THE EFFECTS OF WORKING CAPITAL MANAGEMENT ON SME's PROFITABILITY IN MALAYSIA

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ABSTRACT

The inefficient management of working capital not only reduces profitability but in the end may also lead a concern to financial crisis thus every organization regardless of its profit orientation, size and nature of business, needs requisite amount of working capital. Consequently, the efficient working capital management is the most crucial factor in maintaining survival, liquidity, solvency and profitability of the concerned business organization. The objective of this study is to assess the influence of working capital components on the profitability of selected small and medium enterprises (SMEs) in Malaysia. Deductive approach has been incorporated and chose positivism research philosophy. The sample sizes of 58 SMEs have been selected for gathering the financial information in the study. The Statistical Package for Social Sciences (SPSS) has been applied in the study. The relevant data has been gathered for the time frame of five years i.e. 2010 to 2014. Result shows that it is a significant relationship between the working capital management and profitability of the selected firms. Thus, these findings have been suggested to the small and medium enterprises to minimize its borrowings in order to reduce the risk in the company. Moreover, the small and medium enterprises are recommended that they should improve their receivable cycle to ensure that cash is recovered from the parties. Therefore, firms can provide the discount to the clients in order to collect their account receivables.

KEY WORDS: working capital, working capital components, profitability, small and medium enterprises (SMEs), Malaysia.

ABSTRAK

Pengurusan modal kerja yang tidak cekap bukan sahaja mengurangkan keuntungan tetapi pada akhirnya juga boleh membawa kebimbangan terhadap krisis kewangan bagi setiap organisasi tanpa mengira orientasi keuntungan, saiz dan jenis perniagaan, jumlah yang diperlukan untuk modal kerja. Oleh itu, pengurusan modal kerja yang cekap adalah faktor yang paling penting dalam mengekalkan ketahanan, kecairan, keupayaan membayar hutang, dan keuntungan organisasi perniagaan yang berkenaan. Objektif kajian ini adalah menilai pengaruh komponen modal kerja terhadap keuntungan perusahaan kecil dan sederhana (PKS) terpilih di Malaysia. Saiz sampel 58 PKS telah dipilih untuk mengumpul maklumat kewangan dalam kajian ini. Statistical Package for Social Sciences (SPSS) telah digunakan dalam kajian ini. Data yang berkaitan telah dikumpulkan untuk tempoh masa lima tahun iaitu dari 2010 to 2014. Hasil kajian menunjukkan bahawa hubungan signifikan antara pengurusan modal kerja dan keuntungan bagi syarikat yang dipilih. Oleh itu, penemuan ini telah dicadangkan kepada PKS supaya mengurangkan pinjaman untuk mengurangkan risiko dalam syarikat itu. Selain itu, PKS adalah dicadangkan bahawa mereka perlu meningkatkan kitaran terima tunai untuk memastikan tunai adalah dikutip daripada pihak-pihak tertentu. Oleh itu, firma boleh menawarkan diskaun kepada pelanggan dalam usaha untuk mengutip akaun belum terima mereka dengan cepat.

KATA KUNCI: modal kerja, komponen modal kerja, keuntungan, perusahaan kecil dan sederhana (PKS), Malaysia.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The concept of working capital is referred to as a firm financial position which plays a significant role in maximizing the shareholders' wealth when it maximizes the profits. In order to provide more return on its assets and minimal payment for the liabilities of the firm, it should be able to control the short-term assets and liabilities effectively and efficiently by means of the working capital management. Efficiency in working capital management is a need for every firm to sustain a balance between liquidity and profitability. According Duggal & Budden (2012), working capital management involves managing the short-term assets and short-term liabilities by optimizing its net working capital need which from the difference between short-term assets and short-term liabilities.

Short-term or current assets and liabilities are vital components of the net working capital and therefore firms need to be more careful of analysing them as they play a key role towards the profitability, risks, and the values of firms (Afza & Nazir, 2011 and Smith, 1973). Ganesan (2007) conclude that minimizing the requirements of working capital and maximizing the possible revenues may indicate that the working capital is both balanced and optimal. In addition, if the working capital management is efficient, it may also increase the free cash flow of firms, and the growth opportunities of the firms along with the return to shareholders also are equally greater. Hence, the working capital of the firms should be kept at an optimal level and their values should be maximized (Afza & Nazir, 2007). The efficiency of working capital management is probably to generate significant results and disregard to it by any firm can be highly dangerous (Christopher & Kamalavalli, 2009).

Yadav, Kamath & Manjrekar (2009) and Padachi (2006) highlighted that in order to maintain daily operations and profitable investment opportunities as the benefits, the liquidity margin should be made available to meet the cash demands. Net working capital can be calculated as current assets deduct the current liabilities. Thus, it can be said that working capital plays an important role for the firms and managing their working capital efficiently may ensure their success. Working capital management is considered significant for manufacturing companies. In this regard, studies conducted by Gill, Biger, & Mathur (2010) and Hussain, Farooq, & Khan (2012) highlighted that there is a significant relationship between working capital management and profitability of the manufacturing sectors.

A stable and vibrant economy may consider small and medium enterprises (SMEs) as essential elements. This is so because they may culminate in the creation of jobs within the economy by means of promoting the enterprise culture. As a conclusion, the importance of SMEs in Malaysia is gaining widespread recognition on a global scale. Atrill (2006) carried out a study and found that SMEs in UK were lacking in resources to manage their working capital management effectively and it found that their failure rate is higher compared with those large businesses. According to Padachi (2006), the efficiency of working capital management is vital for the existence, growth and profitability of SMEs due to their limited resources to the financial markets.

1.2 Overview of Small and Medium Enterprises (SMEs) in Malaysia

According to Hooi (2006) and Omar, Lawrence & Ismail (2009), no standard definition of SMEs has been recorded in the literature in the context of Malaysia. They discovered that various agencies, particularly related government and financial institutions defined SMEs on their own terms. SME Corporation Malaysia is presently the central coordinating agency for

advisory services and providing necessary information for every small and medium enterprise in Malaysia (SMEs Corporation Malaysia, 2013).

Since the years of 2005, there have been quite a number of economic developments consist of inflation in price, structural changes in relation to business trends. A review on these definitions was undertaken in the year of 2013 and it culminated in a new SME definition at the 14th National SME Development Council (NSDC) meeting which was held in July 2013.

Following are the definitions:

(a) A firm that has sales turnover of not more than RM50 million or the number of full-time employees not exceeding 200 workers in the manufacturing sector.

(b) A Firm that has sales turnover of not more than RM20 million or the number of full-time employees not exceeding 75 workers in services and other sectors (SMEs Corporation Malaysia, 2014).

Referring to the Department of Statistics of Malaysia, the economic census 2011 resulted out of the total of 662,939 business establishments, there were 97.3% or 645,136 SMEs operating in Malaysia. The average compounded annual growth rate (CAGR) of SMEs was 7.0%, which was higher than 4.9% CAGR of the overall economy in the period of 2005 to 2015. As a result, gross domestic product (GDP) contributed by SMEs was increased from 29.6% in 2005 to 36.3% in 2015. Due to the one-off effect of the SME new official definition, before which, about 8,000 firms which were originally categorized as large firms are now considered SMEs, hence the growth of SMEs' GDP would have been increased from 6.4% in 2013 to 13.6% in 2014. Consequently, SMEs' GDP continued to record a relatively higher growth rate superseding the overall growth of GDP at 6% and it was also reflected across all economic sectors in the country. (SMEs Annual Report, 2014/15).

According to Khalique, Sadique, Abu Hassan, Abdul, Shaari & Adel (2011), SME is the broadest ranging form of business that has been established in Malaysia and they focus on operating in general business, agricultural, and manufacturing sectors. Kassim & Sulaiman (2011) emphasized that the role of SMEs in manufacturing sector is significant as it contributes to the development of economy in Malaysia. Mustapha, Muda & Abu Hasan (2011) reported that the manufacturing sector within SMEs in Malaysia focus on activities such as the production of raw materials, for example, textiles, logging, petroleum, food and beverage, rubber tapping, and electrical appliances.

SMEs particularly in manufacturing sector encounter a lot of constraints in relation to gaining access to financial assistance which can be seen as one of the most important aspects in development of those firms (Ayyagari, Beck & Demirguc-Kunt, 2007). Many SMEs have difficulties gaining funds, because of various factors such as weaker track records, weaker credit rating, short of collaterals, longer loan processing time duration, among others, as required by most banking and financial institutions in Malaysia (Department of Statistics Malaysia, 2006). As a result, most of the SMEs rely more on their own working capital as the major source of finance, thus assessing the impact of working capital management on the firms' profitability is of paramount importance. Narasimhan & Murty (2001) suggested that in order for firms to improve their profitability, there are some critical areas that should be mainly focused on such as decreasing the investment of working capital and improving the efficiency of working capital management instead. Thus, it means in order to improve the profitability, the firms should reduce the number of day's account receivable and inventories, but SMEs may increase number of debtors if they need financing.

According to Tauringana & Afrifa (2013), it was discovered that due to incompetent management, SMEs are therefore poorly managed. A similar view was echoed by Pansiri &

Temtime (2008) that the managerial competency may significantly affect the success or failure of SMEs. This may lead to the effects on both in the short term and long term planning process and the managers may turn more reactive rather than proactive to the problems being faced by their companies.

The working capital management firm practices are essential because they determine the available working capital level (Tauringana & Afrifa 2013), which in turn may affect overall performance. Although the working capital management practices are considered important to SMEs, Howorth & Westhead (2003) however questioned the level of understanding and knowledge of working capital management practices by the SMEs. A survey carried out among SMEs in Malaysia also showed that the lack of collateral, poor business performance and inadequate information were among the main causes for constraints faced by the small and medium enterprises (Aris, 2007).

As has been discussed in the foregoing, it is evident that there is a strong need to intensify research on effective management of working capital and how it may influence SMEs' profitability especially among manufacturing companies of relatively developing economies like Malaysia in which, nothing much has thus far been done and achieved. The study therefore seeks to address both the theoretical and practical aspects of managerial problems and issues of working capital management with an ultimate goal of offering solutions and recommendations in line with the subsequent findings of the study.

1.3 Problem Statement

The main objective of a firm is to maximize its shareholders' wealth. While aggressively maximizing their shareholders' wealth, some firms may have the disposition to pay less attention to maintaining the optimal liquidity requirements. Market valuation of a firm is

often valued by their profitability. Any changes in profitability can thus affect the market valuation and eventually affect shareholders' wealth (Alavinasab & Davoudi, 2013).

According to Siddiquee & Khan (2009), if the management of working capital is inefficient, it may not only decrease the profitability of firms, but also may result in a financial crisis eventually. Hence, all the organizations regardless of their orientation-based profit, business size and nature, they may definitely need some amount of working capital. Moreover, when the current asset is low, the liquidity level may also be equally low that may result in the operations being found difficult to sustain smoothly (Van Horne & Wachowicz, 2008). Thus, the most critical and important factor is the efficiency of the working capital management in order to maintain survival, liquidity or solvency and profitability of the concerned business organizations.

Few studies on working capital in the context of Malaysia have been conducted by Wasiuzzaman & Arumugam (2013) and Mohamad & Saad (2010) to find empirical evidences on working capital and firm profitability in Malaysia. Mohamad & Saad (2010) conducted a research looking into empirical evidences related to working capital management from the market valuation and profitability perspectives and also its impact on the performance of SMEs listed in Malaysia. They found that working capital management is required to ensure there is improvement in a firm's market value and profitability. They also carried out further research into exploring different variables and sample sizes.

As there has been a lack of research looking into the relationship between the working capital management and profitability of SMEs in Malaysia, this has been highlighted in the problem statement and thus contributes to the literature of the present research concerning the management of the working capital to examine whether there is any significant relationship between the working capital management with the SMEs' profitability in Malaysia.

