LEADERSHIP INFLUENCE ON DIVIDEND PAYOUT OF THE MALAYSIAN PUBLIC LISTED COMPANIES

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DECLARATION

The author hereby declares that this project paper is the original study undertaken by him unless stated otherwise. The acknowledgement has been given to references quoted in the list of references. The views and analysis in this study are that of author's, based on the references made, and this does not constitute an invitation to use this study as a technical tool for management purpose.

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ACKNOWLEDGEMENT

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Abstract of the project paper submitted to the Senate of Universiti Tun Abdul Razak in partial fulfillment of the requirements for the Master of Business Administration (Leadership).

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The research aims to understand the leadership influence on dividend payout of Malaysian public listed companies. Dividend decision is solely at the discretion of top leadership that may be influenced by various factors such as financial, non-financial and macro-economic factors. Through empirical studies in relations to Dividend Relevance Theory, many variables having significant influence on dividend decisions are uncovered. Out of which, this research focuses on financial factors that are made available through secondary data published on Internet website, www.klse.i3investor.com. These 7 independent financial variables are Net Profit Margin (NPM), Return of Equity (ROE), Revenue per Share (RPS), Operating Expenses per Share (OEPS), Tax per Share (TPS), Earnings per Share (EPS) and Net Assets per Share (NAPS). Purposive sampling technique is implemented to gather the data for 765 companies listed on main market of Bursa Malaysia for 9 years period between years 2010 to 2018. The regression analysis is conducted through IBM SPSS AMOS statistical software to understand the relationship between these independent variables with Dividend per share (DPS) being the dependent variable. The outcome of the regression analysis to test the Hypotheses is described as Coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The research found that NPM, ROE, RPS, OEPS and EPS have positive significance on Dividend per share (DPS), while TPS is very insignificant and NAPS hypotheses is rejected. Overall 68% of the model is explained with the relations between DPS and 7 independent variables. Investors and Analyst interested in best dividend companies should utilize the dividend distribution model in this research as a guide. It is also suggested that future research should explore developing KLDI (Kuala Lumpur Dividend Index) of Top Dividend driven listed companies in Malaysia and extend to ASEAN region.

CHAPTER 1
INTRODUCTION

1.1. Background of Study

Investors are buying shares in public listed companies in anticipation of higher investment returns given the relationship between risk and rewards. This investment return is generated from either capital gains from disposing their shares at higher market price and/or receiving dividend payment for holding of the shares for a longer period. Dividend is seen as a wealth instrument, of which a sum of money is paid to shareholders from the profits generated by Firm. The main purpose of Dividend pay-outs are to reduce agency conflict, avoid exploiting minority shareholders and enhance firms reputation. (Duha, 2009)

Dividend payout is normally a portion of the profits that is predetermined by the Board of Directors (notably a dividend decision) based on certain factors such as the firm's investment policy, its financing mix and capital structure. (Statistics and Risk Management - Money Flow Part 5, 2012). This would mean, Top Leadership (ie Managing Director or CEO) who chairs Board Meeting would have enormous influence to make dividend decisions, which may not necessarily maximise shareholders value. Furthermore, shareholders dont have any vested right to a dividend until it is declared by the firm's BOD (Brown, 2019). In addition, there is a lack of theoretical model and along side exist empirical irregularities in dividend theories/models (Seppo, 2001). Therefore, in the absence of a structured approach to make informed or comparative dividend decision, Top leadership tend to decide based on past knowledge and cognitive biases (Dietrich, 2010). This leads the decision making to be viewed as branch of social science analysis with behaviourial and attitude driving the decision. Having said that, there are many firms with a clearly defined Dividend policy for its shareholders to enjoy stable dividend income.

What are the determinants of firm's dividend decision? Empirical studies have identified various factors that have correlation with dividend payout such as

a) Financial factors - Profitability, Equity, Liquidity, Historical dividend payout, Financial leverage, Market capitalization and Investment opportunities

b) Non-financial factors – Taxation policy, Financing agreements, Legal requirements, Control objectives, Ownership preferences, Life cycle of firm and Macroeconimic factors (inflation and general economic condition)

Finally, the question that always pop-out, **"Did the shareholder receive the most appropriate dividend payout to maximise shareholders value?** This is seen as a Dividend Puzzle (Black, 1976), when investors need dividend as an incentive to buy shares in a company and it becomes the role of Top Leadership (BOD) to maximise shareholders value. Therefore, without understanding the significant factors that were considered by Board of Directors in making the Dividend decision, it will make it very difficult to establish a fair comparison of dividend payout between firms in the same sector of Bursa Malaysia.

As a result, the purpose of this study is to understand the Leadership and Dividend Payout of Malaysian Public Listed Companies. A clear distinction of this study is to identify and use existing independent variables that have significant and positive correlation with dividend decision from prior empirical studies. For that reason, this research is focused on finding the direction and relationship of several independent variable to Dependedable variable, Dividend. At the same time, this research does not intend to find the relationship between dividend payout vs. firm value or stock price as suggested by two (2) core dividend theories (Dividend Theories), Dividend Relevance Theory and Dividend Irrelevance Theory

However, the variables used in the Dividend Relevance Theory and its various models are considered in developing this research. Once the key variables are clearly determined, subsequently the study will gather the data required from the Firm's annual report to calculate the value of variables such as Return on Equity. Furthermore, as a listed company, there is a statutory obligation to declare and publish annual report for shareholders and general public. Thus, the key data required to calculate the independent variables is made available via annual report. In addition, the annual report provides factual past information on dividend declaration and other non-financial indicators that may be helpful to establish the model. This raw data is readily available through secondary sources, such as www.klse.i3investor.com, www.malaysiastock.biz and www.bursamalaysia.com

As a consequence, this study will establish a set of standard requirement of data across all the firms, which is extracted from the annual report to develop a regression analysis and in testing the hypotheses. Thereafter, ranking of coefficient of correlation is tabulated for prioritizing the independent variable with its magnitude and direction of relationship with dependent variable, Dividend. After which, a formula can be establish to describe the relationship model of multi variable and its model can be further explained by the coefficient of determinantion (R^2)

Finally, the firms' regression analysis will be compared between short-term analysis (year-on-year regression) and long-term analysis between years 2010 – 2018. This would strengthen the regression analysis especially for comparable Regression Coefficient (ß), Significance test (P-Value) and Coefficient of Determination (R^2). The target research would be conducted on 788 firms from 12 sectors on Bursa Malaysia with a history of dividend payout during the last 9 years between years 2010 to 2018.

Future research area would be to develop a Kuala Lumpur Dividend Index (KLDI 100) with a selection of top 100 dividend paying firms in Bursa Malaysia. This would guide investors with appetite for dividend to buy this index linked stocks.

1.2. Problem Statement

There is no legal obligation for public firms to pay dividends, moreover the right to even recommend a dividend payment lie with the Top Leadership (Howard, 2018). This would mean, corporate leadership made up of Top Management and Board of Directors is fully responsible for dividend decision. However, dominant owners and coalition of shareholders have control to amplify power to extract private benefit to reduce corporate payout (dividend payout) and resorting to large funds under discretionary control (Felix-Domingo, 2015). Thus, dividend decision that subsequently leads to **dividend payout is not at the best interest of shareholders**, especially to maximise the shareholders value. In addition, shareholders are frequently deprived of any income from firm, either in the form of dividend or salary. Furthermore, they are not allowed any effective voice in business decision and they are denied any information about corporate affairs. (F.Hodge, 1987).

Thus, addressing the need to establish and understand the factors or variables that have significant influence on dividend decision is crucial for stakeholders. Subsequently, shareholders can justify the dividend received in tandem with the outcome of these variables.

1.3. General Objective

The research objective is to access how far the variables influence dividend payout ratio determined by the Board of Directors. If payout percentage is more shareholders will be happy but the company growth rate will be affected. If the payout percentage is less then the shareholders will be unhappy but the growth rate will be substantial. The specific objectives are

i. To examine how NPM (Net Profit Margin) influences DPS (Dividend per Share)

ii. To study the relationship between ROE (Return on Equity) and DPS

iii. To investigate RPS (Revenue per Share) correlation with DPS

iv. To find the interdependence between OEPS (Operating Expenses per Share) and DPS

v. To study the correlation between TPS (Tax per Share) and DPS

vi. To examine influence of EPS (Earnings per Share) on DPS

vii. To investigate NAPS (Net Assets per Share) correlation with DPS

1.4. Research Questions

The research objective opens up to a set of questions to be answered in order to proceed to conduct the research. However, these research questions are answered through a systematic gathering of quantifiable data and performing statistical regression analysis (Bhat, n/a). Here are specific questions of which the research must work on in a step-by-step method in developing the hypotheses;

1. What are the significant variables that are correlated to dividend decision from past literatures? This would include financial and non-financial variables.

2. How to identify suitable variables for this research? This would include selecting based on underlying financial information available in secondary market and the requirement to calculate the variable value and also other challenges to obtain non-financial variables such as ownership control and age of firm.

3. The research will rely on secondary data to calculate the value of variables

4. What should be the sample size in order to maximize the impact of research? Sample size would be defined as the one short cross sectional studies based on financial data from secondary market. Its important to under the level of interference required to confirm the data must be very minimal given the size of sample may be very large. Thus assumptions must made clear in the research

5. Is the secondary data from a reliable and reputable source? This is vital to ensure the calculation to find the value of variables must be accurate given the data is reliably obtained from annual report of companies.

6. For which period of financial data is to be collected from secondary data? Due to time constraint, the financial period in research must be sufficient for comparison and analysis.

7. What is the outcome expected from regression analysis? This would include relationship and significance between the independent variable with the dependent variable. In addition, the probability of model in explaining or predicting the dependent variable, the Dividend per Share (DPS)

1.5. Significance of the Study

This research is aimed to understand the relationship between independent variables and dependent variables, which have influenced the Leadership in making the dividend decision in Malaysian Public Listed Companies. The findings of this study will benefit various groups that play a vital role in the future of this research.

A. Investors and Shareholders

The significance and relationship of variables will allow investor to compare Dividend Decision with one firm and another firm in the same industry. This would also lead the corporate leadership to make the best dividend decision in comparison with their competitor firms. In future, firms should consider dividend equation or model as an external factor in making the most appropriate Dividend decision.

B. Academia

This research will add literature for future generation to understand the business context of the past in developing a dividend distribution model. In addition, it will serve to explore new ideas and thereafter follow up on future research areas identified through this research. Furthermore, other academicians will further enhance the dividend distribution model through outcome of applied research in a given sector and also criticize the weakness of this research for future improvement.

C. Society

The Dividend Distribution Model developed will be made public for better understanding of impact between firms' performance and dividend payout. Thus, this would prevent public from selecting underperforming firm especially for dividend driven investors.

D.   Government and its Agencies

The Dividend Distribution Model will showcase a strong research foundation exist in Malaysian Universities. Furthermore, it also serves to provide continuous innovations in the equity market. Thus, it will influence leaders in corporate world to further protect interest of minority shareholders

E.   Bursa Malaysia

The research outcome developed a Dividend Distribution Model to calculate the expected payout for Companies listed on Bursa Malaysia Main Market. It is envisaged that Bursa Malaysia will accept the Dividend Distribution Model as a base for launching Kuala Lumpur Dividend Index (KLDI 100), an index that combines top 100 firms that pays dividend to maximize shareholders value.

F.   Securities Commission (SC)

SC is a self-funded statutory body entrusted with the responsibility to regulate and develop the Malaysian capital market. Therefore, Dividend Distribution Model will be seen as an innovative instrument to enhance the equity market, especially protecting minority interest. In future, DDM could have incorporated of being part of a dividend policy as practices by many firms.

1.6. Organization of the Study

Five (5) Chapters were developed for this research, each covering significant area of the research study and its underlying assumptions. Chapter 1 provides an overview of the research. It comprises background of study, problem statement, research objectives, research questions, significance of study as well as the organization of the study.

