CASH FLOW: OPERATING PERFORMANCE OF MANUFACTURING INDUSTRY IN MALAYSIA

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Statement of Originality

The work described in this Final Year Project, entitled “Cash flow: Operating Performance of Manufacturing Industry in Malaysia” is the best of the author’s knowledge that of the author except where due reference is made.

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ABSTRACT

CASH FLOW: OPERATING PERFORMANCE OF MANUFACTURING INDUSTRY IN MALAYSIA

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The objective of this paper is to examine the operating activities performance across the manufacturing industries in Malaysia using financial accounting ratios. The variables chosen in the study include Return on Net Operating Assets ratio (RNOA), Operating Cash Flow ratio (OCF), Earning before Interest, Tax, Depreciation and Amortization Margin ratio (EBITDA Margin), Inventory Turnover ratio (IT) and Operating Cash Flow to Sales ratio (OCF/Sales). Each variable will be analyzed using Stata for 5 year-period from 2010-2014. The results of analysis found that the EBITDA Margin, IT and OCF/Sales did not translate into significant changes in RNOA. The lack of the significance in the ratios above implied that the study of profitability, efficiency and short-term liquidity does not well explain the operating performance of manufacturing industry in Malaysia. In contrast, changes in the OCF were significantly positive related with the changes in RNOA, indicating that the cash position of a company effects the operating performance directly.
ABSTRAK

ALIRAN TUNAI: PRESTASI OPERASI DALAM INDUSTRI PEMBUATAN DI MALAYSIA

Oleh

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Objektif kajian ini adalah untuk mengkaji prestasi aktiviti operasi industri pembuatan di Malaysia dengan menggunakan nisbah perakaunan kewangan. Aliran tunai operasi dicategoriti sebagai aliran tunai yang paling penting kerana kegagalan untuk menjana tunai daripada aktiviti operasi memberi isyarat bahawa perniagaan gagal untuk menjana pendapatan daripada aktiviti terasnya. Pembolehubah yang dipilih dalam kajian ini termasuk RNOA, OCF, EBITDA Margin and IT dan OCF/Sales. Setiap pembolehubah akan dianalisis menggunakan Stata untuk tempoh 5 tahun dari 2010-2014. Hasil analisis mendapati bahawa Margin EBITDA, IT dan OCF/Jualan tidak menghasilkan perubahan ketara dalam RNOA. Ini menunjukkan bahawa keuntungan, efisien dan aliran tunai jangka pendek tidak menjelaskan prestasi operasi industri pembuatan di Malaysia. Sebaliknya, perubahan dalam OCF yang positif, selaras dengan perubahan dalam RNOA, menunjukkan bahawa tahap tunai syarikat menjejas prestasi operasi secara langsung.
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TABLE OF CONTENTS

LIST OF TABLES ........................................................................................................... x
LIST OF FIGURES ........................................................................................................... xi

CHAPTER 1 INTRODUCTION ......................................................................................... 1
  1.0 Introduction ......................................................................................................... 1
  1.1 Background of Study ...................................................................................... 2
  1.2 Cash Flow Ratios ............................................................................................ 7
      1.2.1 Operating Cash Flow ........................................................................... 8
      1.2.1.1 Operating performance: RNOA .................................................. 8
      1.2.1.2 Cash Position: OCF ................................................................. 8
      1.2.1.3 Profitability: EBITDA Margin .................................................. 9
      1.2.1.4 Asset Efficiency: IT ................................................................... 9
      1.2.1.5 Short-term Liquidity: OCF/Sales ........................................... 10
  1.3 Theoretical Framework .................................................................................. 11
  1.4 Problem Statement ....................................................................................... 13
  1.5 Objective of Study ....................................................................................... 15
      1.5.1 General Objective ........................................................................... 15
      1.5.2 Specific Objective ........................................................................... 15
  1.6 Significant of Study ...................................................................................... 16
  1.7 Scope of Study ............................................................................................... 16
  1.8 Concluding Remarks .................................................................................... 17