This paper by means of a model in which, the independent variable is the working capital components which include cash conversion cycle (CCC), receivable conversion period (RCP), payable conversion period (PCP) and inventory conversion period (ICP), while dependent variable is the profitability of SMEs in Malaysia which are return on assets, net operating profits and return on equity. For control variables, three variables, namely firm size, leverage or financial debt ratio and sales growth are examined.

1.4 Research Questions

With regards to the situation in which some firms may not good in manage of the liquidity of the firms, a general research question is thus devised. The general research question of this study is "Does working capital management influence the profitability of SMEs in Malaysia?" In order to analyse the question on working capital, specific research objectives have been developed to study the relationship between working capital management and the profitability of SMEs in Malaysia.

Specific research questions:

i. Is there any significant relationship between cash conversion cycle (CCC) and profitability of SMEs in Malaysia?
ii. Is there any significant relationship between receivable conversion period (RCP) and profitability of SMEs in Malaysia?
iii. Is there any significant relationship between payable conversion period (PCP) and profitability of SMEs in Malaysia?
iv. Is there any significant relationship between inventory conversion period (ICP) and profitability of SMEs in Malaysia?

v. Is there any significant relationship between working capital (WC) and profitability of SMEs in Malaysia?

1.5 Research Objectives

Based on the research questions, the following research objectives have been formulated:

(i) General research objective:

i. To investigate the influence of working capital management on the profitability of SMEs in Malaysia.

(ii) Specific research objectives:

i. To examine the influence of cash conversion cycle (CCC) on the profitability of SMEs in Malaysia.
ii. To examine the influence of receivable conversion period (RCP) on the profitability of SME's in Malaysia.
iii. To examine the influence of payable conversion period (PCP) on the profitability of SMEs in Malaysia.
iv. To examine the influence of inventory conversion period (ICP) on the profitability of SMEs in Malaysia.
v. To examine the influence of working capital (WC) on the profitability of SMEs in Malaysia.

1.6 Significance of the Study

Generally, this study is expected to benefit the society and at the same time, contribute to the literature particularly on the effect of working capital management on profitability of SMEs in the context of Malaysia. The relationship between working capital management and profitability of SMEs is very significant as the improvement of working capitals is considered

necessary for the stability and survival of the firms. This study is significant to SMEs' management as well as other stakeholders. Thus, contribution of this study is to the body of knowledge as explained below:

In relation to practical contributions, this study may benefit Malaysian SMEs by providing them with more reliable scientific measures and perspectives for describing and evaluating how working capital may affect SMEs' profitability. To stakeholders such as lenders and other financial institutions, this study may provide an alternative point of view in decision making and to help the lenders to better understand and predict the direction of SMEs' profitability in future so as to access their liquidity and provide them with additional funding.

Apart from that, the theoretical aspect of this study may contribute to the current knowledge in the aspect of working capital management and profitability of Malaysia SMEs.

1.7 Scope and Limitations of the Study

This study mainly focused on working capital components, i.e. cash conversion cycle (CCC), receivable conversion period (RCP), inventory conversion period (ICP), and payable conversion period (PCP) and their effects on return of assets (ROA), net operating profit (NOP), and return on equity (ROE). This study was mainly focused on local firms, particularly small and medium enterprises (SMEs) in Malaysia.

1.8 Organization of the Thesis

Chapter one discusses the background of the study, problem statement, research questions, research objectives and significance of the study. Next, chapter two comprehensively reviews related literature on working capital management. Followed by the chapter three which describe the methodology employed. It consists of explanations and discussion in relation to

the research framework used, hypothesis development, data collection sampling and procedures, measurement of variables and data analysis techniques. Moving on, chapter four discusses the findings of the study. Finally, the conclusions and recommendations are discussed in chapter five. The conclusion may answer the research questions and fulfil the research objectives of the present study. Recommendations are then made parallel with the conclusions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

It is important for every company to have efficient working capital management. For the companies which are not well-managed, it should be able to generate the cash to fund and improve the overall business performance and thus increase the value of creating opportunities. This study investigated the relationship between working capital management and the SMEs in the context of Malaysia. Previous studies have discussed the importance and contribution of the working capital management, also known as independent variable to company's growth and to examine the profitability of SMEs, also known as dependent variable. Therefore this chapter provides an overview of findings by previous studies which investigated the impact of working capital management on SMEs' profitability in Malaysia.

2.2 Theories of Working Capital Management

According to Sagan (1955), the theory of working capital management emphasizes that the working capital management is required and it is important for the health of a firm. Sagan (1955) stated that the finance manager's operations are the main in the area of cash flows generated in the course of business transactions. Due to all these accounts affect the cash position, the finance manager must be proficient with what is being done for the control of receivables, payables and inventories. Hence, Sagan (1955) pointed out that the working capitals which are management of account receivables, account payables, inventories and cash is important for the operational functions of a firm. In addition, in view of a finance manager particular requirements of safety and liquidity of funds by examine the risk and return of various investment opportunities, the major task of a finance manager is to provide funds when needed and invest temporarily surplus funds as profitability as possible. Therefore, Arabahmadi & Arabahmadi (2013) recommend that a finance manager should

take his decisions on the basis of cash budget and total current assets position rather than on the basis of traditional working capital ratios.

There are two theories which are fisher's separation theory and trade-off theory which related to working capital management is present in this chapter.

2.2.1 Fisher's Separation Theory

Hochstein (2001) stated that the fisher's separation theory was introduced in order to avoid confusion between investment and financing the investment. Overall, it discusses the management of the working capital of the firms. Usually, a company should be able to differentiate between how much they should invest and how they should finance their working capital. Investment working capital refers to gross working capital while financing working capital can be defined as net working capital. Investment in machinery, plant and equipment and short term investments can classified as capital investment. The decision to finance the net working capital is depends on whether positive or negative sign, if there is positive means current assets is not less than current liabilities, it financed with long term capital such as equity or long term borrowing, but on the other hand if there is negative which means current assets less than current liabilities, it financed with short term capital in order to increase the cost of borrowing significantly.

According to Fisher (2010), separation theorem can make a clear definition between the entrepreneurial market opportunities and managerial opportunities of productivity. Therefore, the firms should not be worried about the source of finance or investment preferences but should aim to maximize the firm's value and profitability instead.

2.2.2 Trade-off Theory

It is a theory that explains the balance between the working capital components and profitability. Based on one of the most recent research carried out by Ukaegbu (2014), a

company may have to carefully initiate and have an efficient working capital management in order to maintain the balance between working capital components and liquidity, to avoid the crisis of liquidity and the eventual decrease in income. Moreover, according to Abuzayed (2012), working capital management theory is based on trade-off between profitability and the liquidity risk which is actually the balance resulting from current assets minus the current liabilities. On the other hand, assets liquidity is also concerned by working capital management (Bellouma, 2011). According to Falope and Ajilore (2009), the reduction in working capital may help improve the profitability of the firms. This view was also supported by Phillips (1997) who claimed that possessing so much of cash in hands may lead to opportunity costs.

2.3 Growth of SMEs

According to Skrt & Antoncic (2004), setting up strategic management and formulating both clear mission and vision may help a firm to grow. There are several successful advanced economies which comprised of over 98% of total business establishments and contribute to over 65% of employment as well as over 50% of the gross domestic products (GDP). The number of SMEs in Malaysia may not be as many in comparison with other countries, but it is noteworthy that they still have a strong foundation growth of the new industries and help reinforce the existing industries for future development in Malaysia. Their potential for substantially contributing to the economy of Malaysia is very high. There are over 90% of the SMEs in the manufacturing sector; hence it needs significant changes in manufacturing sector to develop stronger SMEs (SME International Malaysia, 2013).

In September 2012, the latest SMEs profile was released by means of the Economic Census 2011. It showed that SMEs of Malaysia consistently kept increasing at a GDP of 6.8% stronger pace in the year of 2011 and was expected to hit a steady growth pace of among

6.5% to 7.0% in the year of 2012. Based on the SME Corporation Malaysia (2014), SMEs in Malaysia now represent 645,136 establishment or 97.3% of the total business establishments (662,939) in the country.

According to Radam, Abu & Abdullah (2008), SMEs are considered vital towards the development of economy of Malaysia. Previously, the economy of Malaysia, similar to other countries encountered several issues during the recession period, during which, the business slowed down and higher unemployment rate was observed in the country. In order to help the SMEs in the face of difficult situation, the government of Malaysia has implemented various important policies, action plans and programs (Muhammad, Char, & Hassan, 2010).

According to Omar et al. (2009), SMEs are considered to be the backbone of industrial development in the Malaysian economy. In order to accomplish vision 2020, fully development of SMEs in Malaysia is greatly affected by the progress of the economy of Malaysia and it may help Malaysia culminate in an industrialized nation by focusing on Malaysia's strength and overcoming the challenges or weaknesses of the SMEs by the year 2020.

2.4 Factors Contributing to the Growth of SMEs

There are some factors which may contribute to the SMEs' firm growth. Those factors may differ between small and large firms and may also be different from one country to another, depending on their economical, geographical and cultural differences (Bakar, Tabassi, Razak & Yusof, 2012).

Abu Bakar, Awang, Yusof & Adamy (2011) analysed construction companies in Malaysia in relation to the factors affecting their growth. They found that elements such as good cash flow, financial backing, company management and technical expertise may lead to superior

company performance. On the other hand, Wijewardena & De Zoysa (2005) concluded that there are six principle factors that precisely contribute to the growth of manufacturing companies in Sri Lanka. Customer orientation, efficient management, supportive environment, product quality, capital accessibility and marketing strategy are the six principle factors.

Musso & Schiavo (2008) asserted that the financial constraints may significantly affect firms' survival and their ability to grow on the market. The researchers used panel data on French manufacturing firms over the time span of 1996-2004. They established a positive relationship between financial constraints and the productivity growth in the short-run.

According to Mahjom, Alias & Zulkifli (2011), financing is one of key factors which may determine the financial establishment and expansion enterprise in future. According to performance monitoring survey which is carried out by SME Corporation Malaysia in 2010 and 2011, there are two main constraints, namely the cost of raw materials and the increase in inputs when doing the business. Apart from that, access to research and development (R&D) may also be considered as another problem always encountered by SMEs. Hence, there are difficulties for SMEs to enter into the market.

2.5 Dependent Variables (Profitability)

Profitability of the SMEs has been selected as a dependent variable in the literature for working capital management. According to Rossi, Salieri & Sartori (2002), growth play a key role in measurement of the overall firm performance.

Return on assets (ROA), net operating profit (NOP), and return on equity (ROE) are used as dependent variables to analyse the effects of working capital management on SMEs' profitability. Majority of previous studies reported in the literature used these three variables

as proxies for profitability in order to examine the effect of working capital management on profitability (Juan García-Teruel & Martínez-Solano 2007; Afza & Nazir 2007; Samiloglu & Demirgunes, 2008; Afza & Nazir, 2009; Mathuva, 2010; Dinku, 2013: Ademola, 2014).

Taani (2012) and Alavinasab & Davoudi (2013) measured firms' profitability by means of using return on asset and return on equity. On the other hand, Lazaridis & Tryfonidis (2006), Garcia, Martins & Brandao (2011) and Vural, Sokmen & Cetenak (2012) used gross operating profit as the measurement for their dependent variable. Return on equity has been used to measure firms' profitability in the study carried out by Deloof (2003) and Malik & Bukhari (2014). Makori & Jagongo (2013) in their study on working capital and profitability used return on asset to represent the profitability whereas Ching, Novazzi, & Gerab (2011) used return on sales and return on asset for their research.

2.5.1 Return on Assets (ROA)

A lot of studies have used return on assets (ROA) to define profitability. Sharma & Kumar (2011) used return on asset to define profitability of firm in their study to investigate the effect of working capital management on firms' profitability. Another study on working capital effect on profitability of Spanish SMEs firm by Baños-Caballero, García-Teruel, & Martínez-Solano (2012) also used return on asset to measure the firms' profitability. Besides, return on asset was also used as proxy to firm's profitability by Nobanee, Abdullatif, & AlHajjar (2011) in their study on cash conversion cycle and performance of firms in the context of Japan.

