

UNIVERSITI TEKNOLOGI MARA

**A COMPARATIVE ANALYSIS OF
COST EFFICIENCY AND ITS
DETERMINANTS FOR PUBLIC-
LISTED PORT OPERATORS IN
MALAYSIA**

MARIAM BINTI MAHMUN

DBA

August 2021

AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This dissertation has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.


Name of Student : Mariam Binti Mahmud

Student I.D. No. : 2017791777

Programme : Doctor of Business Administration (AA901)

Faculty : Arshad Ayub Graduate Business School

Dissertation Title : A Comparative Analysis of Cost Efficiency and its Determinants for Public-Listed Port Operators in Malaysia

Signature of Student : 

Date : August 2021

ABSTRACT

The Investment in port infrastructure is not only costly in nature but its return on investment takes much longer. In view of its capital intensity, port efficiency is not just about measuring output performance, but it is also important in ensuring business sustainability. Rapid changes in the global shipping environment and intensified competition in the port industry have pressured ports to upgrade their costly infrastructure, particularly to meet the increasing demands of shipping liners in order to remain competitive. The objective of this study is two-fold. First, this study aims to examine the cost-efficiency of Malaysian ports operated by public-listed companies in the country. Secondly, the study aims to determine the relationship between selected factors in influencing the cost-efficiency of the ports. This study employed a quantitative method which combined data envelopment analysis (DEA) estimation to measure the level of cost-efficiency of each operator and a regression model to determine the relationships between ownership, environmental commitment, competition, gross domestic product and the cost-efficiency score. Data were collected from four companies' annual reports for the period of 2011 until 2019. The findings from the study based on the implemented models indicate that the ports are operating at different efficiency levels but generally below the full efficiency. The ranking of cost-efficiency by operators are also identified. Competition has positive relationship in influencing the cost-efficiency of these ports. Meanwhile, GDP growth and ownership of ports had positive relationship but not significant to determine level of cost efficiency whereas environmental commitment has inverse relationship but significant to cost efficiency. Findings from the current work contribute to the body of knowledge with regard to the field of port efficiency in Malaysia. The outcomes from this study are useful for policy makers in determining appropriate policies to encourage operators to rationalise resources and support the growth of ports in the country. The study also provides significant inputs to Malaysian port operators in observing causes of inefficiency and to help them improve their operational and financial strength. Investors including shareholders could then evaluate returns to their share investment values in the company and demand on improvements in port efficiency.

ACKNOWLEDGEMENT

First and foremost, all the praises and gratefulness to the Almighty for His blessings in giving me the great opportunity and accomplishment in completing this dissertation and Doctor in Business Administration study.

I would like to express my sincere gratitude to my research supervisor Professor Dr Imbarine Bujang for his invaluable supervision as well as his endless guidance and encouragement throughout my study from the preparation of this dissertation until its completion. It is really an honour to work under his supervision to accomplish this work. I am also grateful to Dr Alice Wong Su Chu, my co-supervisor for her great assistance and useful comments in going through the content of this dissertation.

My thanks go to other individuals who have supported me either directly or indirectly during the research journey, including UITM staff members from the PASCA, fellow colleagues who kept motivating each other so that we can keep going together throughout the journey and friends for all the positive words and encouragements. I have benefited immensely from the support of these people to keep uplift my spirit.

Finally, this work is specially dedicated to the loving memory of my late father, to my mother, family, especially my dear husband, children and grandchildren to whom I am indebted for their selfless sacrifices, love, prayers and encouragement in enabling me to stand strong while enduring this great journey and experience. Alhamdulillah and may the Almighty reward all the kindness.

TABLE OF CONTENTS

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR’S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	x
LIST OF FIGURES	xii
LIST OF ABBREVIATIONS	xiii
CHAPTER ONE INTRODUCTION	1
1.1 Introduction	1
1.2 Problem Statement	4
1.3 Research Objectives	6
1.4 Research Questions	6
1.5 Rationale of Study	7
1.6 Scope of Study	9
1.7 Definition of Terms	10
1.8 Significance of Study	12
1.9 Organisation of Study	15
CHAPTER TWO PORT DEVELOPMENT IN MALAYSIA	17
2.1 Introduction	17
2.2 Port Development in Malaysia	17
2.3 The Advancement of Port Klang and Port of Tanjung Pelepas as Global Ports	20
2.4 Trade Growth and the Port Sector in Malaysia	23
2.5 Roles of Privatisation of Port Sector in Malaysia	25
2.6 Public-Listed Port Operators	28