007, doi: 10.1007/s10550-007-0018-4.
[10] W. Maia *et al.*, "Evaluation of operational risk in power substations and its rational reduction on the basis of multicriteria allocating resources," *IEEE Access*, vol. 9, pp. 149383–149397, 2021, doi: 10.1109/ACCESS.2021.3124529.
[11] J. W. Creswell, *Research design - Qualitative, Quantitative. and Mixed Methods Approaches - Second Edition*. 2014.
[12] Aisah, "Jaringan Postal," Bandung, 2022.
[13] E.oman, "IT Risk Management Framework," 2017.

Jurnal JURTEKSI Sinta-3.pdf

ORIGINALITY REPORT

8%
SIMILARITY INDEX

PRIMARY SOURCES

1	www.mohe.gov.om Internet	136 words — 5%
2	jurnal.harapan.ac.id Internet	18 words — 1%
3	dewey.petra.ac.id Internet	13 words — < 1%
4	Submitted to Telkom University Your Indexed Documents	11 words — < 1%
5	pure.eur.nl Internet	11 words — < 1%
6	www.eskom.co.za Internet	10 words — < 1%
7	its.nebraska.edu Internet	9 words — < 1%
8	univendspace.univen.ac.za Internet	9 words — < 1%
9	www.researchgate.net Internet	8 words — < 1%

EXCLUDE QUOTES	ON	EXCLUDE SOURCES	OFF
EXCLUDE BIBLIOGRAPHY	ON	EXCLUDE MATCHES	OFF