In addition, Uremadu, Egbide & Enyi (2012) used a sample of firms in Nigeria for year 2005 to 2006 to test the relationship between the working capital management and the profitability. Return on assets (ROA) is one of the measurements of the profitability in their study. Return

on assets (ROA) can be known as return on investment (ROI), thus based on the authors, it is considered as the most effectiveness measurement of the firm's operation.

According to Saleh & Biglar (2009), return on assets (ROA) measures the effectiveness of the firms utilise its assets to generate profits especially manufacturing sector, the ratio high means the management more efficiency utilised its assets to generate the profits. Furthermore, according to Liargovas & Skandalis (2008) and Malik (2011), they are used return on assets (ROA) as the dependent variables because based on the net profit in relation to the selected firms asset base is a better measurement of the return on investments made by the firms.

2.5.2 Net Operating Profit (NOP)

There are research done on the relationship between the working capital management and profitability for a sample of Pakistani companies using net operating profit (NOP) as their profitability measurement (Raheman & Nasr, 2007). It can be estimated the large amount of working capital that invested by Pakistani firms is managed and have a significant effect on the firms profitability. They have found that significant negative relationship between the working capital management and net operating profit (NOP) and these results create shareholders value by reduce the number of days account receivable and inventories to a reasonable minimum.

According to Raheman, Afza, Qayyum, & Bodla (2010), they investigate the effect of the working capital management on the firm's performance in Pakistani within year 1998 and 2007, net operating profit (NOP) was used as a profitability measurement in their study. Their result shows the firms performance is significantly related to cash conversion cycle and inventory conversion period.

2.5.3 Return on Equity (ROE)

Return on equity (ROE) is one of the measurements of profitability of firms. It means that the return give to shareholders by the firms and it is important in investment decisions. This is because if ROE is high means the shareholders' value also is increase.

According to Ching et al. (2011), their research is about the connection between the management of working capital and profitability of the firms in Brazil for the sample of 16 listed companies within the duration of 2005 until 2009. They found out in their study that inventory conversion period (ICP) does not have any impact on the firms profitability measured by return on equity (ROE).

Return on equity (ROE) refers to how much profit earned by a company compare to the total amount of shareholder equity found on the balance sheet (Ward & Price, 2006). The firms with higher ROE means more capable to generate cash internally. According to Helfert (2001), ROE ratio is a profit measurement for the firms because by using ROE ratio, it is more comparable between one firm to the other firms and can indicate the profitability of one industry with the other.

2.6 Working Capital Management (WCM)

Working capital plays a key role in corporate financial management because its management has a significant relationship with the firms' performance on profit and liquidity (Raheman & Nasr, 2007; Pouraghajan & Emamgholipourarchi, 2012). Without proper management of working capital components, companies may have problems to run a smooth operation (Mekonnen, 2011). According to Hillier, Ross, Westerfield, Jaffe & Jordan (2010), working capital management (WCM) is related to managing the short-term financial items and it is

linked with net working capital that involves the determination of financing considerations in short term, which is within a year or less than that. Working capital management may commonly refer to current assets and current liabilities' daily management (Raheman & Nasr, 2007). Eljelly (2004) reported that net working capital is also important in determining the funds availability to meet the daily firm operations and it may affect generating the firm's revenue and shareholders' value. In order to prevent any financial crises, the firms should improve the efficiency of the working capital management by means of increasing the profitability and enhance the firms' value.

According to Kaur, Singh, & Ropar (2013), working capital management is among the best factors that may reportedly have an effect on the profitability of the firms' business activities. They also argued that the working capital management is the most important characteristic of a company's financial management, which may affect the profitability and effectiveness.

According to Charitou, Elfani, & Lois (2010), working capital management is significantly vital in managing the firm's resources in order to meet the daily operation of the business since the global financial crisis happened in 2008. Apart from that, working capital management is crucial in view that it has a directly affect on the firm's profitability (Deloof, 2003; Gill et al., 2010).

2.7 Independent Variables (Working Capital Components)

The relationship between working capital management (WCM) and its influences on profitability of SMEs have been defined and reviewed by previous studies as reported in the literature. Some of the salient findings of previous studies are included here. Four working capital components discussed in the following sections, namely cash conversion cycle (CCC),

receivable conversion period (RCP), payable conversion period (PCP), and inventory conversion period (ICP).

2.7.1 Cash Conversion Cycle (CCC)

The first working capital component is cash conversion cycle (CCC). It is one of the measurements of working capital management (Karaduman, Akbas, Caliskan & Durer, 2011). According to Charitou, Lois & Santoso (2012), CCC is measured by the duration of which, the company may receive cash if the investment in resources is relatively bigger for the purpose of widening the customer sales.

According to Lazaridis & Tryfonidis (2006), they reported connection between working capital management and profitability of SMEs in Malaysia. They used 131 companies as their sample data and used CCC as the measurement for the working capital management, at the end of their study, the results showed that there was significant relationship between the two variables. In order to increase the profitability of the firms, they need to manage and maintain the CCC efficiently by keeping the other variables (receivables, inventory and payable) to a certain level.

According to Sathyamoorthi & Wally-Dima (2008), they reported that CCC is the well-known measurement of working capital management. Cash Conversion cycle (CCC) means the days in numbers which a firm may get or convert backs its economic resources into cash. In the case of Malaysian firms (Zariyawati, Annuar, Taufiq & Rahim, 2009), it was found that significant association between profitability and CCC was reported in the time span of 1996 to 2006.

Abuzayed (2012) found that cash conversion cycle (CCC) is one of the measurements of the working capital management. He studied a sample of listed companies in Jordan between the year of 2000 and the year of 2008. At last the result indicated that there is a positive correlation between cash conversion cycle and the financial debt or leverage. Overall, the longer period of cash conversion cycle may indicate that the firms need to use more investment to finance the current assets. Thus, firms may borrow from external sources and it may contribute to higher cost of borrowing. This might result in not being able to pay liabilities by them and it definitely may have a bad impact on the firms' reputation.

2.7.2 Receivable Conversion Period (RCP)

According to Vural, Sökmen, and Cetenak (2012), there are some companies using factoring companies to sell and hand over their trade credits so that they can get the cash early and improve the working capital at the same time. Higher receivable conversion period may indicate that the firms provide longer credit terms to customers (Linderhof, 2014).

Companies can thus prevent the financial problems and risk by speeding up their collection period of accounts receivable. This can be accomplished by offering customers certain percentage of discount as an inducement for them to pay in advance. In addition, companies also may have an option to offer different discount rates over a specific payment period (Linderhof, 2014).

Malik and Iqbal (2012) studied the relationship between accounts receivables and firms' profitability. The result showed significantly adverse relationship of account receivables and net operating income (NOI) proxy profitability on Pakistan listed companies with a sample of 19 companies over the period of 1990 to 2001. There results were in agreement with Mekonnen (2011) findings of Addis Ababa listed companies with a sample of 13 companies

over the period of 2005 to 2009. Similarly, Dong and Su (2010) reported a substantial negative relationship between accounts receivable and profitability on Vietnam listed companies with a sample of 130 firms over a period of 2006 to 2008, and he notably used gross operating profit in measuring firm profitability.

2.7.3 Payable Conversion Period (PCP)

The third measurement of working capital management is payables conversion period, which is derived by calculating the average terms of credit received from the supplier. It is usually advantageous for companies to maximize their trade payables account since this account does not consume much of its resources, and since companies most often prefer to transact for short-term sources for financing purposes (Padachi, 2006).

Unlike inventory, cash management and receivable conversion period may indicate the short-term assets of the working capital management; however payable conversion period signifies the short-term liabilities of the working capital management. Account payable period may indicate how many days are taken by the company to pay their suppliers. If the account payable period increases, it may cause the company to lose its suppliers. Thus, companies may have to retain a good relationship with their suppliers in order to keep optimal working capital management.

2.7.4 Inventory Conversion Period (ICP)

Commonly, inventory is the second largest asset in a manufacturing firm. Mathuva (2010) described inventory conversion cycle as the period which is usually taken to transform inventory into sales. If inventory conversion period increases, cost of inventory may increase as well. Hence, the objective of inventory management is to lessen the cost of inventory without initiating distraction in the production (Bhattacharya, 2003). In every manufacturing

company, inventory management is a vital make-up of current assets; inventories can be in the form of raw materials, works in progress or even finished goods or products. To improve working capital and efficiency, management of companies may need to keep inventory for sales and try to have less inventory as well. When there is less inventory especially when a customer's demand has to be met immediately, the company may not get the profit and loss on the sales if customer's demand is not achieved (Padachi, 2006).

Deloof (2003) stated that large inventory maintenance can be caused by a drop in sales, and locked up cash flow in working capital because of companies having to put their money in situations when investment is tied down to inventory (Lazaridis & Tryfonidis, 2006). Therefore companies must be smart enough to ensure that their inventories are maintained at the optimal level to fulfil their customers' needs (Charitou et al., 2012).

2.8 Control Variables

The control variables include firm size, growth in sales, and financial leverage. Previous studies reported that firm size (Deloof, 2003; Dong & Su, 2010; Padachi, 2006; Juan García-Teruel & Martínez-Solano, 2007), sales growth (Deloof, 2003; Padachi, 2006; Juan García-Teruel & Martínez-Solano, 2007) and debt ratio or leverage (Makori & Jagongo, 2013) are used as control variables. This is due to the fact that they represent a firm's unique characteristics that may affect its profitability.

2.8.1 Firm Size

With regards to the finance literature, there are various proxies for firm size such as total revenue, total number of employees, total assets and market capitalization of the firm. There are arguments for and against each type of the measure. For instance, some studies utilised the total employment as a measure of firm size. This can be problematic as a firm may have

different types (categories) of employees or workforce, which varies from one industry to another. This study utilises market capitalization as a measure of firm's size because its components include not just the number of shares, but also the value (Okada, 2006).

In evaluating the relationship between independent and dependent variables, the presence of control variables has to be taken into account. Pervan & Višić (2012) in their study, firm size is calculated as the natural logarithm of the total asset. Firm size is one of the important indicators for firm performance. Normally, it is found to have positive relationship with firm profitability as it is reported that greater size of firm can generate greater profitability. This also shows that larger firms are better at managing their cash cycles and thus, has potential of greater profitability.

Lazaridis & Tryfonidis (2006) in their study utilised gross operating income to represent the firm profitability. Their study showed that gross operating income increases with the firm size. Malik & Bukhari (2014) found that size has positive relationship with firm profitability, which indicates that, an increase in size definitely can give positive influence on the firm profitability.

Iqbal, Mulani, & Kabiraj (2013) conducted a study in Pakistani cement industry and found the relationship between firm size and profitability. Their sample includes 21 Pakistani cement companies, which were obtained from Karachi Stock Exchange. Their study is done from 2007 until 2012. The firm size was measured using natural logarithms of sales. The data were analysed using descriptive statistics, Pearson correlation and regression analysis. The results showed a presence of direct positive relationship between firm size and profitability. Furthermore, the results suggest that larger firm size has the ability to earn more profitability compared to smaller sized firms. This is supported by Yazdanfar (2013) in his study on

determinants of profitability in Swedish firm. The result suggested that firm size may positively influence the profitability ratio.

However, Wasiuzzaman & Arumugam (2013) found a negative relationship between firm size and working capital investment. In another study conducted by Sharma & Kumar (2011), the firm size was used as one of the control variables in regression. They found that, all tested independent variables showed that size has a negative relationship with the firms' profitability. The study was conducted in the Indian market and reflects that, larger size of firms may not necessarily increase firms' profitability.

2.8.2 Leverage or Financial Debt

In this study, leverage was a control variable, in which, it is determined by the total debt over total asset.