CHAPTER 2 LITERATURE REVIEW .............................................................................. 18
  2.0 Introduction ..................................................................................................... 18
  2.1 Importance of Financial Ratio ..................................................................... 18
  2.2 Reviews on the Determinants of Operating Performance ......................... 19
      2.2.1 Cash Position .................................................................................. 19
      2.2.2 Profitability ..................................................................................... 19
      2.2.3 Efficiency ......................................................................................... 20
      2.2.4 Liquidity ........................................................................................... 20
  2.3 Theoretical Reviews .................................................................................... 23
      2.3.1 Agency Cost of Debt Theory ......................................................... 23
      2.3.2 Schumpeter Theory of Profitability ............................................. 23
      2.3.3 Allocative Efficiency Theory ......................................................... 24
      2.3.4 Technical Efficiency Theory ......................................................... 25
      2.3.5 Trade Off Theory of Liquidity ....................................................... 26
      2.3.6 Pecking Order Theory of Liquidity ............................................. 27
      2.3.7 Expense Preference Behavior Theory ....................................... 28
  2.4 Reviews of Empirical Testing Procedures .................................................. 29
      2.4.1 Descriptive Statistics ................................................................. 29
CHAPTER 3 METHODOLOGY

3.0 Introduction .................................................. 44
3.1 Population and Sample of the Study ....................... 45
3.2 Data Collection Methods .................................. 45
3.3 Conceptual Model of the Study .......................... 46
3.4 Variables ....................................................... 47
    3.4.1 Dependent Variable ........................................ 47
    3.4.1.1 RNOA .................................................. 47
    3.4.2 Independent Variables ................................... 48
        3.4.2.1 OCF ................................................. 48
        3.4.2.2 EBITDA Margin ................................... 48
        3.4.2.3 IT .................................................. 49
        3.4.2.4 OCF/Sales ......................................... 49
3.5 Hypotheses of the Study .................................... 50
3.6 Methodology ................................................. 50
    3.6.1 Descriptive Statistics .................................. 50
    3.6.2 Pearson’s Correlation ................................. 51
    3.6.3 Pooled Ordinary Least Square (OLS) Regression 52
    3.6.4 Random Effect Model .................................. 52
    3.6.5 Breusch-Pagan Lagrangian Multiplier (LM) Test 53
    3.6.6 Fixed Effect Model .................................... 53
    3.6.7 Hausman Test .......................................... 54
    3.6.8 Diagnostic Test ........................................ 55
        3.6.8.1 Modified Wald Test .............................. 55
        3.6.8.2 Wooldridge Test ................................ 56
    3.6.9 Fixed Effect with Robust Standard Errors ........ 56
        3.6.9.1 F-test ............................................ 57
        3.6.9.2 $R^2$ (Goodness of Fit) .......................... 57
    3.6.10 Multiple Regression Analysis ...................... 58
3.7 Concluding Remarks ....................................... 58
LIST OF TABLES

Table 2.1  Summary of Literature Review ......................................................... 37
Table 4.1  Descriptive Statistics ................................................................. 62
Table 4.2  Correlation Coefficients of Variables ............................................. 63
Table 4.3  Summary Result of Pooled OLS, Random Effect and Fixed Effect ... 67
Table 4.4  Results of Multiple Regression Analysis ......................................... 69
LIST OF FIGURES

Figure 1.1 Components of Malaysia’s Exports, 2014 ....................................................... 5
Figure 1.2 Year-on-Year Export Growth Trend of Main Sectors, 2014 .......................... 6
Figure 1.3 Malaysia’s Exports by Main Sectors, 2014 ...................................................... 7
Figure 1.4 Theoretical Framework for measuring Operating Performance of
Manufacturing Industry in Malaysia ........................................................................ 11
Figure 3.1 The relationship between cash position, profitability, efficiency and
short-term liquidity with the return from operating activities .............................. 47
Figure 4.1 Scatterplot .................................................................................................... 66
CHAPTER 1
INTRODUCTION

1.0 Introduction

International Accounting Standard Board (IASB) and the Malaysian Accounting Standards Board (MASB) have highlighted importance of generating future cash flows from investment decisions. Forecasting future cash flow is an important aspect for decision-making purposes. The elements in predicting future cash flow is inseparable with the related financial theory like agency theory and pecking order theory. Operating activities is a typical day-to-day routine conducted by all company in the process of generating profit. Thus, evaluation of operating activities performance from financial statements is crucial especially for manufacturing industry. A company’s core business activities include manufacturing, distributing, marketing and selling a product or service with the cash effect that come into the determination of income is known as operating activities. Cash flow from operations represents the ability of a firm to generate sustainable cash flows to maintain daily operating undertakings, the repayment of liabilities as well as the source of financing.