Chapter 2 of this research provides literature review of similar empirical and non empirical research done worldwide. In this chapter, the introduction will lead to the theoretical foundation of this research, empirical research to support it and a proposed conceptual framework with related hypotheses development.

Chapter 3 exhibits research design to test the hypotheses. It consists of sampling size of the population, data collection method, operationalization & measurement of variables and finally the data analysis techniques.

Chapter 4 of this research provides the results of regression analysis and corresponding discussion on the findings. This includes the sampling characteristics and sampling techniques utilized to conduct this analysis. Further, the hypotheses were testes for both Short-term (Year-on-year from 2010 to 2018) and Long-term analysis for the same period

Chapter 5 starts by summarizing outcome of the findings in this research and addressing the implication brought forward for Leadership in dividend decision. Thereafter key limitations in the research were described for better understanding of areas of concern. Finally two possible area for future research that would directly benefit the stakeholders and provide structured approach towards dividend decision

CHAPTER 2
LITERATURE REVIEW

2.1. Introduction

The purpose of the study is to develop **Dividend Distribution Model (DDM)** to understand the relationship between several independent variables with a dependent variable, Dividend payout. Further the coefficient of determination or R-squares (R^2) will explain the degree of linear correlation between Independent variables and the dependent variable.

DDM will facilitate Top Leadership and Board of Directors to improve the dividend payout in a more predictable way. In light of that, DDM will develop a linear equation to predict the dividend payout for Companies listed on Bursa Malaysia main market. This model will require a set of significant independent variables that have a strong correlation with dependent variable (dividend decision). Thus, these significant variables will be predetermined from past literatures, which have conducted similar research on relationship between dividend payout to the stock price of a firm. Here are the two major theories in relations to Dividend;

a. **Dividend Irrelevance Theory** – A firm's dividend decision / dividend payout should have little or no impact on stock price. This means, dividends do not add value to a company's stock price (James, Understanding Dividend Irrelevance Theory, 2019)

b. **Dividend Relevance Theory** – A firm's dividend policy has a positive impact on the firm's value of stock. Higher dividend will increase the value of stock price (Rashidjaved, 2019) in anticipation of a sustainable growth in the future.

Subsequently, the set of positive correlated variables from the two major theories are listed down. Thereafter, the underlying formula to calculate these variables is further studied to determine the data input. Subsequently, these data in the underlying variables are further divided into both Financial / non-Financial variables and Qualitative / non-Qualitative variable (if any). Thereafter, a set of criteria is established to facilitate selection of the most appropriate variable with a quantitative factor to be utilized for this research purpose.

2.2. Underpinning Theories

Dividend policy is the policy a company uses to structure its dividend payout to shareholders (Chen, 2019). This dividend policy is very relevant because it serves as an income for shareholders in consideration for the investment risk they undertake. Therefore, top leadership must take the right dividend decision for the benefit of investors especially the minority shareholders. In this context, Dividend Irrelevance Theory does not apply because its basis of company's declaration of dividend payments has no or little impact on share price (Chen, 2019). Which would mean, investors are not concerned about Dividend payments but prefer capital gains with increase in share price.

In the end, the underpinning theory that relates to the dividend decision is "Dividend Relevancy Theory". This theory states that dividend policy affects the value of the firm, which means a change in dividend payment will affect the share price. (John, 2015) in his conference paper has mentioned, Prof James E. Walter and Myron Gordon suggested that shareholders' prefer current dividends and hence a positive relationship exists between dividend and market value of firm. The logic put behind this argument is that investors are generally risk-averse and that they prefer current dividend, attaching lesser importance to future dividends of capital gains. There are three established models that adopts the Dividend Relevance theory in accordance with Dividend has a positive relationship with Firm's value. The three theories are;

A.   Walter's Dividend Model

Prof. James E. Walter argues that the choice of dividend payout ratio almost always affects the value of the firm (EFinance Management, 2019). The theory evolves around the significant relationship between **Internal Rate of Return (R)** and **Cost of Capital (K),** which determines the optimum dividend policy that maximizes shareholder's wealth. In other words, if R < K, the business or project is not worth to undertake and the value of firm will decrease (loss making venture). A simple illustration below;

Table 2.1 Walter's Dividend Model

Relationship	Firm	Dividend payout	
		Decrease	Increase
R > K	Make money	Firm value ⇑	Firm value ⇓
R < K	Loss money	Firm value ⇓	Firm value ⇑
R = K	Breakeven	Firm value **same**	Firm value **same**

B.   Gordon's Dividend Model

This model is developed by Myron Gordon (EFinanceManagement, 2019), which explicitly states that the market value is related to its dividend policy. Cost of Capital (K), Stream of Dividend Payout (D) and Expected annual Growth Rate (G), determines market value of the firm's share. In other words, the relationship between **Rate of return (R)** and the **Cost of Capital (K)** influences the market price of firm's share. A simple illustration as stated below

Table 2.2 Gordon's Dividend Model

Relationship	Firm	Dividend payout	
		Decrease	Increase
R > K	Make money	Share price ⇑	Share price ⇓
R < K	Loss money	Share price ⇓	Share price ⇑
R = K	Breakeven	Share price **same**	Share price **same**

C.   The Bird in Hand Theory

Myron Gordon and John Lintner developed the bird-in-hand theory (Barone, 2019) that stipulates investors prefer dividends to capital gain due the uncertainty of capital gains in the future and also out of the investor's control. This theory simply implies a bird in the hand (represents dividend income today) is worth two in the bush (represents capital gain in the future).

There are various studies and research conducted on the above theories to understand the dividend relationship with market value or firm and factors effecting dividend payout. Empirical research has made choice to study some of this research papers for the above theories to determine the factors having significant correlation with dividend decision.

2.3.   Review of prior Empirical Research

Empirical research conducted through literature review, is a way of gaining knowledge of the research conducted, arguements for relationship between variables and reducing risk of reinventing the wheel. Over the years, there has been numerous study conducted on capital market, making it one of the most researched area.

Therefore, its vital to select the empirical research topic, its investigation method and evaluation of outcome with similar relations to Dividend Decision. Hence, this research report will be able

A.   Develop research on existing body of knowledge

B.   Identify factors with significant positive impact on dividend decision

C.   Develop problem statement that is more precise and clear

The main source of empirical research will be internet websites with access to empirical research published by academic, scholarly or professional journal. This is to ensure the articles are based on observation/experiences and further analyzed either quantitatively or qualitatively. Here are the summary of empirical study conducted with the summary of significant independent variable to Dividend decision (refer to Appendix A and B)

Table 2.3 Significant variables from Empirical Research

Variables	Financial Data	non-Financial Data
Quantitative	Earnings / Profitability / EPS, Cash Flow / Liquidity, Historical Dividend Payout, Competitor's Dividend Payout, Financial Leverage, Size of Firm / Market Cap.	Financing / Taxation Policy, Inflation and Economic condition Age of Firm
Qualitative	Investment opportunities	Financing Agreement, Legal Requirements, Control Objectives, Ownership preference and Control

In addition, non empirical research available such as articles on the internet were also considered, because it summarized research outcomes with variables having significant positive relationship with dividend decision.

Table 2.4 Internet articles on similar reserach area

No	Title	Website
1	Bursa Malaysia Latest Dividend News	(Malaysiastock.biz, 2019)
2	Focusing on dividend decision	(Boundless.com)
3	Ideal dividend payout ratio	(Dividend University, 2016)
4	Best Dividend Stocks	(Dividend.com, 2019)
5	Dividend screener	(Top Dividends, 2019)
6	Independent market research portal	(klse.i3investor.com, 2019)
7	Bursa Malaysia company announcement	(Bursa Malaysia, 2016)

Refer to Appendix B; Summary of internet searches

The seven (7) independent variables and corresponding dependent variable, which have been selected for the purpose of this research is further described below;

Table 2.5 Description of variables

Variable	Type of variable	Description
Net Profit Margin (NPM)	Independent variable	Profitability is the most important variable with high level of significance to dividend decision. Profitability refers to higher earnings after tax and EPS indicates profit earned per outstanding share
Return on Equity (ROE)	Independent variable	A measurement of financial performance of company by the unit of shareholder equity. The formula is Net profit attributable to shareholder divided by Net Worth (Assets minus Liabilities)
Revenue per Share (RPS)	Independent variable	Is a measurement of Revenue or Sales generated by the company per unit of total shares outstanding in the market. Calculation RPS is by dividing Total Revenue with Total no. Of Shares Outstanding (TOSS)
Operating Expenses per Share (OEPS)	Independent variable	The total costs of doing business or operating expenditure to deliver the services/products. This is measured by dividing Total Operating Expenditure (OPEX) with Total Outstanding Shares (TOSS)
Tax per Share (TPS)	Independent variable	Best practices of company to manage its tax exposure will contribute for higher profit margin. The calculation to derive TPS is Total Tax paid divided by Total no. Outstanding Shares (TOSS)
Earnings per Share (EPS)	Independent variable	EPS indicates the Company's profits per units of shares outstanding. It is the most significant measure of profits and its dividend decision. Calculating EPS is Net Profit divided Total no. of Shares outstanding (TOSS)
Net Assets per Share (NAPS)	Independent variable	Net assets is the measure of financial performance with increase value of shareholders equity. Net assets or Net worth = Total Asstes minus Total liabilities. Calculating NAPS is by dividing Net Assets with Total no. Of Shares Outstanding (TOSS)
Dividend per Share (DPS)	Dependent variable	A decision taken by Top Leadership / Board of Directors to make dividend payment from profits generated by company. The Total dividend paid divided Total no. Of Shares outstanding = Dividend per share (DPS)

2.4. Conceptual Framework

Empirical research has identified numerous variables with significant relationship to dividend payout. However, this study is focusing on developing Dividend Distribution Model (DDM) to establish the relationship among variables to predict the dividend payout calculate the dividend payout. Therefore, this research is testing the hypotheses of divident determinants for a public listed company on Bursa Malaysia main market. The choosen variables are:-

Figure 2.1 Conceptual Framework

Independent Variable

- Net Profit Margin
- Return On Equity
- Revenue per Share
- Operating Expenses per Share
- Tax per Share
- Earnings per Share
- Net Assets per Share

Dependent Variable

Dividend Payout
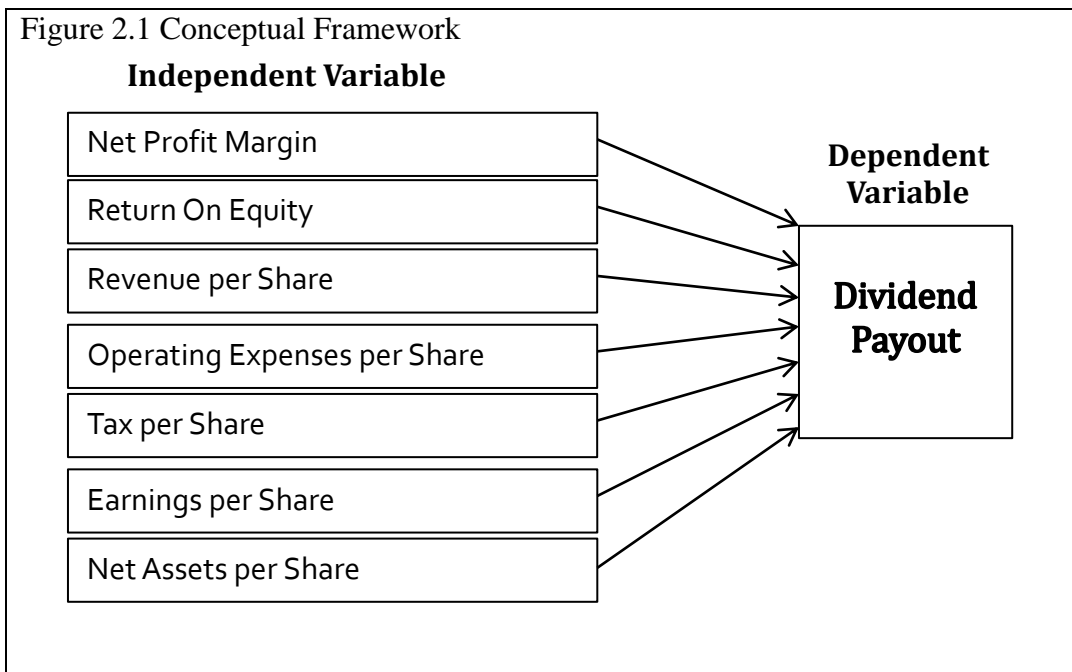
2.5. Research Hypotheses

Empirical research has indicated positive relationship exist between size, age, ownership, profitability and leverage has positive relationship with Dividend decision. However, this research is focused on the correlation of each independent variable to Dividend decision. Subsequently, coefficient of multiple correlation is developed to measure / predict using linear function of the Dividend decision (dependent variable).