A study by Malik & Bukhari (2014) indicated that leverage have a negative relationship with profitability. In other words, a decrease in leverage may result in an increase in profitability. Hence, financial debt is regarded as total debt over total asset. Wasiuzzaman & Arumugam (2013) conducted a study in Malaysia with the purpose of locating the determinant of working capital investment in the listed Malaysian public firms. They echoed that leverage and working capital have a significant negative association. Another significant study was done by Afza & Nazir (2009), which involve firms listed in Karachi Stock Exchange (KSE) in Pakistan. Their study tested on the financial debt with working capital management and similarly, a strong and negative relationship was found.

Conversely, Abu Bakar et.al., (2011) explicated that financial debt, such as loans availability and other credit are significant and is believed to have a positive relationship with the growth of companies. This is also evidenced in Storey (1994) and Zhou & De Wit (2009) as they

found that, the most crucial factor affecting the firms' growth is the availability of financial resources.

Previous literature revealed that even though there are some measurements of leverage ratio, the common formula used by the previous literature was total debt divided by total assets, i.e., Johnson & Mitton, 2003 and Gill & Mathur, 2011.

2.8.3 Sales Growth

It is evident that various studies use differing methods to measure firm growth. The most common metrics used to represent growth rate include sales growth, asset growth and growth in the number of employees. In this study, the researcher uses sales growth as the metric to represent the firm growth. This is due to the fact that the consensus in finance literature revealed that sales growth is the best measure of growth owing to its high generality (Davidsson & Wiklund, 2006; Delmar, Davidsson & Gartner, 2003; Weinzimmer, Nystrom & Freeman, 1998). The firm growth is commonly operationalized by calculating the sales growth within a year. Empirical results showing the effect of sales growth on firm performance has been well documented, in which some showed positive association with firm profitability and others showed mixed results. Davidsson, Steffens & Fitzsimmons (2009) used the resource based view in his argument that firms tend to maximize their growth opportunities in order to create value for the firm. They also observed that there is a possibility for high growth rates to cause lower profitability due to its increased reliance on external capital, which can be expensive.

Dobson & Gerrard (1989), Zeitun & Tian (2007), Lee (2009), and Jang & Park (2011) found that the percentage in sales growth is a measurement of a company's growth. Similarly, Markman & Gartner (2002) also measured the firm sales growth as they came to an

agreement that sales are the best measurement of the company's growth. On the other hand, Titman & Wessels (1988), Sutton (1997), and Safarova (2010) measured growth as a logarithm of variation in sales.

Wasiuzzaman & Arumugam (2013) expounded that, with regards to working capital, sales growth showed a positive influence of investment. However, Sharma & Kumar (2011) found a negative insignificant relationship between sales growth and firm profitability when tested against four independent variables, which are the day's account payables, day's account receivables, day's inventory held and cash conversion cycle.

Lazaridis & Tryfonidis (2006) used gross operating income to represent firm profitability in their study and the result showed that gross operating income increases with sales growth. Another study done by Yazdanfar (2013) in Swedish firm revealed that growth has a positive influence to the firm profitability. This further implies that, firm with greater growth has better access to resources and thus, positively influence profitability.

Another important study was marked by Charitou et al. (2010), which was conducted in Cyprus on working capital and the profitability of the firms. The study set the aim to find evidence about the relationship between management of working capital and the profitability of firms. Sales growth was identified as one of the control variables. The result revealed that sales growth has positive relationship with return on assets, hence indicating that higher growth may increase the profitability.

2.9 Efficiency of Working Capital Management

When a decrease is recorded in the cost of capital and increase in the working capital, the level of working capital may achieve an optimum and balance between profitability and liquidity (Padachi, 2006). A similar view was also echoed by Ganesan (2007), which

indicates that firms may have achieved the optimization of working capital balance when firms reduce their working capital requirement and increase the possible sales or revenue instead.

Nevertheless, various industries have various optimal level of working capital. Forms and amount of working capital components are different in operating cycles. Therefore, efficiency of working capital management may turn a business into success, while ineffective management of the working capital on the other hand may not just lead to incur losses but in serious cases, the firms may eventually collapse. Hence, the efficiency of working capital management is considered important for a firm to sustain or succeed in their business.

2.10 Chapter Summary

It is noteworthy that various researchers have studied the working capital and profitability from different environments and angles. This indicates the importance of the role of the working capital management and it is evident that the working capital management is affecting the Malaysia SMEs profitability. Consequently, the literature reviewed in this chapter provides a comprehensive breakdown of what has been found from the previous studies with regards to the significant relationship between working capital management and profitability of SMEs in Malaysia.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

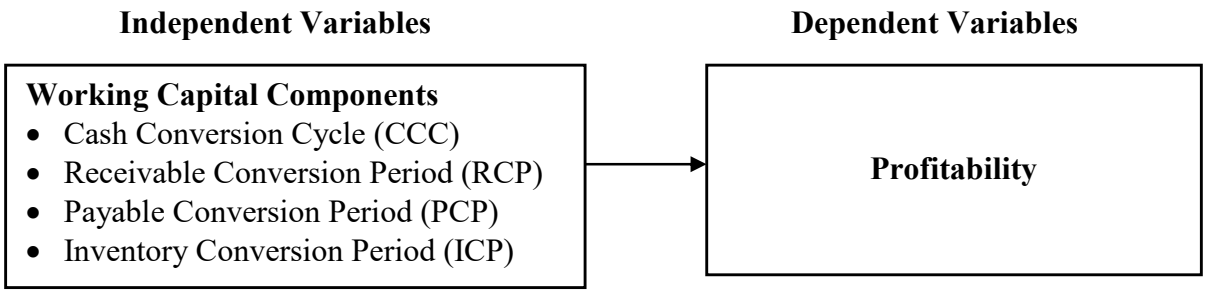
The previous chapter explained on the findings of various studies on the effect of working capital management and the relationship it has with small and medium enterprises (SMEs) in Malaysia. This chapter discusses on the methodology used in this study. A methodology is important as it indicates the reliability and validity of the findings of a research. Apart from that, the variables used in a study can be defined clearly and the relationships among the variables are determined by the framework, which is designed in accordance to the scope of the study. This chapter also discusses other elements of a research methodology such as theoretical framework, hypotheses development, operational definition, data collection and the technique of data analysis.

3.2 Theoretical Framework

It is noteworthy that previous researchers study the influence of working capital management on profitability using large firms in Malaysia (Irene & Lee, 2007; Mohamad & Saad, 2010). However, scant research has been done on the impacts of working capital management on profitability of SMEs, particularly in Malaysia. In this regard, the framework of this study is constructed to ascertain the effect of working capital components such as cash conversion cycle (CCC), receivable conversion period (RCP), payable conversion period (PCP), and inventory conversion period (ICP) on profitability of SMEs firms in Malaysia, which is measured by return on assets (ROA), net operating profit (NOP) and return on equity (ROE).

The figure 3.1 below shows the working capital components as independent variables while SMEs profitability as dependent variables.

Figure 3.1 Theoretical Framework



3.3 Hypotheses / Propositions Development

In line with the abovementioned research framework, the following hypotheses were developed in line with the research questions and the research objectives of this study.

It should be noted that the common tool used to measure firm's profitability is working capital management. Thus, in the researcher's attempt to evaluate the relationship between management of working capital and profitability of SMEs in Malaysia, hypotheses were developed. Nwankwo & Osho (2010) indicated that cash flow can create stability and sustainability of the corporate in future. This is because it can increase the growth of the firms, which shows that an efficient working capital management resulted in profits through revenues. Thus, efficiency of working capital management is important for the firms.

Given such a backdrop, this study evaluates the impact of the working capital components on the SMEs firm's profitability in Malaysia. The findings can be delineated if the working capital components show significant associations on the profitability of the SME firms. According to Afza & Nazir (2009), an efficient working capital management may lead to significant influence in the overall corporate financing, hence maximizing shareholder value as well as the company sales growth.

The hypotheses developed are shown below:

H1: Is there any significant relationship between cash conversion cycle (CCC) and profitability of SMEs in Malaysia?

Findings from previous studies showed the existence of a significant negative relationship between the cash conversion cycle (CCC) and the profitability. This is supported by Ahmadi, Arasi, and Garajafary (2012), in which a significant negative relationship between cash conversion cycle (CCC) and the profitability measure by net operating profit (NOP) was evident in their study. This is also echoed by Quayyum (2011), Dong & Su (2010) and Garcia et al.'s (2011). Contrastly, a study utilising general moment method recorded that there is a positive relationship between cash conversion cycle (CCC) and the firm profitability (Akinlo & Olufisayo, 2011).

H2: Is there any significant relationship between receivable conversion period (RCP) and profitability of SMEs in Malaysia?

Dong & Su (2010) studied the relationship between receivable conversion period (RCP) and the profitability of 130 listed companies in Vietnam from the year 2006 to 2008. It is noteworthy that the result showed the emergence of negative relationship between the two variables, in which the gross operating profit is used as the measurement for the profitability of firms. The same outcome was observed in Ahmadpour & Rostami (2012), a study which examined the relationship between the receivable conversion period (RCP) and the profitability of firm in Tehran, measured using return on assets (ROA). However, this is argued by Falope and Ajilore (2009), who conducted a study involving 50 non-financial Nigerian firms from the year of 1996 to 2005. Surprisingly, the result of their study revealed that positive relationship between the receivable conversion period (RCP) and net operating profit (NOP) is evident. Between the year of 2005 and 2006, there is a research done by Uremadu et al. (2012), which further confirmed that there is a significant positive relationship

between the receivable conversion period (RCP) and return on assets (ROA), which is one of the measurements of firm's profitability.

H3: Is there any significant relationship between payable conversion period (PCP) and profitability of SMEs in Malaysia?

A study using the gross operating profit as the measurement of firm's profitability has recorded that there exist significant negative relationship between the payable conversion period (PCP) and the profitability of 13 sampled companies listed in Addis Ababa from the year 2005 to 2009 (Mekonnen, 2011). This is supported by Malik and Iqbal (2012), in which their study indicated the same result in Pakistan in the year of 1990 to 2001. Conversely, several studies indicated the existence of positive relationship between the payable conversion period (PCP) and the profitability of firms. Uremadu et al. (2012), recorded a positive relationship of payable conversion period (PCP) and the profitability measured by return on assets (ROA). Besides that, Mansoori and Muhammad (2012) study sampled 92 companies listed in Singapore using the similar analysis tools obtained similar results on the year of 2004 to 2011.

H4: Is there any significant relationship between inventory conversion period (ICP) and profitability of SMEs in Malaysia?

Previous studies demonstrated that there is significant negative relationship between inventory conversion period (ICP) and firm's profitability. However, a few studies recorded positive relationship between these two variables. A study in Pakistan, which is done involving 19 firms utilising the net operating profits (NOP) as the measurement of profitability in the year of 1990 to 2001 confirmed that the relationship between ICP and NOP is negative (Malik and Iqbal, 2012). This is also echoed in Ahmadi et al. (2012), in which their research showed a similar result from the year 2006 to 2011. On the contrary, a

study done by Uremadu et al. (2012) in Nigerian with a sample of 25 companies from 2005 to 2006 reported the existence of positive relationship between inventory conversion period (ICP) and return on assets (ROA). A study done on 30 samples of Kenyan companies also recorded the existence of positive relationship between ICP and profitability of the firms (Mathuwa, 2010).

H5: Is there any effect between working capital (WC) and profitability of SMEs in Malaysia?

Baveld (2012) posits the existence of significant relationship between the working capital management and both the profitability as well as the liquidity of firms, which have influence on the firm's value. Similarly, Raheman and Nasr (2007) found that the working capital has direct effect on the firm's profitability and liquidity. The inefficiency of working capital management may result in the inadequate level of working capital in daily operation (Van Horne and Wachowicz, 2008). Moreover, Falope and Ajilore (2009) investigated the effect of profitability on the decreased working capital level using a sample of 50 companies in Nigeria from the year of 1999 to 2006.

