

**IDENTIFYING AND UNDERSTANDING FACTORS LEAD TO
MALAYSIAN'S PORT DEVELOPMENT: TECHNOLOGY PERSPECTIVE**

A thesis submitted to the Graduate School in partial
fulfillment of the requirements for the degree
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by

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ABSTRAK (BAHASA MELAYU)

Kajian yang telah dijalankan ini adalah berkaitan dengan pelabuhan-pelabuhan utama di Malaysia khasnya pelabuhan Klang, pelabuhan Tanjung Pelepas (PTP) dan juga pelabuhan Penang. Objektif kajian ini adalah untuk mengkaji faktor-faktor yang menyumbang kepada pembangunan dan perkembangan pelabuhan di mana penekanan yang utama adalah dari sudut teknologi. Di dalam mencapai objektif kajian ini, pembacaan secara menyeluruh telah dilakukan dan kemudiannya kesemua data tersebut dianalisis sedalam-dalamnya. Kaedah ini juga dikenali sebagai "*Content Analysis*". Kesemua data yang telah dianalisis telah disenaraikan di dalam jadual bagi membuktikan bahawa ianya adalah sahih.

Hasil daripada analisis yang telah dijalankan, ianya terbukti bahawa ketiga-tiga pelabuhan di Malaysia menggunakan teknologi yang terkini dalam membangunkan dan mengembangkan pelabuhan masing-masing. Oleh hal demikian hasil daripada analisis ini juga menunjukkan bahawa ketiga-tiga pelabuhan tersebut menggunakan pemindahan data elektronik (EDI singkatannya). Namun begitu hanya pelabuhan Klang sahaja yang menggunakan dan mengaplikasikan EDI secara komprehensif berbanding pelabuhan Tanjung Pelepas (PTP) dan pelabuhan Pulau Penang. Selain daripada penggunaan EDI, terdapat juga pendekatan lain yang digunakan dalam pengendalian kargo.

ABSTRACT

The study that has been conducted basically is related to the three main ports in Malaysia particularly Port of Klang, Port of Tanjung Pelepas (PTP) and Port of Penang. The main objective of this study is researcher wanted to understanding the factors that lead to the development of Malaysian's port whereby the technology perspective is addressed. In order to reach this objective, a comprehensive and intensive reading has been done and it's followed by analyzing those sources in depth. This kind of method is also known as Content Analysis. Those data that have been analyzed is listed in the table in order to show and prove it is reliable.

From the analysis that has been done, it is proved that those three ports in Malaysia use the sophisticated technology in order to develop their ports. From the finding also showed, that those three ports applied and used the Electronic Data Interchange (EDI). However, only Port of Klang use and applied the EDI comprehensively compared to the other ports which is Port of Tanjung Pelepas (PTP) and Port of Penang. Besides, this study also found that the other technology approaches are also being use and apply at those three ports along with the EDI system in order to ensure that the cargo handling can be done smoothly and properly.

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TABLE OF CONTENT

| | <u>Page</u> |
|---|-------------|
| PERMISSION TO USE | i |
| ABSTRAK (BAHASA MELAYU) | ii |
| ABSTRACT | iii |
| ACKNOWLEDGEMENT | iv |
| LIST OF TABLES | x |
| LIST OF FIGURES | xii |
| ABBREVIATION | xiii |
| CHAPTER ONE: BACKGROUND OF THE STUDY | |
| 1.0 INTRODUCTION | 1 |
| 1.1 BACKGROUND OF THE STUDY | 1 |
| 1.2 MALAYSIAN PORTS | 3 |
| 1.2.1 <i>Port Klang</i> | 4 |
| 1.2.2 <i>Port Of Tanjung Pelepas (PTP)</i> | 7 |
| 1.2.3 <i>Port Of Penang</i> | 8 |
| 1.3 PROBLEM STATEMENT | 11 |
| 1.4 RESEARCH QUESTION | 13 |
| 1.5 RESEARCH OBJECTIVE | 14 |
| 1.6 SCOPE OF THE STUDY | 15 |
| 1.7 SIGNIFICANT OF THE STUDY | 15 |
| 1.8 LIMITATION OF THE STUDY | 16 |