Table 2.6 List of Hypotheses Test

Hypotheses	Statement
H1	NPM (Net Profit Margin) is associated with DPS (Dividend per Share)
Null	There is no relationship between NPM and DPS
H2	ROS (Return on Equity) is related with DPS
Null	There is no relationship between ROE and DPS
H3	RPS (Revenue per Share) is related to DPS
Null	There is no relationship between RPS and DPS
H4	OEPS (Operating Expenses per Share) is associated with DPS
Null	There is no relationship between OEPS and DPS
H5	TPS (Tax per Share) is related with DPS
Null	There is no relationship between TPS and DPS
H6	EPS (Earnings per Share) is related with DPS
Null	There is no relationship between EPS and DPS
H7	NAPS (Net Assets per Share) is related with DPS
Null	There is no relationship between NAPS and DPS

All the above hypotheses will be tested for both short-term analysis (year-on-year basis) and long-term analysis over the period of 2010 – 2018. Further the test is conducted on a purposive sampling technique representing all 765 companies listed on Bursa Malaysia Main Market, of which the only sector excluded is Real Estate Investment Trust (18 companies). The other sectors are Construction (49 companies), Consumer (173 companies), Energy (32 companies), Financial (32 companies), Healthcare (13 companies), Property (97 companies), Plantation (43 companies), Technology (39 companies), Utilities (12 companies), Industrial Products (225 companies), Transportation & Logistics (32 companies) and Telecommunication &

Media (18 companies). Finally a Dividend Distribution Model to explain the relationship between the 7 Independent variable with Dependent variable.

Summary

A Dividend Distribution Model (DDM) is to be developed with a formula to predict the dividend per share for companies listed on Main market of Bursa Malaysia. This research will identify significant variables from literature review and subsequently justify selection of few variables to be used in developing the DDM. Theafter, a conceptual framework with its corresponding hypotheses statements are to be tested.

CHAPTER 3
RESEARCH METHODOLOGY

3.1. Introduction

The purpose of this quantitative research is for hypotheses testing under minimal interference on 765 companies listed on Main Market of Bursa Malaysia. This research setting is noncontrived with a one-shot cross sectional on a time horizon of 9 years between 2010 and 2018. The core strategy deployed is based on ground theory from data analysis to establish Dividend Distribution Model (DDM). Data collection method would be unobstructive on secondary data extracted from published annual report. This data is made available on various websites, out of which the choosen website is www.klse.i3investor.com. Purposive sampling technique is used based on all companies listed and thereafter only focus on dividend paying companies over the same period. Finally, a specific criteria is set in selecting the data for analysis such as Dividend payment must be from current year generated profits, Dividend paid cannot exceed fiscal year new profit distributable to shareholders and dividend paid below RM0.01 is considered insignificant, thus will be ignored.

3.2. Research Design

Research design shall be quantitative and descriptive (measured for a 9 year period between 2010 to 2018) with numerical analysis on financial data collected from reliable secondary source based on published annual report. The data collected in the form of raw financial numbers and ratios, further arranged in tables before analyzed using computational techniques to explain the phenomenon of Dividend payout among companies listed on Bursa Malaysia.

The problem statement is very much quantifiable with primary focus on predefined financial data to calculate the variables. Each individual variable or a set of variables can be compared to the dependent variable (dividend per share), to understand the significance and strength of influence. Quantitative method selected because of its systematic approach to compare and examine relationship between two or more variables based on numerical; subsequently Regression analysis on the data can also be used to calculate effect of the relationship in terms of magnitude and direction.

3.3. Sampling Procedure

Total population of research is 765 companies listed on 12 sectors on Bursa Malaysia. The sectors in Bursa Malaysia Main market which is covered in this research are Construction, Consumer Products & Services, Energy, Finance Services, Health Care, Industrial Products & Services, Plantation, Property, Technology, Telecommunication & Media, Transportation & Logistics and Utilities (Bursa Malaysia, 2018). Thus, its purposive sampling with all firms selected based on key criteria being dividend payout during the period of 2010 to 2018. Therefore, these firms must be listed prior to 2009, in order to complete a full calendar year and declare dividend for year 2010.

Purposive sampling method is systematic and it will ensure the population will be evenly sampled and therefore reliable conclusion will be drawn. However, this method requires alot of time and effort to collate the data for 765 companies over 9 years period into a cross sectional excel sheet for ease of comparision. Furthermore, purposve sampling will eliminate any sample size clustered to a particular segment of companies by size or behaviour.

The Multivariate Analysis with assumptions of ceteris paribus will be understood through regression analysis using SPSS AMOS. This relationship would further be analyzed with output of the following;

a) Significance Test with P-value. If P-Value < 0.05, the independent variable is significant or less insignificant to the dependent variable

b) Regression Coefficient (ß). This would describe the magnitude and the direction of relationship of every independent variable with the dependent variable.

c)   Coefficient of determination (R^2). The model developed with multiple variable can utilize R^2 to justify the % of model explains output of dependent variable. This will extend the justification of social sciences decision making on dividend payout

This research study will undertake to gather data from all 765 companies financial data between the year 2010 to 2018. An example, Construction sector has 49 companies, out of which only 29 companies complied paid dividend in year 2018 and complied with the set of criteris, while the balance 20 firms did not comply or either did not even pay dividends. Therefore, these 20 firms are ignored because no dividend decision, or in other words, dependent variable has no value.

Real Estate Investment Trust (REIT) Sector of Bursa Malaysia is not included in research because all 18 firms have dividend payment as their cornerstone for REIT. This consideration was used to drop REIT Sector from this research analysis. Therefore, the final sample is 765 firms (783-18 REIT companies = 765) from 12 Sectors in Main Market of Bursa Malaysia .

Table 3.1 Sample composition of population

No	Sectors in Main Market of Bursa Malaysia	Total no of companies	Company analyzed	Companies paid Dividend for 2018
1	Construction	49	49	21
2	Consumer	173	173	72
3	Energy	32	32	5
4	Financial	32	32	21
5	Healthcare	13	13	10
6	Industrial Products	225	225	81
7	Plantation	43	43	16
8	Property	97	97	24
9	Technology	39	39	15
10	Transportation & Logistics	32	32	10
11	Telecommunication & Media	18	18	4
12	Utilities	12	12	8
13	Real Estate Investment Trust	18	-	-
	Total	783	765	287

3.4. Data Collection Method

Capital Markets and Services Act 2007 (Securities Commission Malaysia, 2017) requires listed companies to concurrently submit copy of its audited annual accounts and interim / periodic financial reports. These reports are made public on Bursa Malaysia (Bursa Malaysia, 2019) website and also available on individual public companies corporate website, look for a major component such as 'investor relations' or 'investor', subsequently download 'Annual report' segregated by year for financial performance of company.

Extracting the secondary data into self-developed reporting system, many Independent companies (foreign and local owned) are actively providing financial analysis related services to investors or their members. Some of the prominent local websites providing financial related services are www.shareinvestor.com, www.klse.i3investor.com, www.malaysiastock.biz, www.marketwatch.com, etc. These websites provide financial analysis in the form of ratios, graphs, alert, technical chart, blogs and other services.

For the purpose of this research, a short study was conducted to find the best website providing free access to past financial data (secondary data) for all companies listed on Bursa Malaysia to comply with purposive sampling technique. Eventually allowing the extraction of data and searching for related data to calculate value of independent variables and to establish the dividend payout information. Ideally, this website must have easy access, relevant data systematically tabulated, ease of downloading or extraction and provides financial data for the past 10 years. Based upon these criteria's, the best selected website is www.klse.i3investor.com

Figure 3.1 Main page of klse.i3investor.com

A method is established for an effective and efficient data collection and management. These steps include Data Sample, Access through Internet, Type of Data Collection, Data tabulation and Administration of Data.

3.4.1. Data Sample

Purposive sample size will require data of 765 companies for a 10-year period of 2010 to 2019 is copied from the secondary source in the original format. The sample data format is copied and further analyzed to understand the underlying information or formula. Sample data would include financial results, Dividend decision and Equity information.

3.4.2. Access through internet

All relevant data must be available over the Internet, in order to systematically copy the data into excel sheet. Task involved to copy individual company data for 765 companies would require a long period of time. Given the time constraint, the data collection process started early of the semester.

3.4.3. Type of Data collection

Relevant data requirement to calculate the independent variables are predetermined with the data available from the website. Financial data requirements are set as per table below;

Table 3.2 Formulae of Different Variables

Variable	Data requirements
Net Profit Margin (NPM)	Net Profit (PAT)
	Revenue (Total Sales)
Return on Equity (ROE)	Net Profit attributable to Shareholders
	Net Worth (Total Assets – Total Liabilities)
Revenue per Share (RPS)	Revenue (Total Sales)
	Total no. of Shares Outstanding (TOSS)
Operating Expenses per Share (OEPS)	Total Operating Expenditure (OPEX)
	Total no. of Shares Outstanding (TOSS)
Tax per Share (TPS)	Total Tax paid
	Total no. of Shares Outstanding (TOSS)
Earnings per Share (EPS)	Profit After Tax (PAT)
	Total no. of Shares Outstanding (TOSS)
Net Assets per Share (NAPS)	Net Worth (Total Assets – Total Liabilities)
	Total no. of Shares Outstanding (TOSS)
Dividend per Share (DPS)	Total Dividend paid
	Total no of Shares Outstanding (TOSS)

3.4.4. Data Collection

Extracting of data required is done one by one company until all 765 companies is completed. The step by step process as follows;

Step 1: Search for website www.klse.i3investor.com

Step 2: Register as a member at no charges
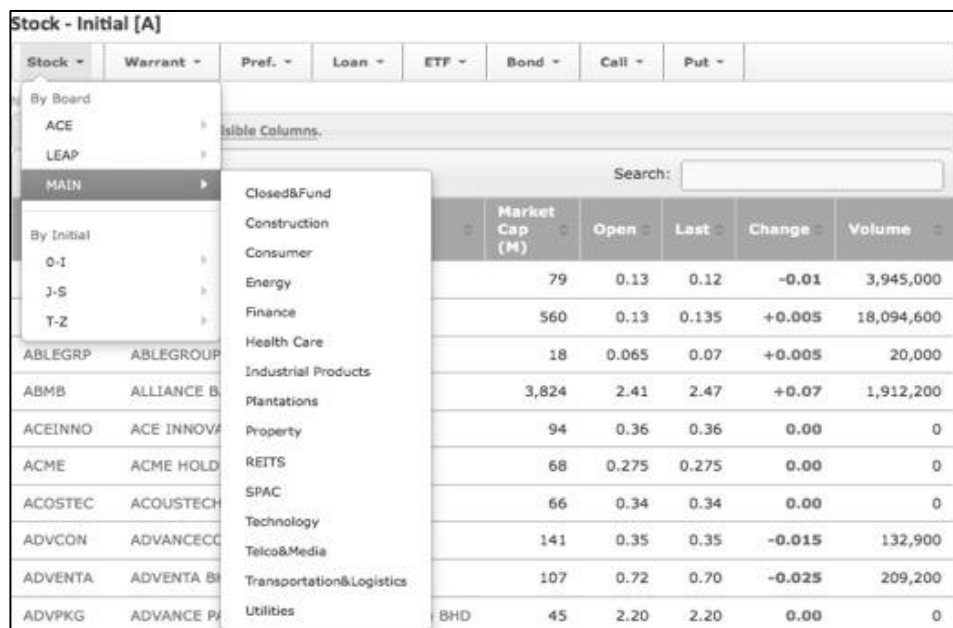
Step 3: Access 'Stock Quote'

Figure 3.2 Stock quote in klse.i3investor.com
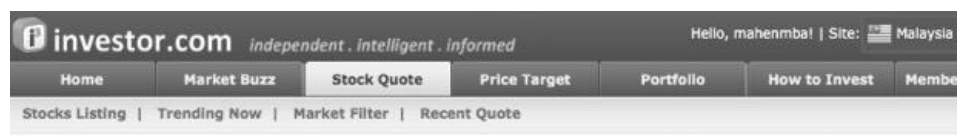
Step 4: 'STOCK ⌄' dropdown menu, select 'MAIN➤' to obtain the 13 sectors.