3.4 Research Design

Zikmund (2003) suggests that a research design helps a researcher to understand the procedure of data collection and information. Furthermore, analysis on the methodology used is of importance in order to ensure that suitable answers are provided in the particular research. The purpose of this study is to evaluate how the management of working capital affects Malaysia SMEs profitability by means of correlations and regression analysis. Variables are utilised to examine the relationship between the working capital management and SMEs profitability in Malaysia. Descriptive statistics and quantitative analysis are used as the research methodology of this study due to the utilisation of financial data, which is collected in the data stream from Companies Commission of Malaysia (CCM).

In addition, ordinary least square is also used to perform the regression analysis of this study. A combination of time series and cross sections is utilised in this research because this study involves a five years' time duration and the effect of the working capital components on the profitability of the SMEs in Malaysia is observed within the five year period; from the year of 2010 to the year of 2014.

3.5 Operationalized Definition

The operationalized definitions used in the present study are as follow:

3.5.1 Return on Assets (ROA)

Return on Assets (ROA) is one of the firm's profitability measurements, which helps to gauge how efficiently a firm uses its assets to generate income. ROA is measured by dividing the net income by the total assets of a company and thus, yielding the efficiency of a firm in utilising its assets (Baveld, 2012; Ching et al., 2011; Mohamad & Saad, 2010). This is derived from the following formula: ROA = Net Sales / Total Assets (Needles, Powers & Crossons, 2008).

3.5.2 Net Operating Profit (NOP)

Net Operating Profit (NOP) demonstrates the revenue of the main activity before non-operating costs and income charges, which it further show the ability of a company to earn profit from its primary business (Subramanyam, 2014). This is derived from the following formula: NOP = Operating Profit / Net Sales.

3.5.3 Return on Equity (ROE)

Return on equity (ROE) measures the return fulfilled by the firm to shareholders. This ratio plays a crucial role in the decision making of an investment, particularly in relation to the respective owners of shares or rights. Commonly, the owners look forward to an increase of this ratio. The return on equity is calculated using the following equation: ROE = Net Income / Total Equity (Ching et al., 2011).

3.5.4 Net Working Capital (NWC)

Net working capital (NWC) is defined as short-term or current assets minus the short-term or current liabilities. The major working capital components include accounts receivable, inventories, cash and cash equivalents as well as accounts payable (Gul, Khan, Rehman, Kahn, Khan & Khan, 2013, and Charitou et al., 2010).

3.5.5 Working Capital Management (WCM)

Working Capital Management (WCM) is defined as managerial strategy that guides a firm in maintaining the working capital, current assets and current liabilities at the level of efficient and in respect to each other. It is a system of balancing liquidity and profitability of a firm mainly through the use of cash management, inventory management and creditor management techniques.

3.5.6 Cash Conversion Cycle (CCC)

Cash Conversion Cycle (CCC) is used to calculate the cash conversion cycle of SMEs in Malaysia. The formula used is the total receivable conversion period and inventory conversion period deduct the payable conversion period. The time taken between the

expenditure for raw materials and the final collection from the sales of the good produced is also taken into consideration (Mekonnen, 2011).

3.5.7 Receivable Conversion Period (RCP)

Receivable Conversion Period (RCP) is defined as the time spent (in days) for the collection of cash from customers. This is derived from the following formula: RCP = (Trade Receivables / Net Sales) * 365 (Gul et al., 2013, and Charitou et al., 2010). It is also defined as the total days taken by a company to gather cash from the debtors. This period indicates the quality of debtors. A company with a shorter collection period has better debtor management policies, which indicates a reduction on the chance of bad debts. Conversely, a company with a longer collection period signifies poor collection policies that may lead to high rate of bad debts (Mekonnen, 2011).

3.5.8 Payable Conversion Period (PCP)

Accounts payable represents the amount owed to creditors as a result of purchases of materials, components or goods on credit from suppliers. Average payment period, on the other hand, is defined as the period between the purchase of these materials, components or goods and the time the money is paid to the suppliers (Soekhoe, 2012). PCP is determined by the period or by the total days spent in trade payables account until payment has been settled to the suppliers. This is derived from the following formula: PCP = (Trade Payables / Cost of Goods Sold) * 365 (Gul et al., 2013, and Charitou et al., 2010).

3.5.9 Inventory Conversion Period (ICP)

ICP represents the number of days good have been turned over (sold) during a period (usually a year) and demonstrates the efficiency of a firm's ability in managing its inventory (Garcia

et al., 2011). This is derived from the following formula: ICP= (Inventory / Cost of Goods Sold) * 365 (Gul et al., 2013, and Charitou et al., 2010).

3.5.10 Firm Size

Firm size is based on total assets stated in the balance sheet of a company. The calculation of the firm size is formulated from logarithm of its total assets, which follows this measurement: Firm Size = Ln (TA).

3.5.11 Leverage or Financial Debt

This is the degree on which a firm is utilizing borrowed money. Financial debt is the combination of short-term and long-term loans, which are stated under liabilities in the balance sheet of a company. The financial debt ratio measures the companies' assets obtained from the financial debt.

3.5.12 Sales Growth

The changes in a company's annual sales value by comparing to the prior year's sales. It measures the firm's sales increment over a period; usually a year (Baveld, 2012).

3.6 Measurement of Variables / Instrumentation

In this study, the necessary variables and their measurements are derived from a variety of sources. Ratio analysis is a simple and easy-to-understand tool, which is helpful in showing the performance of a firm based on the financial strengths and weaknesses that can be measured using their financial statement (Mohamad & Saad, 2010). There are two types of variables used in this study namely dependent and independent variables, which are discussed below.

3.6.1 Dependent Variables

For the purpose of analysing the effect of working capital management on SMEs' profitability, return on assets (ROA), net operating profitability (NOP) and return on equity (ROE) are used as dependent variables. Previous studies reported the use of these 3 variables as the proxy for profitability in examining the effects of working capital management on profitability (Juan García-Teruel & Martínez-Solano 2007; Afza and Nazir 2007; Samiloglu & Demirgunes, 2008; Afza and Nasir, 2009; Mathuva, 2010; Dinku, 2013: Ademola, 2014).

Table 3.1 shows the measurement for ROA, NOP, and ROE. ROA is measured by profit, minus the tax and interest or the net income divided by the total assets. ROA controls the overall efficiency of firm management by using assets to produce profit. Moreover, it is reported as a better measure of the operating efficiency of a firm due to the fact that it is able to link the profitability of the firms to the asset base (Padachi, 2006; Pandey, 2000). NOP is defined as the net operating profits, in which the amount of money that a company has gained after the deduction of the cost of goods sold and the operating expenses. NOP measures a company's long-term profitability and also plays a major role for the growth of a company's management. ROE deals with the amount of net profits returned as a percentage of shareholders equity and it is also one of the measurements for the performance of a company. ROE is one of the most vital profitability metrics because it reveals how much profit a firm earned compared to the total amount of shareholder equity. This study therefore, employs the three variables to measure the profitability of Malaysian SMEs.

Table 3.1 Dependent Variables

Variable	Measurement	Authors
Return on Assets (ROA)	Net Income / Total Assets	Sharma & Kumar (2011); Baños et al. (2012); Nobanee et al. (2011); Uremadu et al. (2012); Saleh & Biglar (2009); Liargovas & Skandalis (2008); Malik (2011)
Net Operating Profit (NOP)	Operating Profit / Net Sales	Raheman & Nasr (2007); Raheman et al. (2010)
Return on Equity (ROE)	Net Income / Total Equity	Ching et al. (2011); Ward & Price (2006); Helfert (2001)

3.6.2 Independent Variables

Independent variables of this study are represented by the working capital components identified with the purpose of observing their effects on SMEs profitability, which includes cash conversion cycle (CCC), receivable conversion period (RCP), payable conversion period (PCP), and inventory conversion period (ICP). These variables are considered the most suitable proxies for measuring working capital efficiency. Dong & Su (2010) highlighted that cash conversion cycle (CCC) is the most important determinant of profitability as it shows the liquidity of cash in a company in a certain period of time. The process starts with the company paying the suppliers for attaining raw materials, which involve cash outflow. In the end, the company should receive money from its customers after selling its goods, which involve cash inflow. Companies should also be concerned to manage the number of day's inventory, accounts receivable, and account payable in order to have an optimal cash conversion cycle (CCC).

Table 3.2 Independent Variables

Variable	Measurement	Authors
Cash Conversion Cycle (CCC)	Receivable Conversion Period (RCP) +Inventory Conversion Period (ICP) -Payable Conversion Period (PCP)	Karaduman et al. (2011); Charitou et al. (2012); Lazaridis & Tryfonidis (2006); Sathyamoorthi & Wally-Dima (2008); Zariyawati et al. (2009); Abuzayed (2012)
Receivable Conversion Period (RCP)	Trade Receivables / Net Sales * 365	Vural (2012); Linderhof (2014); Malik & Iqbal (2012); Mekonnen (2011); Dong & Su (2010)
Inventory Conversion Period (ICP)	Inventory / Cost of Goods Sold * 365	Mathuva (2010); Bhattacharya (2003); Padachi (2006); Deloof (2003); Lazaridis & Tryfonidis (2006); Charitou et al. (2012)
Payable Conversion Period (PCP)	Trade Payables / Cost of Goods Sold * 365	Padachi (2006)

3.6.3 Control Variables

Control variables include the firm size, the sales growth and its financial debt or leverage. Previous study reported that firm size (Deloof, 2003; Dong & Su 2010; Padachi, 2006; Juan García-Teruel & Martínez-Solano 2007), sales growth (Deloof, 2003; Padachi, 2006; Juan García-Teruel & Martínez-Solano 2007) and debt ratio or leverage (Makori & Jagongo, 2013) are used as control variables. These variables are used as control variables since they represent the firm's unique characteristics that may affect its profitability.

Table 3.3 Control Variables

Variable	Measurement	Authors
Firm Size	Ln (TA)	Okada (2006); Pervan & Višić (2012); Lazaridis & Tryfonidis (2006); Malik & Bukhari (2014); Iqbal et al. (2013); Yazdanfar (2013); Wasiuzzaman & Arumugam (2013); Sharma & Kumar (2011)
Leverage or Financial Debt	((Current + Long-term liabilities) / Total Assets) x 100	Malik & Bukhari (2014); Wasiuzzaman & Arumugam (2013); Afza & Nazir (2009); Abu Bakar et al. (2011); Storey (1994); Zhou & De Wit (2009); Johnson & Mitton (2003); Gill & Mathur (2011)
Sales Growth	$((Sales_t – Sales_{t-1}) / Sales_{t-1})$	Davidsson & Wiklund (2006); Delmar et al. (2003); Weinzimmer et al. (1998); Davidsson et al. (2009); Dobson & Gerrard (1989); Zeitun & Tian (2007); Lee (2009); Jang & Park (2011); Markman & Gartner (2002); Titman & Wessels (1988); Sutton (1997); Safarova (2010); Wasiuzzaman & Arumugam (2013); Sharma & Kumar (2011); Lazaridis & Tryfonidis (2006); Yazdanfar (2013); Charitou et al. (2010)

3.7 Data Collection

This study utilises quantitative data, which was derived from the annual financial reports of the small and medium enterprises (SMEs) in Malaysia. Moreover, the data in this study was also collected from Companies Commission of Malaysia (CCM) database. The data consists

of account receivables, inventories, account payables, total assets, total debt, total equity, total current assets, total current liabilities, revenue or sales, profit after tax and profit before tax.

3.7.1 Sampling (Model Specification)

Three models are run to develop the relationship between working capital management and profitability of SMEs. The models run are consistent with the models used in previous studies, i.e., Juan García-Teruel & Martínez-Solano (2007), Samiloglu & Demirgunes (2008) and Zariyawati, et al. (2009).

