

GREEN LOGISTICS STUDY IN FOOD MANUFACTURING INDUSTRIES IN
JOHOR DARUL TAKZIM

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Thesis submitted in fulfillment of the requirements for the award of the degree of
Bachelor of Industrial Technology Management with Honours

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SUPERVISOR'S DECLARATION

I hereby declare that I have checked this thesis and my opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Bachelor of Industrial Technology Management.

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STUDENT'S DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged. This thesis has not been accepted for any degree and it is not concurrently submitted for award of other degree.

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TABLE OF CONTENTS

SUPERVISOR’S DECLARATION	i
STUDENT’S DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
ABSTRAK	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	xi
LIST OF FIGURES	xii
CHAPTER 1 INTRODUCTION	
1.1 Introduction	1
1.2 Problem Statement	2
1.3 Research Objectives	4
1.4 Research Questions	4
1.5 Scope of Study	5
1.6 Significance of Study	5
1.7 Conclusion	6
CHAPTER 2 LITERATURE REVIEW	
2.1 Introduction	7
2.2 Logistics	7
2.2.1 Definition of “Logistics”	7
2.2.2 Developments in transport logistics	8
2.2.3 Road Transportation	9

2.2.4 Distribution	9
2.3 Logistics Impacts on the Environment	10
2.3.1 Carbon Emission	10
2.3.2 Ways to increase energy efficiency	11
2.4 Green Logistics	11
2.4.1 Meaning of “Green Logistics”	11
2.4.2 Green Logistics Management	12
2.4.3 Importance of Going Green	12
2.4.4 Benefits of Green Logistics	13
2.4.5 Drivers of green logistics	14
2.4.6 Barriers to implement green logistics	15
2.4.7 Ways to solve	16
2.5 Food Manufacturing Industries	16
2.6 Conclusion	17

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Introduction	18
3.2 Location Of Study	18
3.3 Research Design	19
3. 4 Sampling	20
3.5 Data Collection Method	21
3.5.1 Primary Data	22
3.5.2 Secondary Data	22
3.6 Development of Instrument	23
3.8 Statistical Analysis	24
3.9 Conclusion	25

CHAPTER 4 DATA ANALYSIS

4.1 Introduction	26
4.2 Reliability Analysis	27
4.3 Demographic Analysis	28
4.3.1 Position of Respondents	29
4.3.2 Qualification of Respondents	30
4.3.3 Years Involved in Logistics Industry	30
4.3.4 Years the Firms was Established	31
4.3.5 Numbers of Employees	32
4.3.6 Annual Turnovers	32
4.4 Reliability Analysis	33
4.5.1 Green Logistics Practices	34
4.5.2 Dedicated Staff	34
4.5.3 Understanding about Green Logistics	35
4.5.4 Sources of Information	36
4.6 Barriers of Implmenting Green Logistics	37
4.6.1 Internal Barriers	37
4.6.2 External Barriers	39
4.6.3 Overview Mean Ranking for Barriers	41
4.7 Ways to Implement Green Logistics	44
4.7.1 Overview Mean Ranking for Ways to Implement Green Logistics	46
4.8 Conclusion	47

CHAPTER 5 CONCLUSION AND RECOMMENDATION

5.1 Introduction	48
5.2 Discussion	48
5.3 Recommendations	49
5.4 Conclusion	50

REFERENCES	51
APPENDICES	54
GANTT CHART	59

LIST OF TABLES

Table No.	Title	Page
1.1	Statistics of goods vehicle until 30 th June 2014	2
1.2	Statistics of goods vehicle until 30 th September 2014	3
3.1	Sampling size table	21
4.1	Cronbach's alpha	27
4.2	Demographic analysis	28
4.3	Statistic analysis of demographic data	29
4.4	Cronbach's Alpha for collected data	33
4.5	Ranking of Internal Barriers	37
4.6	Ranking of External Barriers	39
4.7	Overview Mean Ranking for Sub Elements of Barriers	43
4.8	Mean Ranking for Ways to Implement Green Logistics	44
4.9	Overview Mean Ranking for Ways to Implement Green Logistics	46

LIST OF FIGURES

Figure No.	Title	Page
1.1	Time series of greenhouse gas emission	3
4.1	Position of respondents	29
4.2	Qualifications of respondents	30
4.3	Years Involved in Logistics Industry	30
4.4	Year Established	31
4.5	Number of Employees	32
4.6	Annual Turnover	32
4.7	Practices of Green Logistics	34
4.8	Dedicated staff	34
4.9	Understanding about green logistics	35
4.10	Sources of information on green logistics	36
4.11	Histogram of Internal Barriers according to categories	38
4.12	Histogram of External Barriers according to categories	40
4.13	Histogram of Ways to Implement Green Logistics according to Implementation	45