Figure 3.3 Stock watch on klse.i3investor.com

Step 5: Select 'SECTOR' and click on each and every 'COMPANY' listed.

Figure 3.4 Consumer Products sector on Main Market

Step 6: Next, click 'Research∀' from the dropdown menu, select 'Financials'.

Figure 3.5 AIRASIA X Stock Information

Step 7: Select 'Last 10 FY' from the horizontal bar and the results is published

Figure 3.6 AIRASIA X Financials

Figure 3.7 Financial Results for Last 10 FY of AIRASIA X

Last 10 FY Result									
	AQR	T4Q	31/12/18	31/12/17	31/12/16	31/12/15	31/12/14	31/12/13	31/12/12	CAGR
Revenue	4,262,624	4,345,043	4,544,450	4,562,005	3,900,782	3,062,554	2,936,727	2,307,490	1,967,427	14.97%
PBT	-489,218	-351,052	-241,421	186,804	82,293	-434,194	-605,361	-212,977	38,005	-
Tax	-35,678	-141,890	-71,278	-87,918	-37,456	73,961	85,918	125,981	-4,155	60.56%
NP	-524,897	-492,942	-312,699	98,886	44,837	-360,233	-519,443	-86,996	33,850	-
NP to SH	-524,897	-492,942	-312,699	98,886	44,837	-360,233	-519,443	-86,996	33,850	-
Tax Rate	- %	- %	- %	47.06 %	45.52 %	- %	- %	- %	10.93 %	-
Total Cost	4,787,521	4,837,985	4,857,149	4,463,119	3,855,945	3,422,787	3,456,170	2,394,486	1,933,577	16.58%
Net Worth	207,407	207,407	580,740	954,074	995,555	511,111	711,432	685,423	581,047	-0.01%
Dividend									
	AQR	T4Q	31/12/18	31/12/17	31/12/16	31/12/15	31/12/14	31/12/13	31/12/12	CAGR
Div	-	0	-	-	-	-	-	-	-	-
Div Payout %	- %	- %	- %	- %	- %	- %	- %	- %	- %	-
Equity									
	AQR	T4Q	31/12/18	31/12/17	31/12/16	31/12/15	31/12/14	31/12/13	31/12/12	CAGR
Net Worth	207,407	207,407	580,740	954,074	995,555	511,111	711,432	685,423	581,047	-0.01%
NOSH	4,148,148	4,148,148	4,148,148	4,148,148	4,148,148	3,407,407	2,371,442	1,318,121	266,535	57.98%
Ratio Analysis									
	AQR	T4Q	31/12/18	31/12/17	31/12/16	31/12/15	31/12/14	31/12/13	31/12/12	CAGR
NP Margin	-12.31 %	-11.34 %	-6.88 %	2.17 %	1.15 %	-11.76 %	-17.69 %	-3.77 %	1.72 %	-
ROE	-253.08 %	-237.67 %	-53.84 %	10.36 %	4.50 %	-70.48 %	-73.01 %	-12.69 %	5.83 %	-
Per Share									
	AQR	T4Q	31/12/18	31/12/17	31/12/16	31/12/15	31/12/14	31/12/13	31/12/12	CAGR
RPS	102.76	104.75	109.55	109.98	94.04	89.88	123.84	175.06	738.15	-27.23%
EPS	-12.67	-11.88	-7.50	2.40	1.10	-10.60	-21.90	-6.60	12.70	-
DPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
NAPS	0.0500	0.0500	0.1400	0.2300	0.2400	0.1500	0.3000	0.5200	2.1800	-36.71%
Adjusted Per Share Value based on latest NOSH - 4,148,148									
	AQR	T4Q	31/12/18	31/12/17	31/12/16	31/12/15	31/12/14	31/12/13	31/12/12	CAGR
RPS	102.76	104.75	109.55	109.98	94.04	73.83	70.80	55.63	47.43	14.96%
EPS	-12.67	-11.88	-7.50	2.38	1.08	-8.68	-12.52	-2.10	0.82	-
DPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
NAPS	0.0500	0.0500	0.1400	0.2300	0.2400	0.1232	0.1715	0.1652	0.1401	-0.01%

The above data is copied into MS Excel for each and every of 765 companies analyzed.

Further, the same is transposed in excel to change the information direction. This

29

process continues until data from companies of the same sectors are collated. Task continues with balance of 11 sectors until completion. All of the data collected are tabulated in MS Excel.

3.4.5. Data Tabulation

Data gathered will be tabulated in matrix of panel data and cross sectional data for each firm and the corresponding financial year. The excel table is set forth below into Part A, B, C and D. These parts are made of the same row for ease of reference and formula calculation in MS Excel.

a)   Table 3.3 and 3.4 covers the Public Listed counter information such as sector and name of company. FY of Financial year refers to the year annual report (AR) is submitted and the date of submission

Table 3.3 Stock General Information

Counter		FY	
Sector	Name	Year	Annual Report
UT	YTLPOWR	2010	30 / 06 / 10
UT	YTLPOWR	2011	30 / 06 / 11
UT	YTLPOWR	2012	30 / 06 / 12
UT	YTLPOWR	2014	30 / 06 / 14
UT	YTLPOWR	2015	30 / 06 / 15
UT	YTLPOWR	2016	30 / 06 / 16
UT	YTLPOWR	2017	30 / 06 / 17
UT	YTLPOWR	2018	30 / 06 / 18
UT	YTLPOWR	2019	30 / 06 / 19

Source; extracted from www.klse.i3investor.com

Table 3.4 Code name for each Sector on Bursa Malaysia

No	Sector	Code
1	Construction	CO
2	Consumer	CP
3	Energy	EN
4	Financial	FI
5	Healthcare	HE
6	Industrial Products	IP
7	Plantation	PL
8	Property	PR
9	Technology	TE
10	Transportation & Logistics	TL
11	Telecommunications & Media	TM
12	Utilities	UT

b)   Table 3.5 covers the Financial results extracted from secondary data from
      website of company annual report figures such as Revenue (Total Sales),
      Profit Before Tax (PBT), Taxation (Tax paid), Net Profit (Profit After Tax),
      Net Profit attributable to Shareholders (NP to SH), Tax Rate calculation,
      Total Cost (Operating Expenditure) and Net Worth (Total Assets − Total
      Liabilities)

Table 3.5 Financial Results tabulated into two tables below

Financial Result 1/2				
Year	Revenue	PBT	Tax	NP
2010	13,442,917	1,717,212	-476,203	1,241,009
2011	14,662,559	1,556,906	-309,444	1,247,462
2012	15,870,343	1,391,476	-234,515	1,156,961
2014	14,436,606	1,126,594	82,153	1,208,747
2015	11,858,093	1,247,192	-326,794	920,398
2016	10,245,174	1,314,140	-135,684	1,178,456
2017	9,778,239	867,617	-112,957	754,660
2018	10,589,669	943,244	-226,364	716,880
2019	11,677,077	733,691	-145,881	587,810

Financial Result 2/2

Year	NP to SH	Tax Rate	Total Cost	Net Worth
2010	1,241,135	-27.73%	12,201,908	6,560,778
2011	1,364,168	-19.88%	13,415,097	8,504,223
2012	1,232,211	-16.85%	14,713,382	9,210,001
2014	1,202,414	7.29%	13,227,859	10,117,484
2015	918,812	-26.20%	10,937,695	11,273,111
2016	1,061,850	-10.32%	9,066,718	12,236,833
2017	673,407	-13.02%	9,023,579	13,251,162
2018	620,658	-24.00%	9,872,789	13,144,950
2019	459,479	-19.88%	11,089,267	12,664,248

Source; extracted from www.klse.i3investor.com

c)   Table 3.6 includes the key component of this research is Dividend as the
      Dependent Variable. This would include the actual dividend paid as per the
      financial year, in addition is cap the Dividend paid up to fiscal year Net
      profit attributable to Shareholders. The Dividend Payout (%) is based
      Actual Dividend divide by Net Profit to attributable to Shareholders.

31

Table 3.6 Dividend Payout and Equity Information

	Dividend			Equity	
Actual Div.	Div. NP to SH	Div. Payout		Net Worth	NOSH
852,901	852,901	68.72%		6,560,778	6,495,819
676,013	676,013	49.55%		8,504,223	7,206,969
340,117	340,117	27.60%		9,210,001	7,251,969
656,979	656,979	54.64%		10,117,484	6,569,795
695,871	695,871	75.74%		11,273,111	6,958,710
755,360	755,360	71.14%		12,236,833	7,553,600
387,460	387,460	57.54%		13,251,162	7,749,217
395,932	395,932	63.79%		13,144,950	7,918,645
383,765	383,765	83.52%		12,664,248	7,675,302

Equity figures, which are Total Assets minus Total Liabilities, would provide the Net Worth of company for fiscal year. NOSH represents No. of Shares Outstanding represents the shares floating in the market minus any shares held by company in their treasury.

d) Table 3.7 provides the calculated values for 7 independent variables, which are NPM (Net Profit Margin), ROE (Return on Equity), RPS (Revenue per Share), OEPS (Operating Expenditure per Share), TPS (Tax per Share), EPS (Earnings per Share) and NAPS (Net Assets per Share). Finally the Dependent variable, Dividend per Share (DPS) based on a maximum dividend payout is capped to Net Profit attributable to Shareholders (NP to SH). This DPS would then reflect the true dividend paid from fiscal year profit.

Table 3.7 Derived value for independent variables and dependent variable

Ratio		Per Share					
NPM	ROE	RPS	OEPS	TPS	EPS	NAPS	DPS
0.09	0.19	206.95	187.84	7.33	19.11	1.01	13.13
0.09	0.16	203.45	186.14	4.29	18.93	1.18	9.38
0.07	0.13	218.84	202.89	3.23	16.99	1.27	4.69
0.08	0.12	219.74	201.34	-1.25	18.30	1.54	10.00
0.08	0.08	170.41	157.18	4.70	13.20	1.62	10.00
0.12	0.09	135.63	120.03	1.80	14.06	1.62	10.00
0.08	0.05	126.18	116.45	1.46	8.69	1.71	5.00
0.07	0.05	133.73	124.68	2.86	7.84	1.66	5.00
0.05	0.04	152.14	144.48	1.90	5.99	1.65	5.00

3.4.6. Administration of data

A process to validate financial data copied from secondary source is conducted on a random basis. Data that are found to be too small or too large are cross verified with figures from annual report. If the figure is not same, this data is ignored. However, due to the time constraint with large number of companies and 10 years analysis, this process of data validation is reduced unless data found to be an outlier. Importantly the process of data collection will be conducted in an ethical manner and later reconciled to reflect any accounting policy changes.