Model 1

The first model is utilised to evaluate the relationship between working capital components and profitability (ROA) measures:

$$ROA_{it} = \beta_0 + \beta_1 (CCC)_{it} + \beta_2 (RCP)_{it} + \beta_3 (ICP)_{it} + \beta_4 (PCP)_{it} + \beta_5 (SIZE)_{it} + \beta_6 (LEV)_{it} + \beta_7 (SG)_{it} + e$$

Model 2

The second model examined the relationship between working capital components and profitability (NOP) measures:

$$NOP_{it} = \beta_0 + \beta_1 (CCC)_{it} + \beta_2 (RCP)_{it} + \beta_3 (ICP)_{it} + \beta_4 (PCP)_{it} + \beta_5 (SIZE)_{it} + \beta_6 (LEV)_{it} + \beta_7 (SG)_{it} + e$$

Model 3

The third model looks into the relationship between working capital components and profitability (ROE) measures:

$$ROE_{it} = \beta_0 + \beta_1 (CCC)_{it} + \beta_2 (RCP)_{it} + \beta_3 (ICP)_{it} + \beta_4 (PCP)_{it} + \beta_5 (SIZE)_{it} + \beta_6 (LEV)_{it} + \beta_7 (SG)_{it} + e$$

Where,

β = Regression model coefficient

e = the error term

ROA = Return on Asset

NOP = Net Operating Profit

ROE = Return on Equity

CCC = Cash Conversion Cycle

RCP = Receivable Conversion Period

ICP = Inventory Conversion Period

PCP = Payable Conversion Period

SIZE = Firm Size

LEV = Leverage or Financial Debt

SG = Sales Growth

Consistent with the research and findings of previous studies that discussed only on both large and small sized firms (Deloof, 2003; Dinku, 2013; Juan García-Teruel & Martínez-Solano, 2007; Gul et al., 2013), this study estimates the cash conversion cycle (CCC), receivable conversion period (RCP), and inventory conversion period (ICP) to have a negative relationship with SMEs profitability. However, payable conversion period (PCP) is estimated to have positive effect on SMEs profitability, similar to the previous studies done by Dinku (2013); Gul et al., (2013); Dong & Su (2010) and Karadagli (2012).

In this regard, the negative relationship of cash conversion cycle (CCC), receivable conversion period (RCP), and inventory conversion period (ICP) can be observed in less profitability firms, which allow a longer payment period among their customers, which may happen because the firm have too much stock or inventory, as a result of reduction of sales and declining profits of the firm. On the contrary, the positive relationship between payable conversion period (PCP) and the profitability indicates that the firm, which allow longer payment period, may have high profit as the firm take the advantage of the longer period to reinvest the money in order to gain short term profit.

Table 3.4 The expected signs of each variable

Variable	Expected sign
Cash Conversion Cycle (CCC)	Negative
Receivable Conversion Period (RCP)	Negative
Payable Conversion Period (PCP)	Positive
Inventory Conversion Period	Negative

3.7.2 Data Collection Procedures

There are 58 small and medium enterprises (SMEs) in Malaysia were identified as the sample of this study. The sample of 100 SMEs was randomly selected by Companies Commission of Malaysia (CCM) from different sectors, which is taken from the financial data of CCM. The 58 sampled SMEs are chosen out of the 100 SMEs because only these 58 companies have completed the financial data from the year of 2010 to 2014.

3.8 Techniques of Data Analysis

Multiple regressions method is used to evaluate the relationship between working capital components and SMEs profitability using the ordinary least squares (OLS) regression. The dependent and independent variables were first analysed with descriptive statistics and their normality (consistency) are assessed. This is followed by the Pearson correlation co-efficient test to examine their relationship and finally, the SPSS ordinary least square regression analysis is executed. Thus, the study uses descriptive statistics, Pearson correlation coefficient and multiple regression analysis, which is similar to what has been done by Baveld (2012).

3.8.1 Descriptive Analysis

Descriptive analysis is usually done in order to get the summary of the data collected. Basically, descriptive analysis is presented in a table, which spells out the summary of the statistic, which include the maximum and minimum value, the mean, mode and also the median. It measures the variability of variables, including the standard deviation. The researcher utilises the statistical technique in order to determine the data patterns in the forms of minimum, maximum, mean, and standard error of the data sets (Neyeloff, Fuchs, and

Moreira, 2012). Hence, descriptive statistics is used to provide simple summaries about the samples being studied.

3.8.2 Pearson Correlation Coefficient

The correlation of variables was presented in correlation matrix table. It should be noted that the negative or positive correlation within the variables is to indicate the positive or negative relationship between the studied variables. Correlation is a relationship between two variables, in which both variables are moving in tandem. The value +1.00 indicates perfect positive correlation between variables, while a 0.00 indicates no correlation and a -1.00 indicates that there is a perfect negative correlation (Cohen, Cohen, West and Aiken, 2013). Positive correlation occurs when two variables are moving in similar direction. For instance, when one variable reduce, it might lead the other variable to reduce too, and vice versa.

3.8.3 Multiple Regression Analysis

This study utilises multiple regression statistics to measure the level of which the independent variables influence the dependent variable. The multiple regression analysis examines the adjusted r-square, the significance level, standardized beta, as well as and t-values. Sen and Srivastava (2012) suggested that regression analysis deals with the statistical analysis that predicts the significance of independent variable on the dependent variable of a study. These statistics is useful in finding the extent to which the independent variables jointly explain the dependent variable in the study and further indicate whether to reject or accept the hypotheses raised earlier.

3.9 Chapter Summary

This chapter delineates a discussion on the methodology used in this study. The research framework indicating the dependent and independent variables to be studied in this study is also presented. Apart from that, how the hypothesis was developed is also explicated, together with the discussion on the relationship between dependent and independents variables being tested. This chapter further deliberates on the measurement of its variables, namely the ordinary least square method, followed by the data collection sampling and procedure. Finally, the data analysis techniques used in this study are presented.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

The fourth chapter discusses the data analysis of the study which was obtained from the findings and results of the study. Specifically, this chapter delineates the results of assessing the effect of working capital management on the profitability of SMEs in Malaysia. A range of statistical tests were run in this study for analysis purposes, namely descriptive analysis, correlation analysis, and regression analysis along with the consistency of data assessment, which was gathered in this study. The salient features discussed in this chapter are the data analysis and assessment of the research hypothesis.

Data analysis refers to the processes and procedures involved in gathering and analysing the empirical information collected, which the researcher may want to look into very closely to draw accurate conclusions by means of the findings (Cruz, 2013). The data which was collected and analysed for the present study was for the purpose of assessing how the working capital management impacted on the profitability of SMEs in Malaysia. Specifically, three statistical tests were run in this study, namely descriptive analysis, Pearson correlation analysis and regression analysis among the variables involved in this study.

4.2 Descriptive Analysis

It is defined as the process of analysing statistical information in a meaningful pattern. Such a statistical technique may assist researchers to determine the data patterns in the form of minimum, maximum, mean and standard errors of the data sets (Neyeloff et al., 2012). In this regard, Cruz (2013) argued that descriptive analysis may help data analysts to accurately represent the samples involved and conclude the results in relation to the data patterns and other sub groups which may derive by means of analysing the information. In this study,

descriptive analysis was carried out in order to summarize the gathered data sets. The data analysis notably contributed to the interpretation of the data findings. On the other hand, considering the data patterns or trends helped the researcher reflect on a meaningful picture of the issue at hand. The results obtained from the descriptive analysis were reported in the form of minimum, maximum, mean and standard deviation.

The results of the descriptive analysis from the five-year period i.e., from the year of 2010 till the year of 2014 are illustrated in the following table:

Descriptive Statistics (2010 – 2014)

	N	Minimum	Maximum	Mean	Standard Deviation
ROA	58	.0009	.3607	.0891	.0748
NOP	58	.0061	12.5583	.6327	1.457
ROE	58	1.323	7.8852	.0455	.1786
CCC (days)	58	-74.4100	161.1294	96.5245	81.8809
RCP (days)	58	6.2305	78.8960	54.8119	32.9798
ICP (days)	58	11.3931	148.1172	72.9878	68.0754
PCP (days)	58	5.0411	77.0861	45.7638	37.6126
FS	58	9.9936	18.2479	14.6397	1.4129
FDR	58	.0219	85.8733	1.5789	8.7121
SG	58	.0002	102.3532	.0054	4.7725
Valid N (listwise)	58				

Table 4.1: Descriptive Statistics (2010 – 2014)

Based on the results reported in table 4.1, the mean of the return on assets (ROA), net operating profit (NOP), and return on equity (ROE) are 0.0891, 0.6327 and 0.0455 respectively. The higher NOP indicates that small and medium enterprises (SMEs) in Malaysia are considered efficient in their cost management and therefore gain more profits by optimizing their total assets resulting from their respective daily operations. The maximum and minimum values for ROA are 0.3607 and 0.0009 respectively. The maximum value for ROE i.e., 7.8852 indicates that it is the highest ROE value recorded throughout the period of 2010 until 2014 of SMEs in Malaysia.

The mean value for cash conversion cycle (CCC) is 96.52 days; the maximum and minimum of the CCC are 161.13 days and -74.41 days respectively. The negative day's means there are account of liberal credit facility provided to SMEs from the suppliers. Such results may appear unfavourable owing to the fact that it may take a longer time to convert the source into cash and SMEs may need to invest more and finance their current assets. Such an argument was supported by the high mean value of the financial debt ratio (FDR) i.e., 1.58.

For the receivable conversion period (RCP), the mean value is 54.81 days; the maximum and minimum of RCP are 78.90 days and 6.23 days respectively. On the other hand, the mean value reported for payable conversion period (PCP) is 45.76 days, which indicates that SMEs in Malaysia make their payment to their respective suppliers earlier than receiving their payment from their respective customers. This also highlights that SMEs in Malaysia are rarely involved in trade debts. This could be due to suppliers offering discounts to SMEs in Malaysia and also the government's financial support to their business operations.

The minimum and maximum days of the inventory conversion period (ICP) reported are 11.39 days and 148.12 days respectively. The high mean value for ICP i.e., 72.99 days may indicate that there is relatively higher inventory among the SMEs in Malaysia which may in turn affect the profitability of these SMEs owing to the fact that it may take longer time to sell its inventory and convert into cash.

4.3 Pearson Correlation Analysis

The correlation analysis is considered as a statistical technique that helps researchers elaborate the correlation between variables identified for studies. Specifically, this statistical analysis measures the relationship between the variables in relation to the correlation coefficient.

The extracted information indicates some correlation between the variables depicting the values between the ranges of +1 to -1. The -1 value indicates a negative correlation whereas +1 reflects a positive correlation between the variables (Cohen et al., 2013). In this study, the correlation analysis was administered among the variables, for example, return on assets (ROA), net operating profit (NOP), return on equity (ROE), cash conversion cycle (CCC), inventory conversion period (ICP), payable conversion period (PCP) and receivable conversion period (RCP) of the firms involved in this study. Moreover, the results obtained from the correlation analysis can be explained by means of the "Pearson Correlation" value of the data sets. Moreover, in this study, the correlation analysis was performed within the variables for the five-year period of 2010 till 2014. The justification for performing such correlation analysis separately is to depict an autocorrelation within the variables for different periods which were considered for the present study.

Pearson Correlation (2010 – 2014)

	ROA	NOP	ROE	CCC	RCP	ICP	PCP	FS	FDR	SG
ROA	1									
NOP	.005	1								
ROE	.322	.088**	1							
CCC	-.030	-.014*	-.048	1						
RCP	-.046*	-.186*	-.042	.350*	1					
ICP	-.054	-.142*	-.048	.966*	.196*	1				
PCP	.027**	-.149*	.036	-.087**	.694*	.069**	1			
FS	-.031	.044	.350	.093**	-.105*	.025	-.242*	1		
FDR	-.012	-.039	-.014	-.037	.023	-.035	.031	-.399*	1	
SG	-.017	-.009	-.004	.006	.048	.002	.056	-.248*	.037	1

**. Correlation is significant at the 0.05 level.
*. Correlation is significant at the 0.01 level.

Table 4.2: Pearson Correlation (2010 – 2014)

Table 4.2 shows that the cash conversion cycle (CCC), receivable conversion period (RCP), and inventory conversion period (ICP) are negatively correlated with the profitability measure by the three dependent variables i.e. return on assets (ROA), net operating profit (NOP), and return on equity (ROE). However payable conversion period (PCP) is positive correlation with ROA and ROE but there is a negative correlation is recorded with the

profitability NOP. All the correlations between the variables are considered significant at the confidence levels of 1% and 5%.