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ABSTRACT

In this era of technology, logistics has been started to play the crucial part for economic world. Ministry of Natural Resources and Environment (NRE), Malaysia, carbon dioxide emissions from energy usage in industries showed the highest percentage. Most of the manufacturers will face environmental issues because they not aware about green logistics. The study investigated the Green Logistics implementation in food manufacturing industries in Johor Darul Takzim. Three objectives were tested using data generated from research instruments. This thesis analyzes the understanding and awareness of green logistics, determine the barrier that prevent the implementation of green logistics and identify the ways to implement green logistics in food manufacturing industries in Johor Darul Takzim. A total of 47 food manufacturing companies selected to participate in this study from the Federation of Malaysian Manufacturers directory. The questionnaires were sent to a representative of each company. By utilizing Statistical Package for Social Science (SPSS) variant 20.0, information gathered through overview surveys can be broke down and results acquired are discussed about as table and in addition charts. The instrument included Statistical Package for the Social Sciences to measure the reliability and mean ranking analysis. Result showed the barrier that prevents food manufacturing companies in Johor Darul Takzim to implement green logistics is Lack of Organization Encouragement. Result showed the best ways to implement green logistics is limiting the number of distribution trips to reduce the carbon footprint.

ABSTRAK

Dalam era teknologi, logistik telah mula memainkan peranan yang penting bagi dunia ekonomi. Kementerian Sumber Asli dan Alam Sekitar (NRE), Malaysia, pelepasan karbon dioksida daripada penggunaan tenaga dalam logistik menunjukkan peratusan yang paling tinggi. Kebanyakan pengeluar akan menghadapi isu-isu alam sekitar kerana mereka tidak sedar tentang logistik hijau. Kajian ini menyiasat pelaksanaan Green Logistik di logistik pembuatan makanan di Johor Darul Takzim. Tesis ini menganalisis kefahaman dan kesedaran logistik hijau, menentukan halangan yang menghalang pelaksanaan logistik hijau dan mengenal pasti cara-cara untuk melaksanakan logistik hijau dalam industri pembuatan makanan di Johor Darul Takzim. Sebanyak 47 syarikat pembuatan makanan dipilih untuk mengambil bahagian dalam kajian ini daripada direktori Persekutuan Pekilang Malaysia. Soal selidik telah dihantar kepada wakil bagi setiap syarikat. Tiga objektif telah diuji menggunakan data yang dihasilkan daripada logistik kajian. Instrumen ini disertakan Pakej Statistik untuk Sains Sosial untuk mengukur kebolehpercayaan dan min analisis kedudukan. Keputusan menunjukkan halangan yang menghalang syarikat-syarikat pengeluar makanan di Johor Darul Takzim untuk melaksanakan logistik hijau Kekurangan Pertubuhan Galakan. Keputusan menunjukkan cara terbaik untuk melaksanakan logistik hijau mengehendkan bilangan perjalanan pengagihan untuk mengurangkan jejak karbon.

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

In this era of technology, logistics has been started to play the crucial part for economic world. Zacharia and Mentzer (2007) stated that companies sees opportunities to increase their competitiveness and modify the company's operations when have larger focus on logistics. We have logistics concepts in every sphere of national society and economy. McKinnon (2010, p. 3) stated that logistics had passed over 50 years which is a key determinant in business performance.

Logistics was utilized to clarify incorporated practice between the systems of transportation, stockpiling, and treatment of items which move from material source through the production network framework to the last purpose of offer or utilization, which is the key variable of business performance (Choi, 2011). Logistics is important transport element in every aspect of daily life.

Transportation system is the consistency transportation means, and existing courses geographic area where the things can be conveyed (Chopra and Meindl, 2010). There are different types of modes such as air, sea, rail, land and truck. According to Chopra and Meindl (2010, pp. 68-69), utilizing one transportation modes it can influence the adaptability, size of shipment and rate of delivery. Chopra and Meindl (2010, p. 69) stressed the tradeoff between responsiveness and efficiency where it is

based on the cost and speed of transport. The faster the transportation the more responsive because the time to deliver becomes shorter.

Due to the economic growth in recent years, the use of goods vehicle increases. According to Road Transport Department, the total accounted for goods vehicle is 1,137,319 vehicles in 30th June 2014 which increases to 1,148,308 vehicles in 30th September 2014. Thus, this statistics showed that the uses of goods vehicles rise which increase the logistics activities in Malaysia.

The table below is the statistics of goods vehicle until 30th June 2014 according to state. It showed total goods vehicle of Johor state is 142,392 goods vehicle.

