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**THE INTERACTION EFFECTS OF WORKING CAPITAL
MANAGEMENT ON THE RELATIONSHIP BETWEEN
KEY DETERMINANTS OF WORKING CAPITAL AND
FIRM PERFORMANCE**



By

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**Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
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in Partial Fulfillment of the Requirement for the Doctor of Business Administration**

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ABSTRACT

The current global economy uncertainties have led to the reduction in the accessibility to trade credit facilities imposed on firms by banks and financial institutions. Critically, firms are keen to look internally to working capital management as a key source of finance. Among the main goal of this research is to evaluate the moderating role of the working capital management on the relationship between key determinants of working capital and firm performance. The population for this study covers manufacturing firms listed on the main market of Bursa Malaysia Securities Berhad. This study covers eleven sectors classification based on the criteria established by Malaysia Investment Development Authority. All data is extracted from Bloomberg database. The multivariate analysis of this study is carried out using Statistical Package for the Social Sciences in order to test the hypotheses. The findings have shown that the relationship between key determinants of working capital and firm performance are moderated by working capital management and they form a contemporary working capital management model. Likewise, days sales outstanding and net liquid balance serves as alternative measures of a firm efficiency and liquidity position. Also, it was found that working capital requirements moderate all the relationships between the key determinants of working capital and firm performance. Except for firm size, it was also found that net liquid balance moderates the relationships between the key determinants of working capital and firm performance. This study concludes that the interaction effects of working capital management in listed manufacturing firms as modifying either the strength or direction of relationships between predictors and criterion. Therefore, it provides a comprehensive research framework for listed manufacturing firms to gain competitive advantage in terms of operational analysis, resource management and profitability.

Keywords: working capital management, working capital requirements, net liquid balance

ABSTRAK

Ketidaktentuan ekonomi global semasa telah membawa kepada pengurangan dalam akses kemudahan kredit berdagang yang dikenakan ke atas syarikat oleh bank-bank dan institusi kewangan. Secara kritikal, syarikat berminat untuk mengkaji dari dalaman kepada pengurusan modal kerja sebagai sumber utama kewangan. Di antara matlamat utama kajian ini adalah untuk menilai pengaruh pengurusan modal kerja kepada hubungan antara penentu utama modal kerja dan prestasi firma. Populasi bagi kajian ini merangkumi syarikat pembuatan yang tersenarai di saham utama Bursa Malaysia Securities Berhad. Kajian ini meliputi klasifikasi sebelas sektor berdasarkan kriteria yang ditetapkan oleh Lembaga Pembangunan Pelaburan Malaysia. Kesemua data diekstrak dari pangkalan data Bloomberg. Analisis multivariat untuk kajian ini dijalankan dengan menggunakan SPSS untuk sains sosial untuk menguji hipotesis. Hasil kajian telah menunjukkan bahawa hubungan antara penentu utama modal kerja dan prestasi firma disederhanakan oleh pengurusan modal kerja dan mereka membentuk satu model kerja pengurusan modal kontemporari. Begitu juga, jualan hari tertunggak dan baki kecairan bersih berfungsi sebagai pengukuran alternatif kecekapan syarikat, dan kedudukan mudah tunai. Juga, didapati bahawa keperluan modal kerja menyederhanakan semua hubungan antara penentu utama modal kerja dan prestasi syarikat. Kecuali saiz firma, ia juga didapati bahawa baki kecairan bersih menyederhanakan hubungan antara penentu utama modal kerja dan prestasi firma. Kajian ini menyimpulkan kesan interaksi pengurusan modal kerja di syarikat pembuatan disenaraikan sebagai mengubah samada kekuatan atau arahan hubungan antara peramal dan kriteria. Oleh itu, ia menyediakan rangka kerja penyelidikan yang komprehensif bagi syarikat pembuatan tersenarai untuk mendapatkan kelebihan daya saing dari segi analisis operasi, pengurusan sumber dan keuntungan.

