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**FINANCIAL CHARACTERISTICS, CEO
CHARACTERISTICS, RESEARCH AND
DEVELOPMENT INVESTMENT AND FIRM
PERFORMANCE**



**MASTER OF SCIENCES
(INTERNATIONAL ACCOUNTING)
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RESEARCH AND DEVELOPMENT INVESTMENT AND FIRM
PERFORMANCE**



Thesis Submitted to

**Othman Yeop Abdullah Graduate School of Business,
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**In Partial Fulfillment of the Requirement for the Master of Sciences (International
Accounting)**



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ABSTRACT

The government of Malaysia, once again, had pointed out the importance of productivity and innovation in the Eleventh Malaysia Plan (2016-2020). The issue on research and development had become alarming when only three percent of the amount of research and development had been successfully commercialized. Hence, this study aimed to examine the relationship between financial characteristics (leverage and cash flow), CEO characteristics (CEO duality, CEO financial expertise, CEO age), and research and development investment on firm performance (ROE and return index) based on the agency theory, the stewardship theory and the upper echelon theory. The sample companies were based on non-financial listed companies which had been actively involved in research and development activities from 2014 to 2016. The fixed effects panel data regression was used to analyze the data. Based on 183 firm-year observations, the results revealed a significant relationship between leverage, CEO duality, and research and development investment and firm performance as represented by ROE and return index. Even though cash flow and CEO financial expertise had a significant relationship with ROE, it did not have any significant relationship with return index. Meanwhile, CEO age did not have any significant relationship with ROE, but it had a positive and significant relationship with return index. The result also showed the control variable, namely market value, had a significant relationship with firm performance (ROE and return index). The findings of this study offer a better insight into the importance of CEO attributes and their implication on firm performance. Additionally, they provide an understanding of the contribution of research and development investments towards firm's overall performance.

Keywords: Financial characteristics, chief executive officer characteristics, research and development investment, firm performance.

ABSTRAK

Kerajaan Malaysia telah menonjolkan kepentingan produktiviti dan inovasi di dalam Rancangan Malaysia Kesebelas (2016-2020). Isu mengenai penyelidikan dan pembangunan telah menjadi perhatian apabila hanya tiga peratus daripada jumlah penyelidikan dan pembangunan berjaya dikomersialkan. Oleh itu, kajian ini mengkaji hubungan di antara ciri-ciri kewangan (leveraj dan aliran tunai), ciri-ciri Ketua Pegawai Eksekutif (dualiti, kepakaran kewangan dan umur), pelaburan dalam penyelidikan dan pembangunan ke atas prestasi syarikat (pulangan atas ekuiti dan pulangan indeks) berdasarkan teori agensi, teori pengawasan dan teori ‘upper echelon’. Sampel syarikat adalah terdiri daripada syarikat-syarikat tersenarai bukan kewangan yang aktif terlibat dalam aktiviti penyelidikan dan pembangunan pada tahun 2014 hingga 2016. “Fixed-effect” data panel digunakan untuk menganalisis data. Berdasarkan 183 pemerhatian-tahun firma, hasil kajian menunjukkan hubungan yang signifikan dalam leveraj, dualiti Ketua Pegawai Eksekutif, dan pelaburan dalam penyelidikan dan pembangunan ke atas prestasi firma yang dijelaskan menerusi pulangan atas ekuiti dan pulangan indeks. Walaupun aliran tunai dan kepakaran kewangan Ketua Pegawai Eksekutif mempunyai hubungan yang signifikan dengan pulangan atas ekuiti, tetapi hasil kajian menunjukkan tiada hubungan yang signifikan di antara aliran tunai dan kepakaran kewangan Ketua Pegawai Eksekutif dengan pulangan indeks. Sementara itu, umur Ketua Pegawai Eksekutif didapati tiada hubungan yang signifikan dengan pulangan atas ekuiti, namun terdapat hubungan yang positif dan signifikan di antara umur Ketua Pegawai Eksekutif dengan pulangan indeks. Hasil kajian turut menunjukkan pembolehubah kawalan iaitu nilai pasaran mempunyai hubungan yang signifikan dengan prestasi firma (pulangan atas ekuiti dan pulangan indeks). Penemuan dari kajian ini dapat memberikan maklumat tentang kepentingan atribut CEO dan implikasinya terhadap prestasi firma. Di samping itu, dapatan kajian memberikan pemahaman mengenai sumbangan pelaburan penyelidikan dan pembangunan ke arah prestasi keseluruhan firma.

Kata kunci: Ciri-ciri kewangan, ciri-ciri Ketua Pegawai Eksekutif, pelaburan dalam penyelidikan dan pembangunan, prestasi firma.

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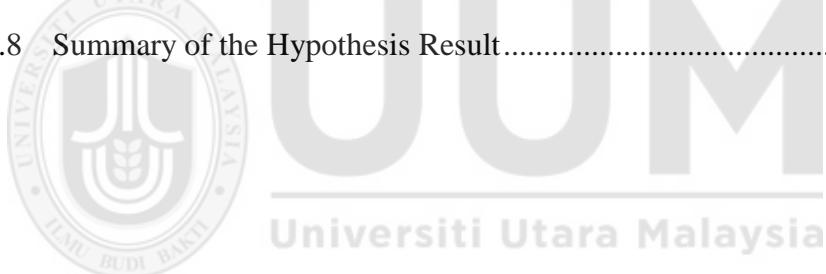
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LIST OF ABBREVIATIONS

CEO	Chief Executive Officer
ETP	Economic Transformation Programme
GERD	Gross Expenditure on Research and Development
IAS	International Accounting Standard
ICT	Information and Communication Technology
MASB	Malaysian Accounting Standard Board
MCCG	Malaysian Code on Corporate Governance
MFRS	Malaysian Financial Reporting Standard
MIA	Malaysian Institute of Accountant
MIDA	Malaysian Investment Development Authority
OLS	Ordinary Least Square
R&D	Research and Development
RI	Return Index
ROE	Return on Equity
SEC	Securities and Exchange Commission
SME	Small and Medium Enterprise
SPSS	Statistical Package for the Social Sciences
STATA	Statistics Data Analysis
US	The United States of America
VIF	Variance Inflation Factor

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Research and development (R&D) is viewed as the process of increasing the stock of knowledge, such as knowledge of culture, man, and society, comprised from the creative work of R&D on a systematic basis in order to devise new applications through the use of this stock of knowledge (OECD, 2013). According to Ayaydin and Karaaslan (2014), R&D is known as a crucial factor that can influence a firm's sustainable competitive capability. This is because, companies can gain their growth, effectiveness, and competitive advantage through R&D (Karaveg, Thawesaengskulthai, & Chandrachai, 2014). As a result, a successful R&D will have a positive impact on firm performance (Anuar, Zulhumadi, & Udin, 2012).

Realising the need for greater R&D activities for the public and private sectors in Malaysia, the Malaysian government had allocated RM150 million to the Business Development Fund and the provision of tax incentives for R&D in budget 2010 (Economic Planning Unit [EPU], 2010). On the other hand, the agenda has been in doubt since it was reported that the R&D gross expenditure had been reduced from 0.69% in 2004 to 0.21% in 2008 (EPU, 2010). However, it was later reported that the R&D gross expenditure had increased from 1.07% in 2010 to 1.13% in 2012 (EPU, 2010). Furthermore, Akoum (2016) found a significant increase in terms of the number of researchers and technicians that were involved with R&D activities ever since

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