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**THE TECHNICAL EFFICIENCY OF GOVERNMENT
LINKED COMPANIES (GLCS): INTERNAL AND
MACROECONOMIC PERSPECTIVES**



**DOCTOR OF PHILOSOPHY
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COMPANIES (GLCS): INTERNAL AND MACROECONOMIC
PERSPECTIVES**

By



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**Thesis submitted to
School of Economics, Finance and Banking,
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Universiti Utara Malaysia,
in Fulfilment of requirement for the Degree of Doctor of Philosophy**

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ABSTRACT

The ever challenging environment in the globalization era, has led Government Linked Companies (GLCs) to adapt various business strategies in their effort to become more efficient. The involvement of Malaysian government as the key player in economic activities does not help the GLCs to be more competent especially when the agenda is being politicised. Furthermore, GLCs are currently facing problems in terms of profit and management that affect their overall level of efficiency. Research on GLCs' competency to overcome the challenges in the business world is still insufficient. Thus, this study aims to investigate the effects of internal and macroeconomic factors that could positively improve the technical efficiency of GLCs. Hence, the objective of this study is to examine the impact of macroeconomic and internal factors on the efficiency of 17 top listed GLCs under G20. In addition, this study also analyses the role of the government as an interaction terms in affecting the technical efficiency of GLCs. Stochastic Frontier Analysis (SFA) is used to identify the technical efficiency score of GLCs followed by the Fixed and Random Effects and Fully Modified Ordinary Least Squares (FMOLS). The results from this study reveal that the internal factors such as the revenue, financial capital, government ownership, firm size and return on assets and macroeconomic factors such as GDP, infrastructure, unemployment, trade openness, inflation rate and real interest rate, show a significant impact on the GLS's technical efficiency. The study recommends government involvement as an interaction terms to improve GLC's efficiency. In terms of policy, the government should play a greater role in providing a stable macroeconomic environment, making rational decisions and establishing more international economic linkages through GLCs. It also indicates that policy-makers should act in accordance with good governance based on GLCs' performance and development.

Keywords: Government Linked Companies, technical efficiency, internal factors, macroeconomic factors, government role

ABSTRAK

Persekitaran yang mencabar dalam era globalisasi menyebabkan Syarikat Berkaitan Kerajaan (SBK) menyesuaikan diri dengan pelbagai strategi perniagaan dalam usaha untuk menjadi lebih cekap. Penglibatan oleh pihak kerajaan sebagai pemain peranan utama dalam aktiviti-aktiviti ekonomi tidak banyak membantu syarikat-syarikat SBK ini untuk menjadi lebih kompeten, terutamanya apabila agenda ini dipolitikkan. Tambahan pula, SBK kini menghadapi masalah dari segi keuntungan dan pengurusan yang menjejaskan tahap kecekapan secara keseluruhannya. Kajian mengenai kecekapan SBK bagi mengatasi cabaran dalam dunia perniagaan masih tidak mencukupi. Oleh itu, kajian ini bertujuan untuk menilai kesan faktor-faktor dalaman dan makroekonomi yang berkemungkinan boleh meningkatkan kecekapan teknikal SBK. Oleh itu, objektif kajian ini adalah untuk mengkaji kesan faktor makroekonomi dan faktor dalaman terhadap kecekapan di 17 buah SBK yang tersenarai di bawah G20. Selain itu, kajian ini juga menganalisis peranan kerajaan sebagai suatu bentuk interaksi (*interaction terms*) dalam mempengaruhi kecekapan teknikal SBK. Analisis Persempadanan Stokastik atau *Stochastic Frontier Analysis* (SFA) telah digunakan untuk mengenal pasti skor kecekapan teknikal SBK, diikuti oleh Kesan-kesan Tetap dan Rawak (*Fixed dan Random Effects*) dan Kuasa Dua Terkecil Lazim Ubah Suai Sepenuhnya (*Fully Modify Ordinary Least Square* atau FMOLS). Hasil kajian ini mendapati faktor dalaman seperti jumlah pendapatan, modal kewangan, pemilikan kerajaan, saiz firma dan pulangan ke atas aset serta faktor makroekonomi seperti KDNK, infrastruktur, pengangguran, keterbukaan perdagangan, kadar inflasi dan kadar faedah sebenar menunjukkan kesan yang signifikan terhadap kecekapan teknikal SBK. Kajian ini mencadangkan penglibatan kerajaan sebagai suatu bentuk interaksi (*interaction terms*) bagi meningkatkan keberkesanan SBK. Dari segi dasar pula, pihak kerajaan perlu memainkan peranan penting dalam menyediakan persekitaran makroekonomi yang stabil, membuat keputusan yang rasional dan mewujudkan hubungan ekonomi antarabangsa melalui SBK. Ini menunjukkan bahawa pembuat dasar juga perlu bertindak selaras dengan urus tadbir yang baik berdasarkan prestasi serta pembangunan SBK.

Kata kunci: Syarikat Berkaitan Kerajaan, kecekapan teknikal, faktor dalaman, faktor makroekonomi, interaksi, peranan kerajaan

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LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
CPI	Consumer Price Index
SFA	Stochastic Frontier Analysis
GLCs	Government Linked Companies
TE	Technical Efficiency
PTE	Pure Technical Efficiency
SE	Scale Efficiency
DMU	Decision Making Unit
ROA	Return on Asset
FC	Financial Capital
GOV	Government Ownership
BD	Board Structure
ER	Exchange Rate
ETP	Economic Transformation Programme
PCG	Putrajaya Committee on GLC High Performance



CHAPTER ONE

INTRODUCTION

1.1 Introduction

Growth slowdown draws the attention of policy-makers and brings about anxiety to middle income countries (Aiyar, Duval, Puy, Wu & Zhang, 2013). It is widely believed that global business is the core of the economic structure of any country, and represents the engine of any developmental activities. In addition, it plays a vital role in the growth and development of an economy, as has been identified academically or practically by previous studies (Yacob, Aziz, Makmor & Zin, 2013). Government agencies have to play a more effective role, especially in economic development, to help boost efficient production of products and services. In order to carry out this role, Government Linked Companies (GLCs) need to be efficient in order to maintain their business success, given the increasing competition and to contribute to the economy.

In economics, 'efficiency' is a term that describes how well a system performs in producing the maximum output for a given quantity of inputs. If more outputs are produced without altering inputs; or if less input is used for the same quantity of outputs produced, efficiency is said to be improved. Efficiency is measured by using best production frontier to enable us to distinguish GLCs that will survive from those that will not.

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