| | |
|----------------|----|
| 1.9 CONCLUSION | 17 |
|----------------|----|

CHAPTER TWO: ECONOMIC OUTLOOK AND SHIPPING INDUSTRY

| | |
|---|----|
| 2.0 INTRODUCTION | 18 |
| 2.1 ECONOMY OUTLOOK | 18 |
| 2.2 OVERVIEW OF SHIPPING INDUSTRY | 20 |
| 2.2.1 <i>The Concept Of Shipping Industry</i> | 21 |
| 2.2.2 <i>History Of The Shipping Industry</i> | 23 |
| 2.2.2.1 <i>Advances In The 19th Century</i> | 24 |
| 2.2.2.2 <i>The 20th Century</i> | 24 |
| 2.2.3 <i>The Important of Shipping Industry</i> | 25 |
| 2.3 CONTAINERIZATION | 28 |
| 2.3.1 <i>The Containerization Concept</i> | 29 |
| 2.3.2 <i>History Of The Containerization</i> | 30 |
| 2.3.3 <i>The Important Of The Containerization</i> | |
| 2.3.4 <i>Issues In Containerization</i> | 34 |
| 2.4 THE CONCEPT OF PRIVATIZATION | 36 |
| 2.4.1 <i>Factors Lead To The Privatization Of Ports</i> | 40 |
| 2.5 CONCLUSION | 44 |

CHAPTER THREE: TECHNOLOGY INDICATOR

| | |
|---|----|
| 3.0 INTRODUCTION | 45 |
| 3.1 TECHNOLOGY | 45 |
| 3.1.1 <i>The Definition Of Technology</i> | 45 |
| 3.1.2 <i>History Of Technology</i> | 48 |
| 3.1.3 <i>Information Infrastructure</i> | 49 |

| | |
|--|----|
| 3.1.4 <i>The Important And Roles Of Technology At Port</i> | 50 |
| 3.2 ELECTRONIC DATA INTERCHANGE (EDI) | 52 |
| 3.2.1 <i>Overview Of EDI Usage</i> | 52 |
| 3.2.2 <i>The Definition Of EDI</i> | 54 |
| 3.2.3 <i>History of EDI</i> | 59 |
| 3.2.4 <i>The EDI Standard</i> | 60 |
| 3.2.5 <i>EDI At Sea Transport And Port Operation</i> | 63 |
| 3.2.6 <i>The Benefits Of EDI Usage</i> | 71 |
| 3.2.7 <i>Factors Increasing Interest In EDI</i> | 75 |
| 3.3 INTERNET ELECTRONIC DATA INTERCHANGE (IEDI) | 80 |
| 3.3.1 <i>The Advantage Of IEDI</i> | 81 |
| 3.4 CONCLUSION | 84 |

CHAPTER FOUR: RESEARCH METHODOLOGY

| | |
|--|-----|
| 4.0 INTRODUCTION | 85 |
| 4.1 CLASSIFICATION OF SECONDARY DATA | 85 |
| 4.1.1 <i>Journal</i> | 86 |
| 4.1.2 <i>Article</i> | 89 |
| 4.1.3 <i>Conference Paper</i> | 91 |
| 4.1.4 <i>Dissertation Paper</i> | 93 |
| 4.1.5 <i>Book</i> | 93 |
| 4.1.6 <i>Internet</i> | 95 |
| 4.2 TOPIC COVERED IN THE STUDY | 95 |
| 4.3 TOPIC COVERED IN THE FINDING SECTION | 97 |
| 4.3.1 <i>Technology Apply At World Wide Port Operation</i> | 97 |
| 4.3.1.1 <i>Containerization</i> | 98 |
| 4.3.1.2 <i>Electronic Data Interchange</i> | 99 |
| 4.3.1.3 <i>Electronic Devices In Container Terminal Port</i> | 100 |
| 4.3.1.3.1 <i>Microwave Technology</i> | 100 |

| | | |
|-----------|--|-----|
| 4.3.1.3.2 | <i>Tagging Technology In Transportation Of Cargo by Rail</i> | 100 |
| 4.3.1.3.3 | <i>Barcode Scanner</i> | 101 |
| 4.3.1.3.4 | <i>Radio Frequency Microcircuit System (RF)</i> | 101 |
| 4.3.1.3.5 | <i>Voice Recognition Technology</i> | 102 |
| 4.3.2 | Technology Apply At Malaysian Ports | 102 |
| 4.3.2.1 | <i>Port Operation</i> | 102 |
| 4.3.2.2 | <i>Information Technology In Shipping</i> | 103 |
| 4.3.2.3 | <i>Information Technology By Land</i> | 103 |
| 4.4 | CONCLUSION | 103 |