The financial crisis on 1997/1998 had created the hardest hit to Malaysia economic growth and at same time the importance of appropriate corporate governance practices start to emerge. Statutory reformations were then introduced to enhance corporate governance, accounting and statutory reporting in order to
encourage transparency in accounting reporting. Bursa Malaysia also makes effort by requiring the financial analysts to include accounting information analysis, financial performance forecasting and some recommendations for the firm listed in Bursa Malaysia. The usefulness and the applicability of operating cash flow in assessing the operating performance remain statistically unknown. Limited studies have been done of the on the impact of the operating cash flow towards the operating performance of different sector and industry in Malaysia. Thus, this study will investigate the operating performance of manufacturing industries in Malaysia by using the appropriate financial ratios. Financial ratios are useful measurement tools used by shareholders, managers and investors to gauge the effectiveness of the management team and overall valuations of company performance. This research will contribute to the further understanding of managerial decision and the consequences of the decision in term of the operating performance attained.

1.1 Background of Study

Malaysian government realized the importance of diversification and modernization of the economy since the tin market collapsed during the early 1980s. Since thereafter, government emphasizes on promoting higher value industries such as manufacturing industries, service industry and finance industry. Since early 1980s, Malaysia’s manufacturing industry has been registering outstanding evolution where the country perceived a transition from primarily an agricultural-based economy towards industrial-based economy. Almost 80% of Malaysia exports are contributed by the manufacturing sector and Malaysia is well-known as the world 17th largest
exporting nation. Tenth Malaysia Plan (2011-2015) has identified 12 National Key Economics Areas (NKEA) that have the potential to directly and materially contribute a quantifiable amount of economic growth to the Malaysian economy. Out of this 12 activities, Palm Oil and related products, Electrical and Electronics and Information and Communications technology are related to manufacturing sector. Therefore, it is important to identify the strengths and weaknesses of manufacturing industry in order to facilitate economic growth.

Ministry of International Trade and Industry (MITI) proposed a Third Industrial Master Plan (IMP3) which serves to drive Malaysia towards global competitiveness. IMP3 expects to achieve long-term global competitiveness through transformation and innovation of the manufacturing and services sectors. Following, 12 high potential industries in the manufacturing sector have been targeted for further development and promotion, including the resource based and non-resource based industries. Under IMP3, manufacturing sector is targeted to grow at 5.6 percent annually and contribute 28.5 percent to gross domestic product (GDP) in 2020 and total investment of RM412.2 billion (Third Industrial Master Plan, 2011).

According to Ministry of International Trade and Industry Report (2013), in year 2013, Malaysia’s economy grew 4.7 percent despite the challenging global economic conditions and Malaysia’s manufacturing sector managed to grow by 3.4 percent on its own. Hence, the performance of manufacturing industries in Malaysia for year 2013 was stimulating and gratifying. Throughout the year, manufacturing sector kept expanding and successfully contributed to the growth of country’s
exportations with a share of 67.1 percent of total exports or RM483.0 billion (Ministry of International Trade and Industry Report, 2013). Besides, according to the Ministry of International Trade and Industry Report (2013), Malaysia manufacturing sector succeeded in attracting investments that worth RM52.1 billion in 787 projects, 26.8 percent more than the RM41.1 billion achieved in 2012. This proved that Malaysia is actually capable of attracting international investment and acting a global business hub. Also, Malaysia adopted a more comprehensive approach in order to attract quality foreign investments in knowledge intensive, research and development, high technology and high value-added industries to further reinforce its position as a competitive Foreign Direct Investments region. From the total investments approved in year 2013, foreign investments in manufacturing projects achieved RM30.5 billion or 58.5 percent of the total (Ministry of International Trade and Industry Report, 2013). Besides, Ministry of International Trade and Industry Report (2013) tabulated a total of 4,113 manufacturing projects approved for the period of 2009-2013 and the employment rate from manufacturing industries also increased by 4.7 percent to 70,049 workers as compared to 2012. All the achievement in previous year 2013 had proved that manufacturing sector in Malaysia is slowly and increasingly getting a stronger place in global economy.

Although Malaysia has showed some outstanding achievement in manufacturing industries in overall, the underlying potential risk pose by the internal control of the industries operations are indeed require further investigation. Results of previous study showed that there are statistical evidence proving that strong
relationship exist between company’s cash position, profitability, efficiency and short-term liquidity with its performance (Chong, Yap, and Mohamad, 2013). However, the performance varies across different industry, therefore by focusing on operating activities of one industry; it would more effective and precise to estimate a favorable approach for the industry. Manufacturing industry is chosen as it is characterized by intensive operating activities requirements and high competition as one out of five main industries in Malaysia, placing the second place after Services industries.