3.5. Measurement

The multiple regression analysis is used to test the Hypotheses and predict the value of Dividend per Share (DPS) based on the correlation coefficient of the independent variables (Net Profit Margin, Return on Equity, Revenue per Share, Operating Expense per Share, Tax per Share, Earnings per Share and Net Assets per Share)

Therefore, the Regression analysis will further find trending of each independent variable to the dependent variable and later measure the correlation of significance (magnitude and direction) of each variable to the dependent variable. Subsequently, relationship among several independent variables with dependent variable for each year of analysis is tabulated for comparison with other years between years 2010 to 2018. Finally, a long-term (2010 – 2018) regression analysis model to predict the value of DPS

Figure 3.8 Significance of relationships between NPM (independent variable) with dependent variable (DPS)

Each Independent variable significance to Dependable Variable

Net Profit Margin
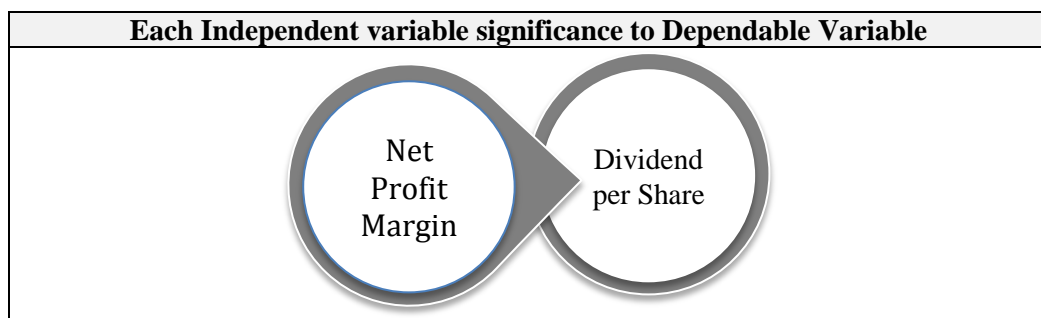
Dividend per Share

Figure 3.9 Relationship between all seven (7) independent variables with dependent variable, DPS

Seven (7) Independent variable significance to One (1) Dependent Variable

NPM

NAPS

ROE

EPS

DPS

RPS

TPS

OEPS
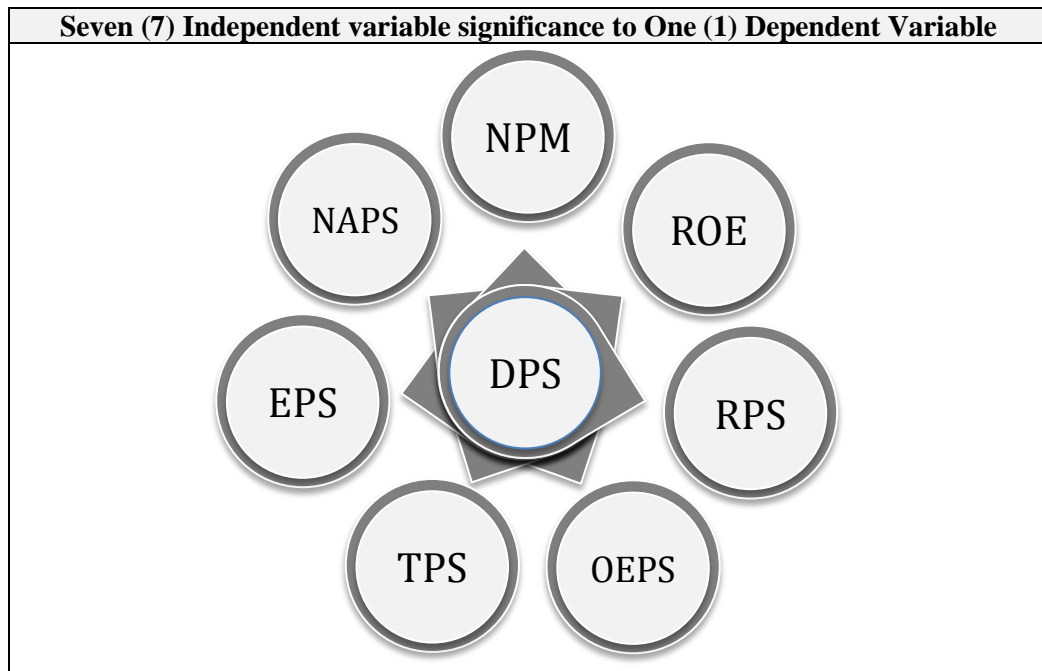
A.   Independent Variables

Independent variables were selected from empirical research with significant correlation to dividend per share (DPS). Here are the justifications and assumptions for selecting the independent variables and the set of data management criteria.

1.   Net Profit Margin (NPM)

2.   Return on Equity (ROE)

3.   Revenue per Share (RPS)

4.   Operating Expenses per Share (OEPS)

5.   Tax per Share (TPS)

6.   Earnings per Share (EPS)

7.   Net Assets per Share (NAPS)

1. Net Profit Margin (NPM)

NPM is measurement of the total Net Profit contributed from its corresponding Revenue generated. NPM is measured in %. The higher the net profit margin (%) would mean the profit contribution for the same amount of Revenue has increased. In simple terms, the operating expenses is being managed more effective and efficiently, resulting in higher profit contribution. As a result, the dividend payout should be higher given that all other assumptions remain the same.

For the purpose of this research, the calculation for NPM is Net Profit (RM) divide by Revenue (RM). The results will always be < 1, because Revenue – Costs = Profit. The final number for analysis is two decimal points between 0.00 to 0.99.

The following raw data is excluded from analysis;

a)   Negative value for NPM as a result of financial loss (Negative profit) and sometimes it's a result of high taxation impacting profitability.

b)   NPM value can't be calculated because Revenue is not provided or error

c)   NPM > 1 due to Taxation reversed to increase Net Profit > Revenue.

d)   No dividend is paid for the fiscal year

2. Return on Equity (ROE)

ROE is measurement of Net Profit (NP attributable to Shareholders) generated for every unit (RM) of Equity, or a calculation of utilization of Net Assets to generate Profits. ROE is measured in %. The higher the ROE (%) would mean the profit generated for each unit of Equity (Net Assets) has increased. In simple terms, the utilization of net assets has been optimized, resulting in higher profit contribution. As a result of higher ROE, the net profit attributable shareholders will also increase. Thus it will be paid out as Dividends given that all other assumptions remain the same.

For the purpose of this research, the calculation for ROE is Net Profit attributable to Shareholders (NP to SH) divide by Net Worth (RM). Net Worth or Net Assets is calculated by deducting Total Liabilities from Total Assets. The results of ROE ≥ 0 on a two decimal point, varies from 0.00 to 7.42

The following raw data is excluded from analysis;

a) Negative value for ROE as a results of Financial loss (Negative profit) and / or Net Assets can be negative due to Total Liabilities > Total Assets.

b) ROE value can't be ascertain because Net worth is not provided or Revenue remain at zero

c) No dividend is paid for the fiscal year

3.   Revenue per Share (RPS)

RPS is ratio measurement of total Revenue generated for every unit (no. of shares) of Shares outstanding (shares repurchased not included). This means shares RPS is often used, as a measurement to compare between two firms given the higher performance will result in higher RPS. RPS is measured in cents per share. The higher the RPS would mean the company is able to generate higher revenue for each unit of Shares outstanding. In simple terms, for every unit of shares held will be represented by higher revenue generated for that given share in a specific period (annual). As a result of higher RPS, the company is able to generate higher revenue, which means there exist business opportunity. Thus dividend payout will be lower because the company has means to other opportunities given that all other assumptions remain the same.

For the purpose of this research, the calculation for RPS is Total Revenue divided by No. of Shares Outstanding (NOSH). The results of RPS ≥ 0 on a two decimal point, $2.74 < X < 5,332.40$

The following raw data is excluded from analysis;

a)   RPS value can't be ascertain because Revenue is not provided or remain at zero

b)   RPS > Six thousand Ringgit (RM6,000) per Share because this is an outlier could be due to negative profit before tax and tax adjustments made.

c)   No dividend is paid for the fiscal year

4. Operating Expenses per Share (OEPS)

OEPS is a measurement of total Costs for every unit of Shares (NOSH). OEPS is a ratio measurement in cents per share. The higher the operating expenses per share (cents/share) would mean the total costs for the same unit of share has increased. In simple terms, the operating expenses are not managed well, resulting in higher costs. As a result, the dividend payout should be lower given that all other assumptions remain the same.

For the purpose of this research, the calculation for OPES is Total Costs (RM) divide by No. of Shares Outstanding (units). The results will always be > 0, because expenses is always > 0 and shares is a positive integer. The final number for analysis is two decimal points $0.14 < X < 5,035.76$

The following raw data is excluded from analysis;

a)   OEPS value can't be calculated because Total Costs is not provided

b)   OEPS < 0 due to Total Costs with a negative value

c)   No dividend is paid for the fiscal year

5. Tax per Share (TPS)

TPS is measurement of the Tax paid (RM) for every unit of Share (NOSH). TPS is measured in cents / share. The higher Tax per Share (TPS) would mean the tax planning is not effective, resulting in lower profit after tax. TPS can be compared with companies in the same sector to understand tax-planning effectiveness. In simple terms, the ineffective management of tax will result in lower profitability. As a result, the dividend payout should be lower given that all other assumptions remain the same.

For the purpose of this research, the calculation for TPS is Total Tax Declared (RM) divide by No of Shares (NOSH). The results can go either way positive (+) or negative (-), because Tax declared has bearing on past year taxation, which may impact Tax value. However on the financial standpoint, tax is an operational expense from fiscal year profit. The final number for analysis is two decimal points $-85.60 < X < 112.40$

The following raw data is excluded from analysis;

a)   No of Shares (NOSH) is an outlier with very low no of shares

b)   TPS value can't be determined because tax payment is not provided

c)   No dividend is paid for the fiscal year

6. Earnings per Share (EPS)

EPS is measurement of total Net Profit (NP) contributed for every unit of Shares. EPS is measured in cents / share. The higher the NP would mean the profit contribution for the same no of shares has increased. In simple terms, the company is operating in an effective and efficient way, resulting in higher profit contribution. As a result, the dividend payout should be higher given that all other assumptions remain the same.

For the purpose of this research, the calculation for EPS is Net Profit attributable to Shareholders (NP to SH) divide by No. of Shares (NOSH). The results should always a positive integer, only if Profit is generated in business to consider for dividend payment The final number for analysis is two decimal points $1.01 < X < 319.86$

The following raw data is excluded from analysis;

a) Negative value for EPS as a result of financial loss (Negative profit)

b) No dividend is paid for the fiscal year

7. Net Asset per Share (NAPS)

NAPS is a measurement of the Net Worth of company for every unit of Share. Net Worth is defined as Net Assets, ie Total Assets minus Total Liabilities. NAPS measured in terms of RM per share. The higher the NAPS would mean the company is investing in more assets, resulting in higher Total Assets minus Total Liabilities. In simple terms, more assets are deployed to manage the business, resulting in higher revenue expected. As a result, the dividend payout should be higher given that all other assumptions remain the same.

For the purpose of this research, the calculation for NAPS is Net Worth (RM) divide by No. of Shares (NOSH). The results can be either negative (-) or positive (+) because Net worth is the difference between Total Assets minus Total Liabilities. The final number for analysis is two decimal points $0.03 < X < 482$

The following raw data is excluded from analysis;

a) Negative value for NAPS as a result of negative financial position of the company (Total Assets minus Total Liabilities)

b) NAPS value can't be calculated because Net Worth is not provided

c) No dividend is paid for the fiscal year

B. Mediating Variable

No mediating variable is required because the purpose is to test the hypotheses and develop a Dividend Distribution Model (DDM) to forecast the dividend payout. Furthermore, these variables are chosen from empirical study with significant relationship with dividend payout.