CHAPTER FIVE: FINDING

| | | |
|---------|--|-----|
| 5.0 | INTRODUCTION | 105 |
| 5.1 | TECHNOLOGY APPLY AT WORLD WIDE PORT OPERATION | 105 |
| 5.1.1 | <i>Container Haulage</i> | 105 |
| 5.1.2 | <i>Electronic Data Interchange (EDI)</i> | 107 |
| 5.1.2.1 | <i>Data Transmission In The Port Terminal</i> | 107 |
| 5.1.3 | <i>Electronic Devices In The Container Terminal Port</i> | 110 |
| 5.1.3.1 | <i>Microwave Technology</i> | 110 |
| 5.1.3.2 | <i>Tagging Technology In Transportation Of Cargo By Rail</i> | 112 |
| 5.1.3.3 | <i>Barcode Scanner</i> | 113 |
| 5.1.3.4 | <i>Radio Frequency Microcircuit System (RF)</i> | 114 |
| 5.1.3.5 | <i>Voice Recognition Technology</i> | 115 |
| 5.2 | TECHNOLOGY APPLY AT MALAYSIAN PORTS | 118 |
| 5.2.1 | <i>Port Operation</i> | 119 |
| 5.2.2 | <i>Information Technology In Shipping</i> | 121 |
| 5.2.3 | <i>Information Technology In Land</i> | 122 |

| | |
|----------------|-----|
| 5.3 CONCLUSION | 127 |
|----------------|-----|

CHAPTER SIX: DISCUSSION, RECOMMENDATION AND CONCLUSION

| | |
|--|-----|
| 6.0 INTRODUCTION | 128 |
| 6.1 DISCUSSION | 128 |
| 6.2 RECOMMENDATION FOR FUTURE RESEARCH | 138 |
| 6.3 CONCLUSION | 139 |
| REFERENCES | 143 |
| APPENDIX A | 173 |

LIST OF TABLES

| <u>Tables</u> | <u>Page</u> |
|--|-------------|
| Table 1.1: CARGO STATISTIC (000'Fwt) | 5 |
| Table 1.2: SHIP STATISTICS | 5 |
| Table 1.3: CONTAINER INFORMATION (TEUs) | 6 |
| Table 1.4: CONTAINER INFORMATION (TEUs) | 6 |
| Table 1.5: CONTAINER INFORMATION (TEUs) | 6 |
| Table 1.6: CONTAINER THROUGHOUT AT PORT OF TANJUNG PELEPAS, 2000-2006 (IN MIL. TEU) | 8 |
| Table 1.7: PORT PRIVATIZATION MODELS | 11 |
| Table 2.1: FACTORS THAT INFLUENCE THE EXISTENCE OF PRIVATE SECTORS OF PORT OPERATIONS | 41 |
| Table 3.1: EDI MESSAGE EXPENDING THE PROCESS OF LOADING AND DISCHARGING AT SEAPORT | 68 |
| Table 3.2: THE COMPARISON BETWEEN PAPER PROCESS & EDI | 75 |
| Table 4.1: JOURNAL | 87 |
| Table 4.2: ARTICLES | 89 |
| Table 4.3: CONFERENCE PAPERS | 91 |
| Table 4.4: DISSERTATION PAPERS | 93 |
| Table 4.5: BOOKS | 94 |
| Table 4.6: INTERNET | 95 |
| Table 4.7: TOPICS COVERED IN THE LITERATURE REVIEW | 96 |
| Table 4.8: CONTAINERIZATION | 98 |

| | |
|--|-----|
| Table 4.9: EDI | 99 |
| Table 4.10: MICROWAVE TECHNOLOGY | 100 |
| Table 4.11: TAGGING TECHNOLOGY IN TRANSPORTATION OF CARGO BY RAIL | 100 |
| Table 4.12: BARCODE SCANNER | 101 |
| Table 4.13: RADIO FREQUENCY MICROCIRCUIT SYSTEM (RF) | 101 |
| Table 4.14: VOICE RECOGNITION TECHNOLOGY | 102 |
| Table 4.15: PORT OPERATION | 102 |
| Table 4.16: INFORMATION TECHNOLOGY IN SHIPPING | 103 |
| Table 4.17: INFORMATION TECHNOLOGY BY LAND | 103 |
| Table 5.1: DATABASE CLASSIFICATION | 109 |