**Figure 1.1: Components of Malaysia's Exports 2014**

![Pie chart showing components of Malaysia's exports 2014](image)

Source: Department of Statistics, Malaysia (2014)

The main sector that contributed to Malaysia exportation included manufacturing sector, mining sector and agriculture sector. According to the pie chart above, it is clearly shown that manufactured goods account for the highest
percentage (76.4%), amounting up to RM337.17 billion out of the total export of Malaysia in year 2014.

Figure 1.2: Year-on-Year Export Growth Trend of Main Sectors, 2014

According to Figure 1.2, Malaysia’s total exports for manufactured goods fluctuated throughout the year for year 2013 and year 2014 respectively. The growth of manufactured goods achieved peak (roughly 18.0%) in April 2014 after recovering from the negative outputs in early half of year 2013. According to World Trade Organization (2014), several factors has been identified including flat import demand by developed countries (0.2%) and moderate import growth in developing country economies (4.4%) that contributed to the deterioration of trade of manufactured goods in 2013. However, the percentage of growth of manufactured goods managed to maintain around 10.0% in the second half of year 2013 and in the first six month for the year 2014, which indicated that manufacturing sector did serve as the main contributor to Malaysia economic growth.
Figure 1.3: Malaysia's Exports by Main Sectors, 2014

Source: Department of Statistics, Malaysia (2014)

According to Figure 1.3, manufactured goods account for a remarkable contribution to the total export of goods from Malaysia in year 2014. Roughly 80.0% of the total export is contributed mainly by manufactured goods.

1.2 Cash Flow Ratio

According to GAAP (Generally Accepted Accounting Principles) requirements, the measurement of the registrant's historical or future financial performance for an accounting period is presented in accordance with the statement of balance sheet, income and statement of cash flows. The alteration of cash flow between two accounting period can be categorized into three major classes: operating cash flow, investing cash flow and financing cash flow with each class signify a different uses and sources of cash. Analysis of operating cash flow is focused to narrow down the scope of study by using cash ratios as cash flow information has strong explanatory power.
1.2.1 Operating Cash Flow

The variables that will be covered in the model of this study is discussed as follow, including the dependent variable Return on Net Operating Assets Ratio (RNOA), independent variables Operating Cash Flow Ratio (OCF), Earning before Interest, Tax, Depreciation and Amortization Margin Ratio (EBITDA Margin), Inventory Turnover Ratio (IT) and Operating Cash Flow to Sales Ratio (OCF/Sales).

1.2.1.1 Operating performance: Return on Net Operating Assets Ratio (RNOA)

Return on net operating assets ratio (RNOA) is the complements of Return on Equity ratio (ROE), filling the gaps and assisting in the analysis of the management’s ability to run a company (Schmidt, 2015). ROE is the measure of the ability of the board of management in managing the company. DuPont\(^1\) formula has been widely used to break the single ratio into several components to provide a clearer explanation of a particular ratio. However, merely evaluation of DuPont formula of ROE ratio failed to separate the operating and non-operating performance of a company. Instead, RNOA as the operating part derived from ROE is more suitable to measure the effectiveness of the operating decision.

1.2.1.2 Cash Position: Operating Cash Flow Ratio (OCF)

For a listed manufacturing company, a strong cash position is a powerful indicator of the financial strength of that company. It provides some useful insights to the investor regarding the ability of the company to conduct the business as well as the ability to pay off the obligations. Operating cash flow ratio (OCF) relates cash

\(^1\) DuPont model is created in 1919 by an executive at E.I. du Pont de Nemours & Co. Assets are measured at gross book value rather than at net book value using DuPont analysis.
flow accrued from company operations to its current debt. Operating cash flow measures the amount of cash generated by a company’s normal business operations, thus it is best to measure short-term liquidity of a company. Operating cash flow is chosen instead of net income because it is a better indication of liquidity, as debt is usually paid off using cash.

1.2.1.3 Profitability: Earning before Interest, Tax, Depreciation and Amortization Margin Ratio (EBITDA Margin)

EBITDA margin serve to measure a company’s profitability. By using EBITDA margin, a company’s primary profitability is obtained as it excludes depreciation and amortization. This ratio measure a company’s profitability by comparing revenue with net income/earnings. Hence, this metric provide the percentage remains after deducting operating expenses. EBITDA Margin is the appropriate ratio for measuring the operating performance as it excludes the financing and tax considerations. Managers and investors are capable of focusing more on the operating profitability as EBITDA Margin minimizes down the non-operating factors that is differ for each and every company.