C. Dependent Variable

Dividend per Share (DPS) is measurement of the total Dividend paid for every unit of shares (shares). DPS is measured in terms of cents per share. The higher DPS value (cents) would mean the company paid higher dividend for every share. In simple terms, the higher dividend payout resembles maximize shareholders value. It would also indicate the Top Leadership is making informed decision on better dividend payout. This decision is relating to study on social science in relation to behavioral and attitude. This study will test the hypotheses for all seven (7) independent variables and its relationship dividend decision.

For the purpose of this research, the calculation for DPS is Total Dividend paid (RM) divided by No. of Shares (NOSH). The results are either a positive number or zero (no dividend paid). The final number for analysis is two decimal points $1.00 < X < 312$

The following raw data is excluded from analysis;

a) $0.00 < DPS < 1.00$ cents because the value is considered insignificant

b)   DPS value can't be calculated because Dividend payment is inaccurate or error

c)   No dividend is paid for the fiscal year

3.5. Data Processing

The data gathered will have to ensure the entire population is covered, in order to test the hypotheses and develop a dividend distribution model, which then represents the entire population of Main Market on Bursa Malaysia. It will allow data collected to be presented in a more meaningful way and improve the intepretation of data. This would include a properly described data in the form of graphs, charts and cross sectional tables. Ultimately, the data will be used to explain dividend spread including range, standard deviation and variance.

3.6. Statistical Techniques

Statistical & Qualitative data analysis software such as IBM SPSS AMOS and Mircosoft EXCEL will be both utilized to develope the regression analysis. SPSS AMOS will provide a pictorial analysis while Excel will cross verify the regression analysis.

Summary

Chapter 3 consists on design of the research, period of testing and its corresponding purposive sampling technique. It further looks into the purpose of each data, its collection method that must reliable and serves the purpose of this research. This data will have to meet the minimum criteria to qualify for regression analysis. Thereafter, the raw data will undergo an operational calculation to measure the value of the seven (7) individual variables and the dependent variable. Chapter 4 will display the regression analysis results and summarize the discussion

CHAPTER 4
RESULTS AND DISCUSSION

4.1   Introduction

Chapter 4 will provide summary of the research data, its analysis, corresponding results and relevant discussions to support the findings. The first section of sample characteristics will draw upon the sampling technique relied on for representing the population of data. The second part will describe the hypotheses testing using the sampling data to verify the hypotheses drawn up are accepted or rejected. Finally, a discussion area to relate the findings with past literature reviews, in order to gain a better understanding of the outcome.

4.2   Sample characteristics

It is important to capture a large sample size, in consideration of obtaining a higher confidence level or improved probability. Therefore, we look at the entire population for more accurate results or the sample size to represent a segment of the entire target population. However, either way, the rule to select the sample size depends heavily on the limited time available and the degree of accuracy of data. This would mean, the sample size must truly represent the entire population with a high confidence level >99%.

Sampling technique most appropriate in this research is stratified purposive sampling, or in other words the purpose of the research is related to Dividend per share (DPS) and the dependent variable. Therefore, the research is confined to public listed companies on Main market of Bursa Malaysia, which have declared dividends during the financial years 2010 – 2018. Consequently, due to the unavailability of a general listing with companies paying dividend over the last 9 years, thus a raw secondary data has been collected to identify the companies. In addition, there are subsequent sampling characteristics implemented to the overall data collected, in order to minimize the

sampling errors and improve the robustness of the data. Hence, here are the steps taken to minimize the errors;

Step 1:

If dividend were not paid for a particular year during the sample period of years 2010 to 2018, the firm data for that particular year will be removed from analysis. Example, if dividend were not declared for 3 years, then these 3 years will be excluded from the sample data. However, the remaining years with dividend payment will remain for analysis.

Step 2:

Dividend paid per share must exceed RM0.01 in value; this would mean the anomalies from the data would be removed. This is significant because given that 297 out of 7304 annual reports have declared dividend below 1cent. Furthermore, the consideration to drop also involves the net value of DPS (Dividend per share) is of no significance because < RM0.01cent

Step 3:

Dividend payout must be generated from current year net profits attributable to shareholders (NP to SH). As a result, Only companies with profits generated for a particular financial year will qualify as the sample data. Dividend could be paid from reserves, as spelt out under Malaysian Companies Act 2016. Notwithstanding, this dividend will distort the overall performance of companies under the present year economic condition. On that ground, the dividend paid is capped at maximum value equal to Net Profit attributable to Shareholders (NP to SH). Which means, Dividend payout will be adjusted to reflect current year profit generated.

Step 4:

The total dividend payout must not exceed the particular year's profits, specifically the net profits attributable to shareholders. This will ensure the amount of dividend paid from reserve account will be removed. Example, Maxis have paid dividend over RM 3 billion for both years of 2013 and 2014. Notwithstanding, the net profit attributable to shareholders (NP to SH) was slightly more than RM 1.7 billion, MAXIS paid from reserve account. For the purpose of analysis, the dividend paid more than NP to SH, will be deleted and therefore the full amount of NP to SH will be considered for analysis

Step 5:

Remove any data that may not be related, inaccurate or insignificant due to the source being from secondary data. These data is extracted from a renowned financial services web-portal, http://klse.i3investor.com. Here are sample data to be inaccurate, ie firm name, Marine and General Berhad from Transportation and Logistics Sector declared dividend in year 2017 for the amount of RM 709,980,523,000. This data is nonsensical to be included in the data analysis. Thus, any ratio calculated provides a big value will be further analyzed to understand and later decide if data can be ignores.

4.3   Hypotheses Testing

Regression analysis was conducted on the secondary data collected from www.klse.i3investor.com. The main purpose of regression was for hypotheses testing and not for forecasting dividend, even though an attempt to develop a Dividend Distribution Model (DDM) to describe the relationship among the variable in an equation may also be necessary. DDM forecasting can't precisely predict Dividend payout because distribution of dividend (if any) is at the discretion of Leadership of company. Under the context of retaining company control, Top leadership will opt to retain the profits generated as opposed to making dividend payments.

Top Leadership, especially Board of Directors of listed companies has executive powers to make the crucial decision on dividend payout. Nevertheless, regression analysis will be utilized to explain the relationship between seven (7) independent variables with dependent variable. Hypotheses testing related to this research consists of three major elements;

i.   Significance Test, P-value for relationship / correlation between independent and dependent variables

ii.   Regression coefficient, a measure of magnitude and direction of relationship between independent variables with dependent variable

iii. Squared multiple correlation (R^2) or Coefficient of determination explaining the % of dependent variable explained by the model

Short-Term (year on year) Regression analysis for years 2010 to 2018

1.   Year 2010 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis is conducted on 2010 data to verify the hypotheses test. The 2010 Financial data for the below firms have been selected for the regression analysis.

Table 4.1 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	17
2	Consumer	CP	75
3	Energy	EN	7
4	Financial	FI	16
5	Healthcare	HE	6
6	Industrial Products	IP	94
7	Plantation	PL	20
8	Property	PR	25
9	Technology	TE	14
10	Transportation & Logistics	TL	17
11	Telecommunication & Media	TM	8
12	Utilities	UT	7
		TOTAL	306 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

Figure 4.1 AMOSS Pictorial Regression Analysis for year 2010

48
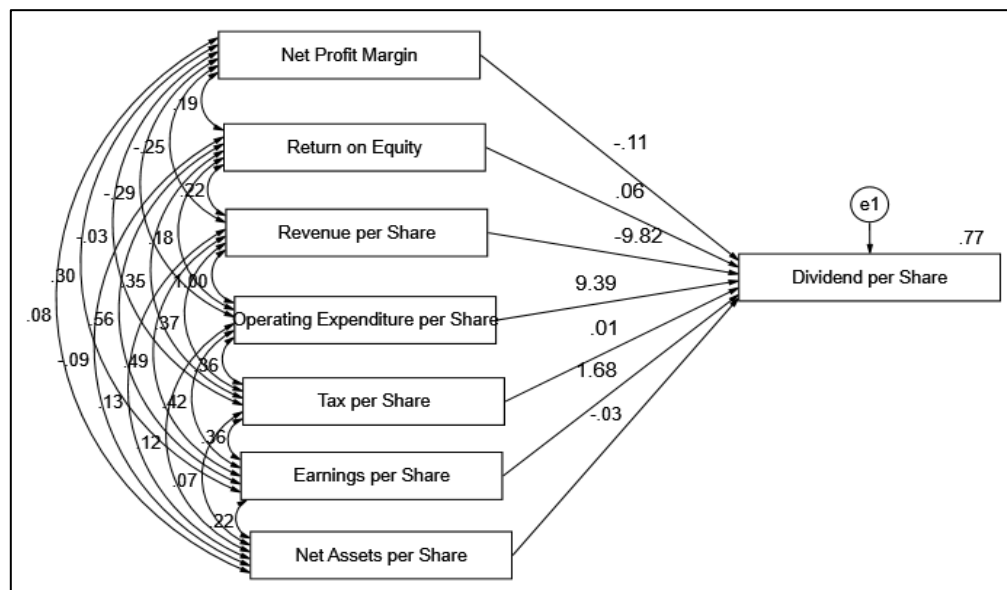
Table 4.2 Regression Weights (Data 2010)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-21.107	6.430	-3.282	.001	-.108
DPS	<---	ROE	9.785	6.136	1.595	.111	.057
DPS	<---	RPS	-.618	.141	-4.392	***	-9.819
DPS	<---	OEPS	.614	.141	4.363	***	9.392
DPS	<---	TPS	.024	.067	.363	.716	.011
DPS	<---	EPS	1.338	.149	8.955	***	1.683
DPS	<---	NAPS	-.181	.165	-1.095	.273	-.032

The Coefficient of Determination, R^2 for the model is 0.77 or only 77% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 23% of the DPS.

Table 4.3 Analysis of Independent Variable (IV) influence on Dependent Variable (DV)

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has a significant influence on prediction of DPS, with $P < 0.05$	When NPM goes up by 1, DPS goes down by 21.107
ROE	ROE has no significant influence on prediction of DPS, with $P > 0.05$	When ROE goes up by 1, DPS goes up by 9.785
RPS	RPS has a significant influence on prediction of DPS, with $P < 0.05$	When RPS goes up by 1, DPS goes down by 0.618
OEPS	OEPS has a significant influence on prediction of DPS, with $P < 0.05$	When OEPS goes up by 1, DPS goes up by 0.614
TPS	TPS has no significant influence on prediction of DPS, with $P > 0.05$	When TPS goes up by 1, DPS goes up by 0.024
EPS	EPS has a significant influence on prediction of DPS, with $P < 0.05$	When EPS goes up by 1, DPS goes up by 1.338
NAPS	NAPS has no significant influence on prediction of DPS, with $P > 0.05$	When NAPS goes up by 1, DPS goes down by 0.181

Independent Variable such as ROE, TPS and NAPS has no significant influence on Dependent variable, DPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows; ROE, EPS, OEPS, TPS, NAPS and NPM.

Table 4.4 Ranking of IV based on relationship with DV

IV →	ROE	EPS	OEPS	TPS	NAPS	RPS	NPM
Ranking	1	2	3	4	5	6	7
DV (DPS)	+9.79	+ 1.34	+ 0.61	+ 0.02	-0.18	-0.62	-21.11

2.   Year 2011 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis is conducted on 2011 data to verify the hypotheses test. The 2011 Financial data for the below firms have been selected for the regression analysis.