Payable conversion period (PCP) is resulted as positive correlation with ROA and ROE but inventory conversion period (ICP) is resulted as negative correlation with three of the profitability measurement (ROA, ROE & NOP). It signals that management of payables is significant influence the profitability of SMEs in Malaysia. On the other hand, the negative correlation between ICP and the three measurement of profitability indicates that the ICP and profitability moving on an adverse direction, also means that longer days of inventories, it can opposite influence the firms profit. These results support by the study done by Deloof (2003), Mohamad & Saad (2010) and Gill & Mathur (2011) as they also found the same results.

Table 4.3: Multicollinearity Analysis (2010 – 2014)

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	RCP	.908	1.101
	ICP	.721	1.387
	PCP	.461	2.167
	CCC	.519	1.927
	FS	.869	1.150
	FDR	.578	1.731
	SG	.920	1.087

In order to confirm that the multicollinearity may not pose any problem in this study, the results of variance inflation factor (VIF) was administered first, as shown in Table 4.3. According to the Hair, Anderson, Tatham & Black (1992), the threshold value for VIF should be less than 10 and the tolerance value (1/VIF) should be higher than 0.10. Thus, the results shown above indicate that there is no problem of multicollinearity among the variables involved in this study.

4.4 Regression Analysis

In relation to statistical analysis, the regression technique helps data analysts to evaluate the effect of the independent variable on the dependent variable of the study. The extracted information indicates that the regression analysis is highly based on both modelling and analysing the information in support of its influence on other variables (Atkinson and Riani, 2012). Sen and Srivastava (2012) reported that the regression analysis is statistical analyses that may help researchers predict the significance of independent variable on the dependent variable involved in studies. In the case of the present study, this analysis was performed to examine the influence of working capital management on the profitability of SMEs in Malaysia. Financial ratios such as return on assets (ROA), net operating profit (NOP) and return on equity (ROE) of the firm are considered the dependent variables which can be used as the measurement of the profitability of the firms. For the independent variable, it is the working capital management that was measured through cash conversion cycle (CCC), payable conversion period (PCP), receivable conversion period (RCP) as well as inventory conversion period (ICP) of selected SMEs in the context of Malaysia. The relationship between the variables was determined as per the account periods.

Table 4.4: Regression Analysis (2010 – 2014)

Independent Variables	Model 1 (DV = ROA)	Model 2 (DV = NOP)	Model 3 (DV = ROE)
Constant	.889147	.154389	-.071246
CCC	-2.03E-05	.003374	-.000163
	(0.0562)**	(0.0005)*	(0.3652)
RCP	-.000408	-.006214	-.000351
	(0.0146)**	(0.0053)*	(0.6337)
ICP	-4.98E-05	-.002539	-.000301
	(0.3107)	(0.0189)**	(0.2503)
PCP	.000410	-.001316	.000195
	(0.0349)**	(0.6008)	(0.0533)**
FS	-.000105	.000539	8.85E-05
	(0.5439)	(0.7965)	(0.7795)
FDR	-2.45E-05	-.004132	-.000401
	(0.9355)	(0.1649)	(0.6843)
SG	-.001674	.044123	.007959
	(0.3988)	(0.3203)	(0.3251)
R-square	.498824	.515879	.432217
Adjusted R-square	.428659	.448102	.352727
Durbin-Watson	1.493211	1.508236	1.510674
F-value	0.031493**	0.000296*	0.799845

*. Significant at the 0.01 level. **. Significant at the 0.05 level.

According to Garson (2012), R-square is defined as an estimation of the variables, i.e., to see whether, for example, it is a linear relationship with the dependent variables in a given model, if notably, there are more variables in the given model, it may indicate relatively higher R-square. In model 1, the adjusted R-square indicates that 42.87% variation in ROA of SMEs in Malaysia can explained by the regression model. The adjusted R-square implies that 44.81% and 35.27% of the variation in the profitability of NOP (model 2) and ROE (model 3) also can be explained through the regression model.

The results as discussed in the foregoing clearly indicate that no presence of autocorrelation was detected in the output because, according to Makridakis and Wheelright (1978), the acceptance level of Durbin-Watson (DW) statistics should be more than 1.5 but less than 2.5. Even if there is one result in Model 1, it may indicate that the DW value of 1.49 is considered

lower than 1.5, but it has to be noted that there is not a very significantly lower value, it may only result in the signal of warning, but the results may still be accepted.

Based on this understanding, three basic models were developed; however, the regression analysis was administered between the working capital components and different measures of the firm's profitability.

4.4.1 Return on assets (ROA) as a profitability measure of SMEs in Malaysia

The results of Model 1 demonstrated that there was a negative relationship between cash conversion cycle (CCC), receivable conversion period (RCP), and inventory conversion period (ICP) with the return on assets (ROA). The CCC and RCP variables were significant at 5% confidence level with the ROA, but were insignificant for ICP. The significant relationship between CCC and RCP with the ROA indicated that any increase in CCC and RCP may result in relatively lower profitability measured by ROA for the SMEs in Malaysia. On the contrary, it may also indicate that as a short time could have been taken by firms to convert the source into cash or the money received from their respective customers, the higher the profitability. The findings of the present study are notably consistent with the Fisher's separation theory and trade-off theory of working capital management.

On the other hand, the relationship between payable conversion period (PCP) and ROA result was positive. A significant relationship was recorded at 5% confidence level between PCP and ROA. This shows that any increase in PCP may indicate that SMEs in Malaysia settle their respective bills later to their respective suppliers may culminate in higher profitability. Such results obviously are in agreement with Dinku (2013) who investigated the effects of working capital management on the SMEs profitability in the context of Ethiopia, in which, it was found that the PCP was positively related to the SMEs' profitability.

In Model 1, the result showed that the coefficients were negative and insignificant for the three control variables, namely firm size (FS), leverage or financial debt ratio (FDR), and sales growth (SG). It can be inferred that firm size (FS), leverage or financial debt ratio (FDR), and sales growth (SG) do not have any impact on the SMEs' profitability in the context of Malaysia.

The findings of the present study indicated that SMEs in the context of Malaysia rely more on short-term trade debts to finance their respective daily operations because payable conversion period (PCP) has thus far positively been related to the SMEs profitability in the context of Malaysia. SMEs in Malaysia should be suggested to shorten the cash conversion cycle (CCC) and receivable conversion period (RCP) in order to improve their sales and the profitability.

4.4.2 Net operating profit (NOP) as a profitability measure of SMEs in Malaysia

Model 2 utilises the net operating profit (NOP) as the dependent variable. It was found that there was a negative relationship between receivable conversion period (RCP), inventory conversion period (ICP), payable conversion period (PCP) and the net operating profit (NOP). The RCP is the variable considered significant at 1% confidence level with the NOP, ICP was significant at 5% confidence level, but it was insignificant for PCP however. In this regard, it can be inferred that the level of account receivables, inventories and account payables may have to be reduced for SMEs in the context of Malaysia in order to improve the net operating profit (NOP). The cash conversion cycle (CCC) showed both positive and significant relationship between CCC and NOP, with the significance being at 1% confidence level. The significant relationship between CCC and NOP indicates that any increase in CCC may in turn result in higher profitability measured by NOP for the SMEs in the context of Malaysia. In other words, SMEs in Malaysia may have to find ways and means to be more efficient in using the short-term assets and liabilities in generating more profits. This is

consistent with Fisher's separation theory, which according to Gustafson, Barry, & Sonka (1988), by means of using the achievement or maximization of the firm's present value, the optimal investment policy could be achieved. Working capital management policy should be based on the preferences and choices of the financial decision makers within organizations.

4.4.3 Return on equity (ROE) as a profitability measure of SMEs in Malaysia

Return on equity (ROE) was used as the dependent variable in Model 3 and table 4.4 illustrates that the cash conversion cycle (CCC), receivable conversion period (RCP), and inventory conversion period (ICP) had a negative relationship and were insignificant with the return on equity (ROE) as the profitability measurement for SMEs in the context of Malaysia. However, positive and significant relationship was recorded between payable conversion period (PCP) and the return on equity (ROE), in which the significance was at 5% confidence level. Hence, it can be concluded that any increase in the account payables may result in the improvement of the profitability of the firms. This is in line with what was argued by Ching et al. (2011) in their study about the relationship between management of working capital and profitability of the firms in the context of Brazil. Their study sampled 16 listed companies in the time span of 2005 to 2009 and it was found that inventory conversion period (ICP) did not have any significant impact on the firms' profitability, measured by return on equity (ROE). Based on the results presented in table 4.4, it is noteworthy that ROE was not relatively a good measurement of SMEs profitability in the context of Malaysia in comparison with return on assets (ROA) and net operating profit (NOP). This is due to the fact that ROE is considered as a measurement of the return for the shareholders and there are some significant differences between ROA and ROE, which may have directly affected the operational activities of the firms.

4.5 Chapter Summary

Referring to what has been discussed in the foregoing, it can be argued that there is a significant relationship between the working capital components and profitability (return on assets and net operating profits) for the time frame of five years i.e., from 2010 till 2014. On the contrary, an insignificant relationship was found between the working capital components and profitability (return on equity) for the same five years. The data analysis indicated that the working capital components had a high effect on the profitability of the firms with regards to the financial information of the SMEs in the context of Malaysia. The next chapter focuses on the summarized findings as well as some recommendations intended for relevant users of the study.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter explicates the conclusions of this study, which sheds some light on the overall results that were attained from the analysis. In this study, the researcher intended to explore the impact of working capital management on profitability of small and medium enterprises (SMEs) within Malaysian context. This chapter puts emphasis on the summarized findings which were evaluated as per the formulated research objectives. The purpose of analysing research objectives is to verify if the objectives developed for the present study were successfully achieved by the researcher or vice versa. In addition, the ratio analysis was employed in the previous chapter with the purpose of assessing the influence of working capital management on the profitability. Regression analysis was also performed to measure the impact of one variable on the other variables.

Furthermore, recommendations are presented in this chapter, specifically to the SMEs in the context of Malaysia, hoping to shed some light on how to enhance their performance, as well as dealing with internal issues efficiently. This chapter also offers some suggestions for future researchers to pursue this topic with different variables and so forth. Implications for future researchers are also discussed in this chapter, together with the research limitations, which delineates the issues faced by the researcher in the course of carrying out the present study. Lastly, this chapter provides a brief summary of the entire chapter.

5.2 Summarized Findings

The summarized findings were evaluated on the basis of the research objectives. The aim of analysing the research objectives was to verify if the objectives formulated for the present study were successfully achieved by the researcher. The ratio analysis was employed in the

previous chapter in order to assess the impact of working capital management on the profitability of firms, whereas a regression analysis was performed to measure the impact of one variable on the other variables.

The research objectives of this study aimed to observe the existence of either significant or insignificant relationship between the working capital components, which consisted of cash conversion cycle (CCC), receivable conversion period (RCP), payable conversion period (PCP), inventory conversion period (ICP); and the profitability measures by return on assets (ROA), net operating profit (NOP), and return on equity (ROE).

On the whole, the results of this study showed significant relationship between working capital components i.e. cash conversion cycle (CCC), receivable conversion period (RCP), and payable conversion period (PCP) and the profitability measured by return on assets (ROA). However, insignificant relationship between inventory conversion period (ICP) and the return on assets (ROA) was observed. Apart from that, significant relationship between the cash conversion cycle (CCC), receivable conversion period (RCP), inventory conversion period (ICP) and the profitability measured by net operating profit (NOP) was also observed. However, an insignificant relationship between payable conversion period (PCP) and the net operating profit (NOP) was observed. Another insignificant relationship was also observed between the cash conversion cycle (CCC), receivable conversion period (RCP), inventory conversion period (ICP) and the profitability measured by return on equity (ROE). On the contrary, a significant relationship was observed between payable conversion period (PCP) and the return on equity (ROE).

