

**DEVELOPMENT OF RISK ASSESSMENT TOOL FOR THE
LAND CARGO TRANSPORTATION**



**INSTITUT PENGURUSAN PENYELIDIKAN UNIVERSITI
TEKNOLOGI MARA
40450 SHAH ALAM, SELANGOR
MALAYSIA**

BY:

Leader: *Afzan Ahmad Zaini*
Members : *Dr. Intan Rohani Endut*
Abdul Azim Ahmad Zaini

Table of Contents

1. Letter of Report Submission	1
2. Letter of Offer	2
3. Acknowledgement	3
4. Enhanced Research Title and Objectives	4
5. Report	5
5.1 Executive Summary	5
5.2 Introduction	
5.2.1 Background	6
5.2.2 Problem Statement of Research	7
5.2.3 Aim and Objectives	8
5.3 Literature Review	8
5.4 Research Methodology	11
5.4.1 General	11
5.4.2 Risk Identification	12
5.4.3 Risk Matrix	12
5.5 Result and Analysis	16
5.5.1 Analysis of Demography	16
5.5.2 Findings of Risk Identification	18
5.5.3 Analysis of Risk Assessment Matrix	21
5.5.3.1 Results for Likelihood	21
5.5.3.2 Results for Impact	23
5.5.3.3 Results for Risk Response Plan	25
5.5.3.4 Risk Assessment Tool	30
5.6 Conclusion and Recommendations	37
5.7 References	38
6. Research Outcomes	40
7. Appendix	41

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Prof. Dr. Abu Bakar Abdul Majeed
Penolong Naib Canselor (Penyelidikan)
Institut Penyelidikan, Pembangunan dan Pengkormesilan
Universiti Teknologi MARA
40450 Shah Alam

Prof. Dr.,
**PENGHANTARAN LAPORAN AKHIR PROJEK PENYELIDIKAN
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Dengan segala hormatnya, perkara diatas adalah dirujuk.

2. Sukacita dimaklumkan bahawa pihak kami telah menyiapkan laporan penyelidikan ini dalam masa yang telah ditetapkan oleh pihak RMI, menghasilkan 3 *index proceeding* dan telah melatih seorang pelajar master dalam bidang perniagaan.
3. Bersama-sama ini kami majukan 2 salinan laporan berkulit keras dan satu salinan softcopy dalam bentuk CD.
4. Segala kerjasama daripada pihak tuan kami dahului dengan ucapan terima kasih.

Yang Benar,

AFZAN AHMAD ZAINI
Ketua Projek

- s.k
1. Rektor, UiTM Sarawak
 2. Dekan, Fakulti Senibina Perancangan dan Ukur, UiTM Shah Alam.
 3. Dr. Intan Rohani Endut, Fakulti Kejuruteraan Awam, UiTM Shah Alam (Ahli Projek)

5. Report

5.1 Executive Summary

The purpose of this report is to present details of a study which has been undertaken with an aim of establishing a risk assessments tool for the logistics industry particularly the land cargo transportation in Malaysia. For the purpose of achieving this aim, three core objectives have been outlined which include investigating the type of risks faced by the land cargo transportation and logistics supply chain in general, evaluating the likelihood and impact of the risks and drawing systematic mitigation measures for the critical risks. The first objective was achieved using the risk identification process which was done by listing down all possible risks inherent in the industry. From the risk identification, 59 probable risks which could give adverse consequences to the industry were identified. Subsequently all 59 risks were categorized under 5 general risk groups designated as Environmental risk, Financial risk, Political risk, Social risk, and Technical risk. The second objective was materialised by adopting the principle of the risk assessment matrix in which not only the degree of the impact and likelihood were determined but also the severity of the risks themselves based on the quantitative analysis of the empirical data obtained from the questionnaire survey. The results revealed four risks namely "Rising fuel cost", "Economic recession", "Workers demand salary increment" and "Increase in maintenance cost" were critical to the industry. In addition, from the risk matrix, the reduction of risk as the response plan was mostly agreed by respondents to be the best response plan for all four critical risks. The third objective gave the elaboration to the risk response plan which was argued to be simplistic. Here, the mitigation measures were drawn from the fundamental aspects, causes, effects of the critical risks and subsequently the mitigation measures to be taken to alleviate the adverse consequences of the critical risks were proposed. Lastly a tool was established that composed of three assessment parts denoted as the risk identification, the risk assessment matrix and the risk mitigation measures.

5.2 Introduction

5.2.1 Background

Logistics is one of the most prominent aspects in businesses today. Its importance and intensification have shown as the mover to the growth of economy especially in the developing country like Malaysia. As a matter of fact, logistics has seen as a must-have function in businesses today and therefore, no manufacturing, services, marketing, distributions or project executions would succeed without the support of logistics. Logistics is generally understood as an organized system of transportation services and defined as a component of supply chain management which plans, delivers, and controls the forward and reverse flow of goods, storage and warehousing services and related information from the point of origin to the point of consumption in order to meet customers' requirements in the most cost effective, efficient and timely manner (The Council of Supply Chain Management Professional, CSCMP, 2012). As one of major elements in supply chain, logistics has gained importance as the supply chain develops into globalised and more complex system due to increasing in geographical distance between the production point to the consumption point, more players of supply chain have moving forward into the businesses and the substantial growth in the outsourcing activities.

In any business environment which is bounded with complexities and uncertainties, without exception the logistics industry, logistics players are deemed to manage their supply chains effectively in order to increase efficiency, productivity and reactivity from any probable risks expected such as internal or external conflicts, cost overruns, inability to offer services, loss of customers, deteriorating reputations, and operational or technical problems to name a few. As describe by Peck (2005), the more complex a network there is, the more interfaces do exist and the higher the vulnerabilities will be. This has distinctively revealed that from the integration, expansion and advancement of businesses within the supply chain would not only generate larger business opportunities, capacities and profit margins but at the same time would also witness to the increasing and diversification of the businesses' inherent risks. In addition to this, globalisation is often viewed as a source which predominantly creates complexity in business networking, thus it definitely is one of the major factors that also contribute to the increase of supply chain vulnerabilities and risks.