Table 4.5 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	19
2	Consumer	CP	75
3	Energy	EN	8
4	Financial	FI	20
5	Healthcare	HE	8
6	Industrial Products	IP	106
7	Plantation	PL	22
8	Property	PR	26
9	Technology	TE	13
10	Transportation & Logistics	TL	16
11	Telecommunication & Media	TM	9
12	Utilities	UT	7
	TOTAL		329 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

Figure 4.2 AMOSS Pictorial Regression Analysis for year 2011
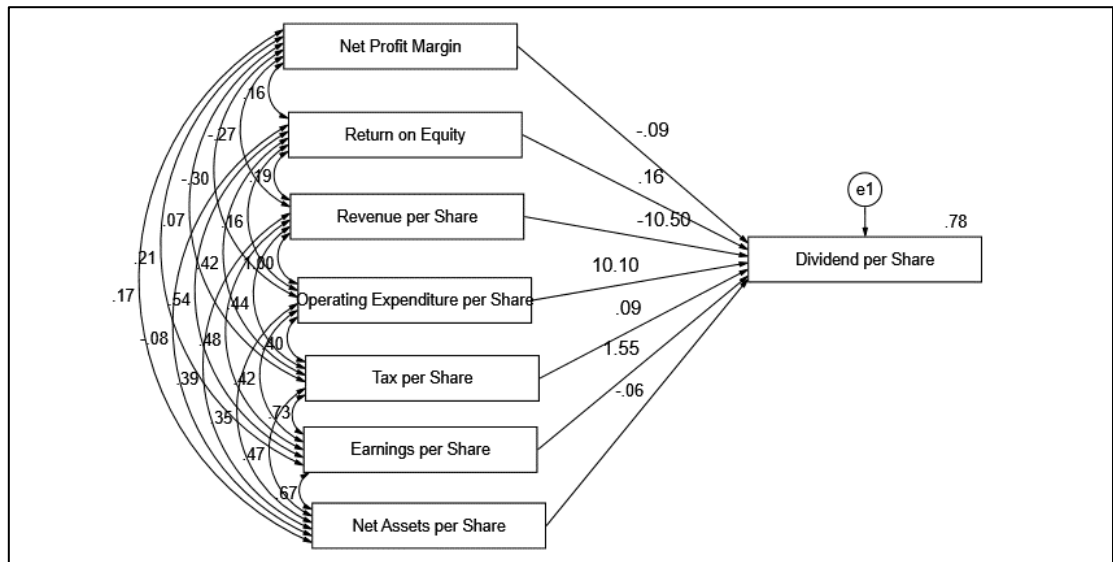
Table 4.6 Regression Weights (Data 2011)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-15.477	5.372	-2.881	.004	-.087
DPS	<---	ROE	27.709	7.887	3.513	***	.156
DPS	<---	RPS	-.573	.111	-5.177	***	-10.499
DPS	<---	OEPS	.570	.111	5.153	***	10.103
DPS	<---	TPS	.194	.081	2.377	.017	.094
DPS	<---	EPS	1.186	.123	9.618	***	1.546
DPS	<---	NAPS	-.782	.691	-1.131	.258	-.057

The Coefficient of Determination, R^2 for the model is 0.777 or only 77.7% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 22.3% of the DPS.

Table 4.7 Analysis of Independent Variable (IV) influence on Dependent Variable (DV)

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has significant influence on prediction of DPS, with $P < 0.05$	When NPM goes up by 1, DPS goes down by 15.477
ROE	ROE has significant influence on prediction of DPS, with $P < 0.05$	When ROE goes up by 1, DPS goes up by 27.709
RPS	RPS has significant influence on prediction of DPS, with $P < 0.05$	When RPS goes up by 1, DPS goes down by 0.573
OEPS	OEPS has significant influence on prediction of DPS, with $P < 0.05$	When OEPS goes up by 1, DPS goes up by 0.570
TPS	TPS has significant influence on prediction of DPS, with $P < 0.05$	When TPS goes up by 1, DPS goes up by 0.194
EPS	EPS has significant influence on prediction of DPS, with $P < 0.05$	When EPS goes up by 1, DPS goes up by 1.186
NAPS	NAPS has no significant influence on prediction of DPS, with $P > 0.05$	When NAPS goes up by 1, DPS goes down by 0.782

Independent Variable such NAPS has no significant influence on Dependent variable, DPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows;

Table 4.8 Ranking of IV based on relationship with DV

IV →	ROE	EPS	OEPS	TPS	RPS	NAPS	NPM
Ranking	1	2	3	4	5	6	7
DV (DPS)	+ 27.71	+ 1.19	+ 0.57	+ 0.19	-0.57	-0.78	-15.48

3.   Year 2012 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis is conducted on 2012 data to verify the hypotheses test. The 2012 Financial data for the below firms have been selected for the regression analysis.

Table 4.9 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	20
2	Consumer	CP	74
3	Energy	EN	9
4	Financial	FI	19
5	Healthcare	HE	8
6	Industrial Products	IP	88
7	Plantation	PL	23
8	Property	PR	31
9	Technology	TE	16
10	Transportation & Logistics	TL	14
11	Telecommunication & Media	TM	10
12	Utilities	UT	9
		TOTAL	321 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

Figure 4.3 AMOSS Pictorial Regression Analysis for year 2012
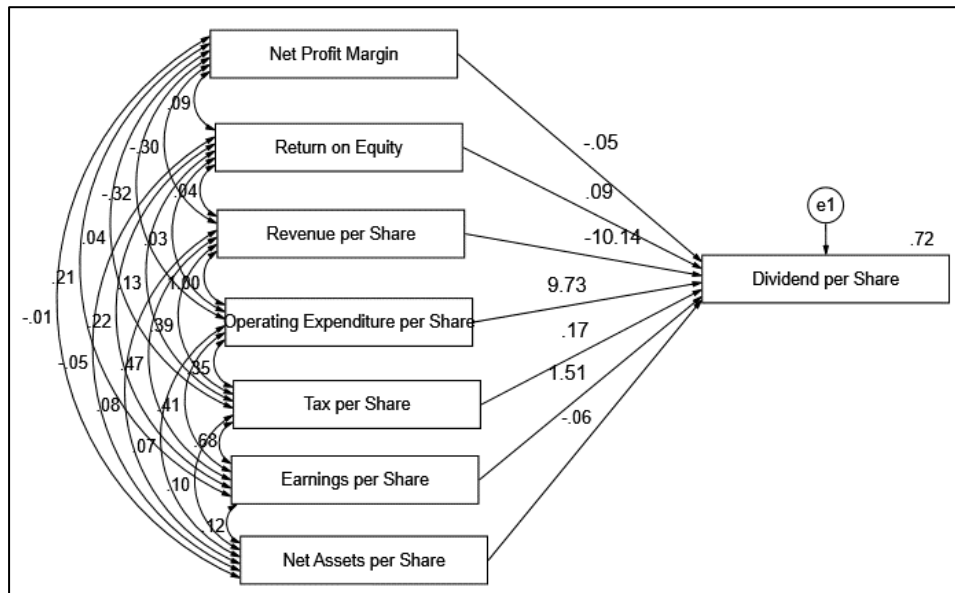
Table 4.10 Regression Weights (Data 2012)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-10.073	6.784	-1.485	.138	-.051
DPS	<---	ROE	6.528	2.253	2.898	.004	.088
DPS	<---	RPS	-.564	.112	-5.015	***	-10.141
DPS	<---	OEPS	.560	.113	4.979	***	9.732
DPS	<---	TPS	.324	.079	4.109	***	.166
DPS	<---	EPS	1.152	.123	9.384	***	1.508
DPS	<---	NAPS	-.120	.065	-1.859	.063	-.055

The Coefficient of Determination, R^2 for the model is 0.724 or only 72.4% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 27.6% of the DPS.

Table 4.11 Analysis of Independent Variable influence on Dependent Variable

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has no significant influence on prediction of DPS, with $P > 0.05$	When NPM goes up by 1, DPS goes down by 10.073
ROE	ROE has significant influence on prediction of DPS, with $P < 0.05$	When ROE goes up by 1, DPS goes up by 6.528
RPS	RPS has significant influence on prediction of DPS, with $P < 0.05$	When RPS goes up by 1, DPS goes down by 0.564
OEPS	OEPS has significant influence on prediction of DPS, with $P < 0.05$	When OEPS goes up by 1, DPS goes up by 0.560
TPS	TPS has significant influence on prediction of DPS, with $P < 0.05$	When TPS goes up by 1, DPS goes up by 0.324
EPS	EPS has significant influence on prediction of DPS, with $P < 0.05$	When EPS goes up by 1, DPS goes up by 1.152
NAPS	NAPS has no significant influence on prediction of DPS, with $P > 0.05$	When NAPS goes up by 1, DPS goes down by 0.120

Independent Variable, NAPS has no significant influence on Dependent variable, DPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows;

Table 4.12 Ranking of IV based on relationship with DV

IV →	ROE	EPS	OEPS	TPS	NAPS	RPS	NPM
Ranking	1	2	3	4	5	6	7
DV (DPS)	+ 6.53	+ 1.15	+ 0.56	+ 0.32	-0.12	-0.56	-10.07

4.   Year 2013 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis is conducted on 2013 data to verify the hypotheses test. The 2013 Financial data for the below firms have been selected for the regression analysis.

Table 4.13 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	22
2	Consumer	CP	71
3	Energy	EN	9
4	Financial	FI	21
5	Healthcare	HE	8
6	Industrial Products	IP	88
7	Plantation	PL	26
8	Property	PR	31
9	Technology	TE	14
10	Transportation & Logistics	TL	13
11	Telecommunication & Media	TM	9
12	Utilities	UT	8
	TOTAL		320 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

Figure 4.4 AMOSS Pictorial Regression Analysis for year 2013
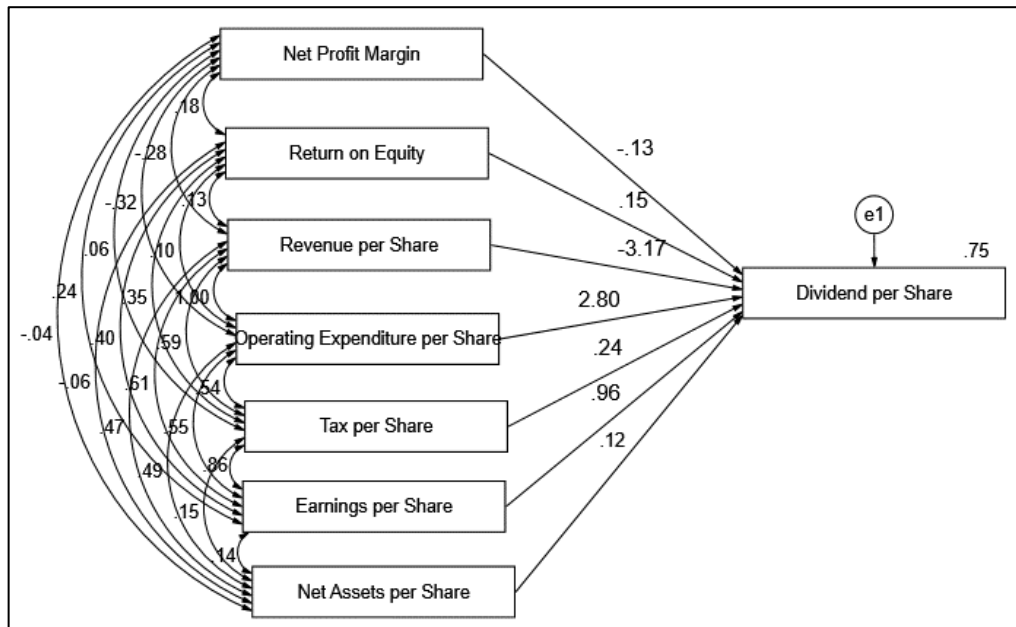
Table 4.14 Regression Weights (Data 2013)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-27.526	8.210	-3.353	***	-.128
DPS	<---	ROE	20.202	4.270	4.731	***	.149
DPS	<---	RPS	-.205	.084	-2.426	.015	-3.165
DPS	<---	OEPS	.192	.085	2.248	.025	2.803
DPS	<---	TPS	.529	.134	3.942	***	.238
DPS	<---	EPS	.751	.089	8.485	***	.965
DPS	<---	NAPS	.107	.031	3.398	***	.117

The Coefficient of Determination, R^2 for the model is 0.748 or only 74.8% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 25.2% of the DPS.