Table 1.1: Statistics of Goods Vehicle until 30th June 2014

JADUAL 1.2 : JUMLAH TERKUMPUL KENDERAAN BERMOTOR MENGIKUT JENIS DAN NEGERI, MALAYSIA, SEHINGGA 30 JUN 2014
Table 1.2 : Total Motor Vehicles by Type and State, Malaysia, Until 30th Jun 2014

NEGERI State	MOTOSIKAL Motorcycle	MOTOKAR Motorcar	BAS Bus	TEKSI Taxi	KERETA SEWA PANDU SENDIRI Hire & Drive Car	KENDERAAN BARANG - BARANG Goods Vehicle	LAIN - LAIN Others	JUMLAH Total
PERLIS	71,667	22,231	175	126	79	1,970	2,255	98,503
KEDAH	835,173	309,566	2,925	2,310	1,352	38,435	30,267	1,220,028
PULAU PINANG	1,291,159	1,050,795	4,893	3,634	1,665	73,822	38,596	2,464,564
PERAK	1,255,739	717,386	4,524	3,662	874	72,547	58,879	2,113,611
SELANGOR	1,239,628	1,057,248	6,336	13,347	1,866	177,332	130,998	2,626,750
WILAH PERSEKUTUAN	1,671,759	3,567,365	17,776	52,647	40,005	252,863	234,421	5,836,836
NEGERI SEMBILAN	505,522	318,912	2,439	1,926	562	45,864	16,213	891,438
MELAKA	425,841	318,552	1,668	1,554	428	27,055	13,447	788,545
JOHOR	1,687,779	1,378,921	8,349	12,129	2,753	142,382	5,139	3,327,452
PAHANG	537,820	355,117	1,945	1,886	982	44,533	28,309	970,592
TERENGGANU	347,190	194,083	1,032	924	326	21,788	13,402	578,745
KELANTAN	491,875	281,879	1,962	1,520	587	29,100	16,535	823,458
SABAH	323,809	576,175	6,948	4,520	3,676	119,413	97,249	1,131,790
SARAWAK	698,877	707,116	3,048	2,385	1,505	90,215	97,171	1,600,317
PORTAL RAKAN NIAGA	0	12,566	0	0	0	0	1	12,567
MALAYSIA	11,383,838	10,867,907	64,020	102,570	56,660	1,137,319	872,882	24,485,196

Source: Road Transport Department

The table below is the statistics of goods vehicle until 30th September 2014 according to state. It showed total goods vehicle of Johor state is 143,809 goods vehicle which increased within 3 months.

Table 1.2: Statistics of Goods Vehicle until 30th September 2014

JADUAL 1.2 : JUMLAH TERKUMPUL KENDERAAN BERMOTOR MENGIKUT JENIS DAN NEGERI, MALAYSIA, SEHINGGA 30 SEPT 2014
Table 1.2 : Total Motor Vehicles by Type and State, Malaysia, Until 30th Sept 2014

NEGERI State	MOTOSIKAL Motorcycle	MOTOKAR Motorcar	BAS Bus	TEKSI Taxi	KERETA SEWA PANDU SENDIRI Hire & Drive Car	KENDERAAN BARANG - BARANG Goods Vehicle	LAIN - LAIN Others	JUMLAH Total
PERLIS	72,532	22,575	175	126	79	1,977	2,262	99,726
KEDAH	843,897	312,433	2,934	2,312	1,353	38,676	30,397	1,232,002
PULAU PINANG	1,301,828	1,058,385	4,942	3,683	1,680	74,542	38,777	2,463,837
PERAK	1,265,290	722,865	4,566	3,663	876	73,122	59,174	2,129,556
SELANGOR	1,255,547	1,063,554	6,400	13,926	1,940	179,329	132,308	2,653,004
WILAH PERSEKUTUAN	1,690,319	3,605,980	17,943	53,297	40,874	255,705	235,220	5,899,338
NEGERI SEMBILAN	510,338	320,887	2,444	1,931	562	46,415	16,271	898,848
MELAKA	198,790	300,790	1,271	1,551	190	37,050	19,564	794,983
JOHOR	1,705,732	1,390,476	8,412	12,289	2,753	143,809	93,677	3,359,148
PAHANG	543,401	357,633	1,950	1,887	982	44,879	28,430	979,162
TERENGGANU	350,953	195,276	1,037	924	327	21,867	13,406	583,790
KELANTAN	498,126	284,030	1,976	1,520	587	29,231	16,557	832,027
SABAH	331,607	584,363	7,000	4,536	3,700	120,197	97,740	1,149,143
SARAWAK	709,902	716,056	3,060	2,397	1,569	91,117	97,962	1,622,063
PORTAL RAKAN NIAGA	0	73,575	0	0	1	184	9	73,769
MALAYSIA	11,509,252	11,028,814	64,510	104,045	57,713	1,148,308	877,754	24,790,396

Source: Road Transport Department