Overall, it can be concluded that, in the present context, there was a significant relationship between working capital components, profitability of return on assets (ROA) and the net operating profits (NOP). In this regard, it is proven that effective working capital

management may have a significant impact on SMEs' profitability in Malaysia. On the contrary, it is noteworthy that there was an insignificant relationship between working capital components and profitability of return on equity (ROE).

5.3 Recommendations

The findings suggest that they were effective to fulfil the objectives of this study. The prime objective of the researcher was to identify the effect of working capital management on the profitability of SMEs that are operating in the context of Malaysia. On the basis of results, certain recommendations have been made to the selected companies which are considered may help them improve their performance. The recommendations to the companies are as follows:

i. It has been suggested to the small and medium enterprise (SMEs) the financial report should be used instead of cash as a gauge for performance because most of the SMEs only focus their cash position and omit the debt position of the companies.
ii. It also recommended to the small and medium enterprises (SMEs) to reduce their debt with the aim of increasing their credibility on the market.
iii. Proper and clear accounting record suggested being keep by the small and medium enterprises (SMEs) to ensure that all financial transaction is record down to avoid leakage in financial transaction.
iv. The small and medium enterprises (SMEs) are advised that they may need to build strong and long-term relationships with their suppliers in order to increase their payable conversion period.
v. It is recommended that the companies may need to use trade credit in order to increase their sales and offer some flexibilities related to their trade credit for the purpose of attracting a large amount of customers.

vi. It is advised to the small and medium enterprises (SMEs) to reduce its working capital requirement and increase their profitability by appealing a large number of customers.

5.4 Recommendation for Future Research

In this study, the researcher has explored the influence of working capital management on the profitability of small and medium enterprises (SMEs) within Malaysian context. The objectives of the current research were addressed by the research by means of a comprehensive review of literature; the suggestions have been presented for the new researchers to conduct their research on one of the following topics which are enlisted in the following:

i. Due to the limitation of the data availability, it may suggest to future researcher to extend the sample size of the small and medium enterprises (SMEs) in others sectors to fill up the gap.
ii. It also suggested future researcher can add other working capital components such as net trade cycle, market securities and other external variable to analyse further on the effect on SMEs profitability.
iii. Another suggestion is a comparative analysis can also be done between SMEs in Malaysia with SMEs in other countries to identify the country specific factors on the impact of the management of working capital on the SMEs profitability.

5.5 Implications

The findings of the research indicated that working capital management have significant impact on the profitability of small and medium enterprises. The core issue that is being experienced by and large, the small and medium enterprises (SMEs) is the limited access to finance. However, this lack of financial assistance may create problems for the SMEs which

ultimately results from the management of working capital are considered extremely difficult along with the profitability of the companies.

This research offers some recommendations to the small and medium enterprises (SMEs) to consider effectively managing their working capital because SMEs need to manage their working capital in order to minimize their respective borrowings. The higher amount of leverage is considered risky for the firms and it can directly influence the profitability of the companies. The rationale behind the working capital management is significant to companies whereas the working capital management may directly influence the risk and profitability of firms. This research can be used by firms to effectively manage their working capital system along with the policy makers.

The overall results of this study showed that the managers of SMEs can improve their performance by increasing their profitability or in other words, minimize the cash conversion cycle (CCC), inventory conversion period (ICP), payable conversion period (PCP) and receivable conversion period (RCP). However, small and medium enterprises (SMEs) may need to take an extended period in order to pay off the suppliers.

Furthermore, firms need to build strong relationship with its suppliers in order to return the payable amount. Similarly, this study can be useful for the stakeholders of the companies in order to adjust the capital regulations to improve the performance of firms and to increase the credit risk of SMEs in the context of Malaysia. In this way, stakeholders such as the lenders can develop better ideas of whether to provide credit to the small and medium enterprises (SMEs) or not. The present study can be beneficial for the new SMEs to effectively manage their working capital management to reduce its liability and increase the profitability of firms.

5.6 Research Limitations

The research limitations are generally known as the issues which are experienced by researchers in the course of conducting their respective studies. In this study, the researcher intended to explore the impact of working capital management on the profitability of SMEs in the context of Malaysia. In this regard, some related previous research which explored the influences of working capital on the profitability of small and medium enterprises (SMEs) was reviewed. Some of the limitations experienced in the present study were time-constraints; there was limited time available to complete the research which has thus affected the overall results of the study. Another limitation of the current study is related to the inadequate availability of the data due to which, the research could not appropriately examine the effects of working capital on small and medium enterprises (SMEs) on a large-scale. Moreover, the data for companies were only obtained from the Companies Commission of Malaysia (CCM). Furthermore, a large amount of data was missing in the majority of the firms which ultimately reduced the sample size to 58 companies only.

Besides, another research limitation that was experienced in this study was resource constraints; the reason for results of the study being affected was because it did not have adequate resources. Therefore, these limitations such as time-constraints, sample size and resource constraints have largely influenced the results of the present study.

5.7 Conclusion

The overall results obtained from the analysis indicated that the existing study has shed some light on the relationship between working capital management and the profitability of small and medium enterprises (SMEs) in the context of Malaysia. In this chapter, results from the overall analysis indicated that there was a significant relationship between the working

capital components and the profitability measures by return on assets (ROA) and net operating profits (NOP). Besides, it also showed an insignificant relationship between the working capital components and profitability measure by return on equity (ROE).

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APPENDICES

The sample list of 58 small and medium enterprises (SMEs) in Malaysia:

1. A.B.Ng Secretarial Services Sdn. Bhd.
2. A.F.F. Sdn. Bhd.
3. A.L. Wong Motor Sdn. Bhd.
4. Aar Teraspadu Sdn. Bhd.
5. Ada Emasjewel Sdn. Bhd.
6. Advance Vertex Motors Sdn. Bhd.
7. Agensi Pekerjaan Global Man Sdn. Bhd.
8. Alam Tenggara Homemakers Sdn. Bhd.
9. Ampweld Marketing Sdn. Bhd.
10. Asr Padu Sdn. Bhd.
11. Autotech Solution (M) Sdn. Bhd.
12. Baley Concept (M) Sdn. Bhd.
13. Ban Hoe Seng Sdn Bhd
14. Ban Lee Heng Motor (Melaka) Sdn. Bhd.
15. Ban Loong Trading Company Sdn Bhd
16. Bayu Kreasi Sdn. Bhd.
17. Binaan Desjaya Sdn. Bhd.
18. Chin Pek Soo Holdings Sdn. Bhd.
19. Dagang Nusantara Sdn. Bhd.
20. Elegant Avenue (M) Sdn. Bhd.
21. F.Y. Sdn. Bhd.
22. Foo Nyit Tse & Brothers Sdn Bhd
23. Galaxy Techniques Sdn. Bhd.
24. Guan Hoe Company Sdn Bhd
25. Hin Ann Co Sendirian Berhad.
26. Hle Engineering Sdn. Bhd.
27. Inshirah Travel & Tours Sdn. Bhd.
28. Kean Tat Hup Kee (Malaysia) Sdn. Bhd.
29. Kechau Moulding Industries Sdn. Bhd.
30. Kejuruteraan S.B.C. (M) Sdn. Berhad

31. Kemasik Industries (M) Sdn. Bhd.
32. King Hup Industries Sdn. Bhd.
33. Lee Boun Tiong Sdn. Bhd.
34. Leong Hin San Sdn Bhd
35. Pembinaan Khalishew Sdn. Bhd.
36. Perniagaan Teratai Sdn. Bhd.
37. Pine & Hill Wood Products Sdn. Bhd.
38. Poh Teik Enterprise Sdn. Bhd.
39. Poliklinik Kinta Sdn. Bhd.
40. Rapat Tenaga Sdn. Bhd.
41. Seng Yew Trading (M) Sdn. Bhd.
42. Shayo (M) Sdn. Bhd.
43. Sin Meng Kee Products Sdn. Bhd.
44. Sin Wah Lee Motors Sdn. Bhd.
45. Sri Changgong (Kota Bharu) Sdn. Bhd.
46. Syarikat Bernas Edar Sdn. Bhd.
47. Syarikat Germuda Perak Sdn. Bhd.
48. Syl Properties Sdn. Bhd.
49. Synn Heng Trading Company Sdn Bhd
50. T.F. Metal Industries Sdn. Bhd.
51. Tenin (M) Sdn. Bhd.
52. The Ipoh Traders Company Sdn Bhd
53. The Jalan Langgar Transport Company Bhd.
54. Tien Tuck Tong Medical Hall Sdn. Bhd.
55. Ultrawin Sdn. Bhd.
56. Unique Progress Sdn. Bhd.
57. Usaha Pammek Sdn. Bhd.
58. Wira Homeland Sdn. Bhd.

Descriptive Statistics

Descriptive Statistics (2010 – 2014)

	N	Minimum	Maximum	Mean	Standard Deviation
ROA	58	.0009	.3607	.0891	.0748
NOP	58	.0061	12.5583	.6327	1.457
ROE	58	1.323	7.8852	.0455	.1786
CCC (days)	58	-74.4100	161.1294	96.5245	81.8809
RCP (days)	58	6.2305	78.8960	54.8119	32.9798
ICP (days)	58	11.3931	148.1172	72.9878	68.0754
PCP (days)	58	5.0411	77.0861	45.7638	37.6126
FS	58	9.9936	18.2479	14.6397	1.4129
FDR	58	.0219	85.8733	1.5789	8.7121
SG	58	.0002	102.3532	.0054	4.7725
Valid N (listwise)	58				

Pearson Correlation

Pearson Correlation (2010 – 2014)

	ROA	NOP	ROE	CCC	RCP	ICP	PCP	FS	FDR	SG
ROA	1									
NOP	.005	1								
ROE	.322	.088**	1							
CCC	-.030	-.014*	-.048	1						
RCP	-.046*	-.186*	-.042	.350*	1					
ICP	-.054	-.142*	-.048	.966*	.196*	1				
PCP	.027**	-.149*	.036	-.087**	.694*	.069**	1			
FS	-.031	.044	.350	.093**	-.105*	.025	-.242*	1		
FDR	-.012	-.039	-.014	-.037	.023	-.035	.031	-.399*	1	
SG	-.017	-.009	-.004	.006	.048	.002	.056	-.248*	.037	1

**. Correlation is significant at the 0.05 level.
*. Correlation is significant at the 0.01 level.

Multicollinearity Analysis

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	RCP	.908	1.101
	ICP	.721	1.387
	PCP	.461	2.167
	CCC	.519	1.927
	FS	.869	1.150
	FDR	.578	1.731
	SG	.920	1.087

Regression Analysis

Independent Variables	Model 1 (DV = ROA)	Model 2 (DV = NOP)	Model 3 (DV = ROE)
Constant	.889147	.154389	-.071246
CCC	-2.03E-05	.003374	-.000163
	(0.0562)**	(0.0005)*	(0.3652)
RCP	-.000408	-.006214	-.000351
	(0.0146)**	(0.0053)*	(0.6337)
ICP	-4.98E-05	-.002539	-.000301
	(0.3107)	(0.0189)**	(0.2503)
PCP	.000410	-.001316	.000195
	(0.0349)**	(0.6008)	(0.0533)**
FS	-.000105	.000539	8.85E-05
	(0.5439)	(0.7965)	(0.7795)
FDR	-2.45E-05	-.004132	-.000401
	(0.9355)	(0.1649)	(0.6843)
SG	-.001674	.044123	.007959
	(0.3988)	(0.3203)	(0.3251)
R-square	.498824	.515879	.432217
Adjusted R-square	.428659	.448102	.352727
Durbin-Watson	1.493211	1.508236	1.510674
F-value	0.031493**	0.000296*	0.799845

*. Significant at the 0.01 level. **. Significant at the 0.05 level.