LIST OF FIGURES

| <u>Figures</u> | <u>Page</u> |
|--|-------------|
| Figure 1.1: TOTAL CONTAINER TRAFFIC AT PENANG PORT | 9 |
| Figure 1.2: TYPES OF CARGO LANDING AT PENANG PORT | 10 |
| Figure 3.1: TRANSACTION WITHOUT USING EDI | 58 |
| Figure 3.2: TRANSACTION USING EDI | 58 |
| Figure 3.3: THE COMPLEXITY OF CONVERTING DATA TO IN-HOUSE STANDARD, ILLUSTRATED FOR FOUR TRADING PARTNERS. | 62 |
| Figure 3.4: LINER SHIPPING- EDI MESSAGE SCENARIO | 67 |
| Figure 5.1: ELECTRONIC DEVICES IN PORT TERMINAL | 117 |

ABBREVIATION

| | |
|----------------------|---|
| ASEAN | - Association of Southeast Asian Nations |
| CNS | - Community Network Services |
| CSI | - Container Security Initiative |
| DWT | - Deadweight Tons |
| EC | - Electronic Commerce |
| EDI | - Electronic Data Interchange |
| EDIFACT | - Electronic Data Interchange for Administration, Commerce and Transportation |
| EFT | - Electronic Fund Transfer |
| <i>et al.</i> | -At All |
| EU | - European Union |
| FTP | - File Transfers Protocol |
| GDP | - Gross Domestic Product |
| ICDs | - Inland Container Depots |
| ICT | - Information and Communication Technology |
| IEDI | - Internet Electronic Data Interchange |
| IMT- GT | - Indonesia, Malaysia, Thailand – Growth Triangle |
| IOS | - Inter-Organizational System |
| ISO | -International Organization for Standardization |
| IT | - Information Technology |
| JIT | - Just- In-Time |
| LNG | - Liquefied Natural Gas |

| | |
|------------------|--|
| LPG | - Liquefied Petroleum Gas |
| MNC | - Multinational Company |
| MOMAF | - Ministry of Maritime Affairs and Fisheries |
| NAFTA | - North America Free Trade Agreement |
| PKCS | - Port Klang Community System |
| POR-T-MIS | - Port Management Information System |
| PPC | - Penang Port Commission |
| PTP | - Port of Tanjung Pelepas |
| SMK | - Sistem Maklumat Kastam |
| SMS | - Short Messaging Service |
| TDCC | - Transportation Data Coordinating Committee |
| TDI | - Turkish Maritime Administrative |
| TEU | - Total Equivalent Unit |
| UNCTAD | - United Nations Conference on Trade and Development |
| U.S | - United States |
| VAN | - Value Added Network |
| XML | - Extensible Mark-up Language |

CHAPTER ONE

BACKGROUND OF THE STUDY

1.0 INTRODUCTION

This chapter presents the background of the research, problem statements, research questions, objective of the research, scope of the study, significant of the study, and limitation of study.

1.1 BACKGROUND OF THE STUDY

The rapid growth of globalization phenomenal and the growth in trade have had a huge impact in the development of the port in Malaysia. It has spurred investment and development of ports and various other transport infrastructures to support its increasing trade with the world's nations. The importance of ports to the country is underlined by the fact that an estimate about 99% of its international trade, the lifeblood of its economy, is being carried through the oceans via its international seaports (Branch, 1986; Razman and Khalid, 2000; Powell, 2001; Southall, 2005; Nazery, 2006).

Ports play a vital role in economic development of the country. Thus, Malaysia government continues undertaken several liberalization exercises (Nazery, 2006) to promote efficiency and competitiveness in transportation sector especially in term of the project investment. Those projects include enhancement in various development of port, highway, water supply, waste disposal and sewerage projects (Hooi, 2001).

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