Kata kunci: pengurusan modal kerja, keperluan modal kerja, baki kecairan bersih

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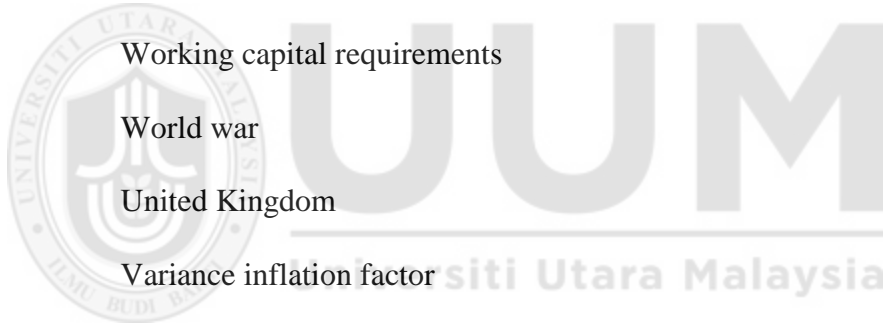
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LIST OF ACRONYMS AND ABBREVIATIONS

A	Age
ACP	Average collection period
AFC	Asian financial crisis
AR	Accounts receivable
AP	Accounts payable
BMSB	Bursa Malaysia Securities Berhad
BS	Balance sheet
C	Cash and short-term marketable securities
CA	Current assets
CAPM	Capital asset pricing model
CCC	Cash conversion cycle
CF	Cash flow
CL	Current liabilities
CT	Configurational theory
DPO	Days payable outstanding ⁴
DSO	Days sales outstanding
EBITA	Earnings before interest, tax and amortization
FST	Fisher separation theorem
GDP	Gross domestic product
GFC	Global financial crisis

GOI	Gross operating income
GOP	Gross operating profit
GWC	Gross working capital
HMR	Hierarchical multiple regression
HHB	Hexagon Holdings Berhad
ICAEW	The institute of Chartered Accountants England and Wales
INV	Inventories
ITO	Inventory turnover ratio
LV	Leverage
MIDA	Malaysian Investment Development Authority
MR	Multiple regression
NA	Short term net accrual
NLB	Net liquid balance
NOP	Net operating profit
NTC	Net trade cycle
NWC	Net working capital
OC	Operating cycle
OCF	Operating cash flow
OLS	Ordinary least square
PN	Practice note
PLS-SEM	Partial least square – structural equation modeling
PWC	Price Waterhouse Coopers
ROA	Return on assets

ROE	Return on equity
ROS	Return on sales
S	Size
SG	Sales growth
SME	Small and medium enterprise
SPSS	Statistical package social sciences
STB	Short term borrowings
WACC	Weighted average cost of capital
WC	Working capital
WCM	Working capital management
WCR	Working capital requirements
WW	World war
UK	United Kingdom
VIF	Variance inflation factor
US	United States



CHAPTER 1

INTRODUCTION

1.1 Introduction

Firstly this chapter starts by capturing the background of this study in terms of the evolution of working capital management (WCM), the contemporary understanding of WCM, the importance of WCM, WCM in non-crisis period, and finally WCM influence on Malaysia manufacturing industry. It is then followed by problem statement, research questions, and research objectives respectively. Subsequently, it presents the scope and limitations of the study, definition of key terms and organization of the thesis.

1.2 Background of the Study

1.2.1 The evolution of working capital management (WCM)

The concept of working capital (WC) was probably first coined by Karl Marx (1818-1883), even though it was used at that time to describe a different meaning (Bhattacharya, 2009). In its infancy, WC was termed as ‘variable capital’ in order to describe payment of wages advanced to workers prior to the goods/products ‘work-in-progress’ completion (Bhattacharya, 2009; Lukkari, 2011). Later, the concept of WC was further developed as a firm ‘safe deposit’ to ensure that a firm was able to

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