1.2.1.4 Asset Efficiency: Inventory Turnover Ratio (IT)

Inventory turnover ratio (IT) show how many times a company’s inventory is sold and replaced over an accounting period. This ratio measures how fast the company’s product are moving in the marketplace, thus indicating the efficiency of the operating activities of a company. High value of inventory turnover ratio is preferable as it represent a healthy cash flow from the operating transactions.
However, a value that is too high actually indicates inadequate manufacturing capacity, while relatively low value serve as a sign that the company may have difficulty in selling off their products.

1.2.1.5 Short-term Liquidity: Operating Cash Flow to Sales Ratio (OCF/Sales)

Operating cash flow to sales ratio (OCF/Sales) measures the ability of a company to translate sales into cash by comparing the operating cash flow of a company to its sales revenue. Operating cash flow is directly proportional with the level of sales. High value of this ratio indicates a good operating cash flow. Therefore a consistent and increasing trend of this ratio reflects company’s efficient debtor management and hence impose a good investment opportunities.

1.3 Theoretical Framework

A theoretical framework is formed to deduce the applicability of the relevant theory in the study of the model in this research. Figure 1.4 formulated the used of Agency Cost of Debt theory, Schumpeter theory, Technical Efficiency theory and Pecking Order theory in explaining the Cash Position, Profitability, Efficiency and Short-term Liquidity respectively.
Agency cost of debt consisted of two type of conflicts: the agency conflict between managers and shareholders and the agency conflict between shareholders and bondholders. For instance, a manager might be risk averse which opt for job security while the shareholders hope to invest in risky projects to maximize their profit. Hence, if the risky project is successful, shareholder wealth increased, contrarily, if the project fails, the manager lost the job. Besides, the conflict between shareholders and bondholder is inevitable as the source of investment mainly contributed by the bondholder. Conflict arises as if the risky project invested succeed, all the profit will go to the shareholder, but in turn, if the project fail the bondholder have to bare the loses. The level of the operating cash flow is therefore determined by the choice of investing and at the same time fulfilling the desire of each party involved.
Following the theory proposed by Schumpeter, the concept of ‘new combination’ is a leading concept in the current economic development. Five major scope of the ‘new concept’ including the introduction of new good, new method of production, opening of new market, conquest of the new source of supply or raw materials and the establishment of the new organization of any industry is developed. Hence, this new approach together with the innovations concept will further enhance the evolving of the economic conditions. Although there is arguments regarding innovations cause monopoly, the monopoly does not last forever. Innovations only cause temporary monopoly but the profits and advantages it brought to the total economic welfare are infinite. In short, the advantage proposed by this theory could be measure in term of profitability, which is the most significant outcome to be observed.

Technical Efficiency theory implies a general condition of optimal distribution of the resources to minimize the waste and improve efficiency. An efficient condition is a condition where the production of the goods is achieved with minimum resources while maximizing the outputs. Technical efficiency is a better measurement of operating activities as in focused on evaluating the capital, labour and the resources that involved in the income generating goods. Although this theory suggested that no one can be better off without deteriorating others, the equilibrium level can still be adjusted to maximise the well beings of the parties involved. This theory is applicable to the production of the inventory, beginning from the transformation of the raw material into the ready goods, and also the matching of the production of the inventory with demand of the goods in the market. If the inventory
is produce in accordance to the market demand, the inventory will be easily liquidated off and the amounts of obsolete goods can be greatly reduced.

Pecking order theory does not consider optimal capital structure as priority, instead it asserts the distinct preference in adopting internal financing rather than external fund. The financing choice using external funds will consider the alternatives that minimise the additional costs of asymmetric information. Hence, pecking order theory opts for the internal generated funds, followed by risky debt and finally resorting to equity. Debt financing tends to burden the company with the periodically payment of interest rate as well as repayment of principle, and failure to do so might induce bankruptcy of the company. The choice of financing will affect the short-term liquidity of a company as if the company is financing through external debts, the repayment of debts have to be fulfil first before the sales can be translated to the profit of the company. Therefore, pecking order theory served to strengthen the security of the firm and avoid the problems of repayment of loan.

1.4 Problem Statement

According to the Economic Report 2013/2014 released by the Ministry of Finance, Malaysian economy is expected to grow at a stronger pace of between 5% and 5.5% in 2014 on firm domestic demand and recovery in exports. High labor demands as well as high yield investment opportunities placed manufacturing industry an important sector in Malaysia. Malaysia is among the top choice for foreigners to invest in manufacturing industry as Malaysia’s economic development