Table 4.15 Analysis of Independent Variable influence on Dependent Variable

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has significant influence on prediction of DPS, with $P < 0.05$	When NPM goes up by 1, DPS goes down by 27.526
ROE	ROE has significant influence on prediction of DPS, with $P < 0.05$	When ROE goes up by 1, DPS goes up by 20.202
RPS	RPS has significant influence on prediction of DPS, with $P < 0.05$	When RPS goes up by 1, DPS goes down by 0.205
OEPS	OEPS has significant influence on prediction of DPS, with $P < 0.05$	When OEPS goes up by 1, DPS goes up by 0.192
TPS	TPS has significant influence on prediction of DPS, with $P < 0.05$	When TPS goes up by 1, DPS goes up by 0.529
EPS	EPS has significant influence on prediction of DPS, with $P < 0.05$	When EPS goes up by 1, DPS goes up by 0.751
NAPS	NAPS has significant influence on prediction of DPS, with $P < 0.05$	When NAPS goes up by 1, DPS goes down by 0.107

All Independent Variable have significant influence on Dependent variable, DPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows;

Table 4.16 Ranking of IV based on relationship with DV

IV →	ROE	EPS	OEPS	TPS	NAPS	RPS	NPM
Ranking	1	2	3	4	5	6	7
DV (DPS)	+ 20.20	+ 0.75	+ 0.19	+ 0.53	+0.11	-0.21	-27.53

5.   Year 2014 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis is conducted on 2014 data to verify the hypotheses test. The 2014 Financial data for the below firms have been selected for the regression analysis.

Table 4.17 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	19
2	Consumer	CP	75
3	Energy	EN	8
4	Financial	FI	23
5	Healthcare	HE	8
6	Industrial Products	IP	86
7	Plantation	PL	20
8	Property	PR	34
9	Technology	TE	16
10	Transportation & Logistics	TL	13
11	Telecommunication & Media	TM	11
12	Utilities	UT	9
		TOTAL	322 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

Figure 4.5 AMOSS Pictorial Regression Analysis for year 2014
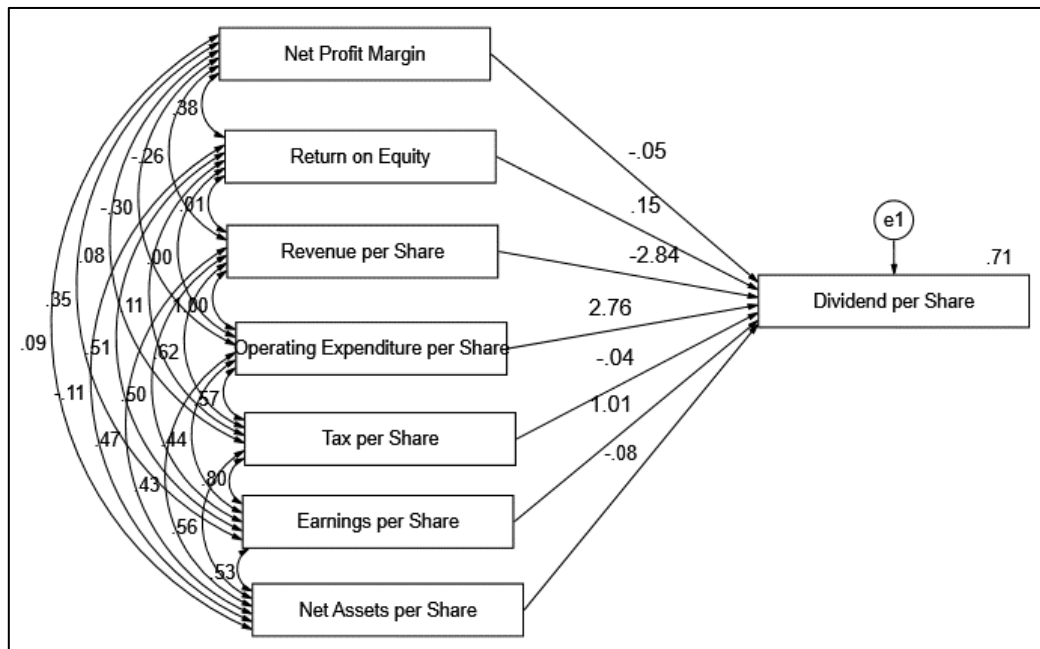
Table 4.18 Regression Weights (Data 2014)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-10.543	8.181	-1.289	.197	-.052
DPS	<---	ROE	8.544	3.442	2.482	.013	.149
DPS	<---	RPS	-.179	.080	-2.249	.024	-2.843
DPS	<---	OEPS	.183	.080	2.291	.022	2.761
DPS	<---	TPS	-.078	.162	-.480	.631	-.036
DPS	<---	EPS	.706	.082	8.584	***	1.014
DPS	<---	NAPS	-.994	.511	-1.945	.052	-.083

The Coefficient of Determination, R^2 for the model is 0.711 or only 71.1% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 28.9% of the DPS.

Table 4.19 Analysis of Independent Variable influence on Dependent Variable

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has no significant influence on prediction of DPS, with P > 0.05	When NPM goes up by 1, DPS goes down by 10.543
ROE	ROE has significant influence on prediction of DPS, with P < 0.05	When ROE goes up by 1, DPS goes up by 8.544
RPS	RPS has significant influence on prediction of DPS, with P < 0.05	When RPS goes up by 1, DPS goes down by 0.179
OEPS	OEPS has significant influence on prediction of DPS, with P < 0.05	When OEPS goes up by 1, DPS goes up by 0.183
TPS	TPS has no significant influence on prediction of DPS, with P > 0.05	When TPS goes up by 1, DPS goes down by 0.78
EPS	EPS has significant influence on prediction of DPS, with P < 0.05	When EPS goes up by 1, DPS goes up by 0.706
NAPS	NAPS has no significant influence on prediction of DPS, with P > 0.05	When NAPS goes up by 1, DPS goes down by 0.994

Independent Variable such as NPM, TPS and NAPS has no significant influence on Dependent variable, DPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows;

Table 4.20 Ranking of IV based on relationship with DV

IV →	ROE	EPS	OEPS	TPS	RPS	NAPS	NPM
Ranking	1	2	3	4	5	6	7
DV (DPS)	+ 8.54	+ 0.71	+ 0.18	- 0.08	-0.18	- 0.99	-10.54

6.   Year 2015 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis is conducted on 2015 data to verify the hypotheses test. The 2015 Financial data for the below firms have been selected for the regression analysis.

Table 4.21 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	20
2	Consumer	CP	71
3	Energy	EN	7
4	Financial	FI	25
5	Healthcare	HE	10
6	Industrial Products	IP	88
7	Plantation	PL	15
8	Property	PR	33
9	Technology	TE	15
10	Transportation & Logistics	TL	11
11	Telecommunication & Media	TM	11
12	Utilities	UT	9
		TOTAL	315 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

Figure 4.6 AMOSS Pictorial Regression Analysis for year 2015
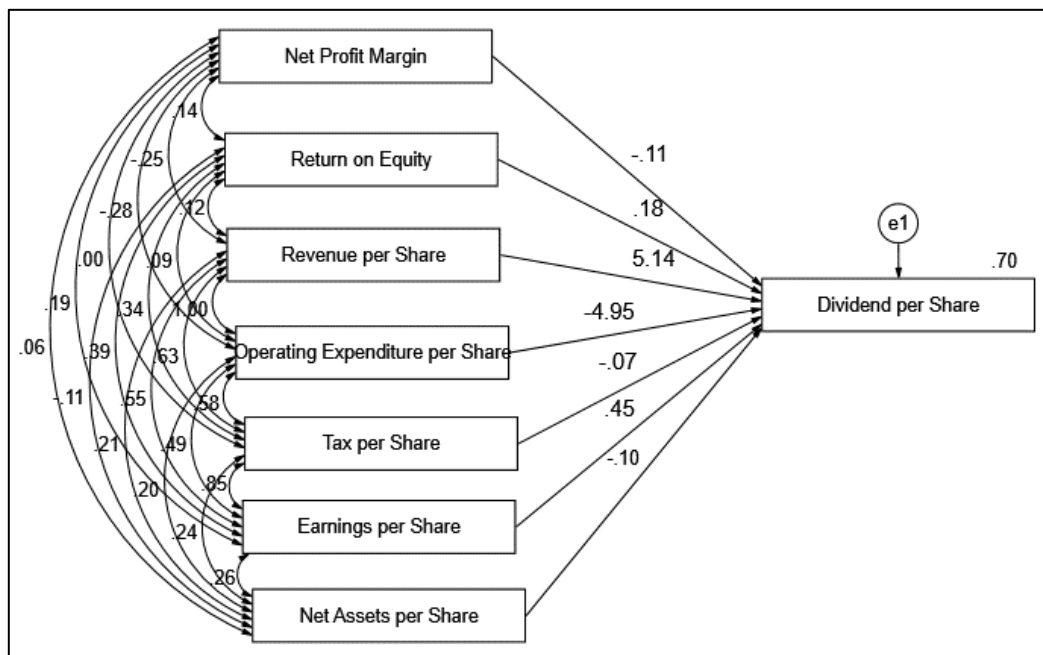
Table 4.22 Regression Weights (Data 2015)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-23.355	8.457	-2.762	.006	-.108
DPS	<---	ROE	21.365	4.266	5.008	***	.176
DPS	<---	RPS	.321	.089	3.603	***	5.135
DPS	<---	OEPS	-.326	.090	-3.631	***	-4.953
DPS	<---	TPS	-.151	.176	-.860	.390	-.068
DPS	<---	EPS	.342	.075	4.577	***	.453
DPS	<---	NAPS	-.580	.189	-3.065	.002	-.102

The Coefficient of Determination, R^2 for the model is 0.70 or only 70% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 30% of the DPS.

Table 4.23 Analysis of Independent Variable influence on Dependent Variable

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has significant influence on prediction of DPS, with $P < 0.05$	When NPM goes up by 1, DPS goes down by 23.355
ROE	ROE has significant influence on prediction of DPS, with $P < 0.05$	When ROE goes up by 1, DPS goes up by 21.365
RPS	RPS has significant influence on prediction of DPS, with $P < 0.05$	When RPS goes up by 1, DPS goes down by 0.321
OEPS	OEPS has significant influence on prediction of DPS, with $P < 0.05$	When OEPS goes up by 1, DPS goes down by 0.326
TPS	TPS has no significant influence on prediction of DPS, with $P > 0.05$	When TPS goes up by 1, DPS goes down by 0.151
EPS	EPS has significant influence on prediction of DPS, with $P < 0.05$	When EPS goes up by 1, DPS goes up by 0.342
NAPS	NAPS has significant influence on prediction of DPS, with $P < 0.05$	When NAPS goes up by 1, DPS goes down by 0.580

Only Independent Variable, TPS has no significant influence on Dependent variable, DPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows;

Table 4.24 Ranking of IV based on relationship with DV

IV →	ROE	EPS	RPS	TPS	OEPS	NAPS	NPM
Ranking	1	2	3	4	5	6	7
DV (DPS)	+ 21.37	+ 0.34	+ 0.32	- 0.15	- 0.33	- 0.58	- 23.34

7.   Year 2016 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis is conducted on 2016 data to verify the hypotheses test. The 2016 Financial data for the below firms have been selected for the regression analysis.

Table 4.25 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	19
2	Consumer	CP	82
3	Energy	EN	4
4	Financial	FI	22
5	Healthcare	HE	9
6	Industrial Products	IP	91
7	Plantation	PL	17
8	Property	PR	31
9	Technology	TE	15
10	Transportation & Logistics	TL	10
11	Telecommunication & Media	TM	10
12	Utilities	UT	10
	TOTAL		320 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

Figure 4.7 AMOSS Pictorial Regression Analysis for year 2016
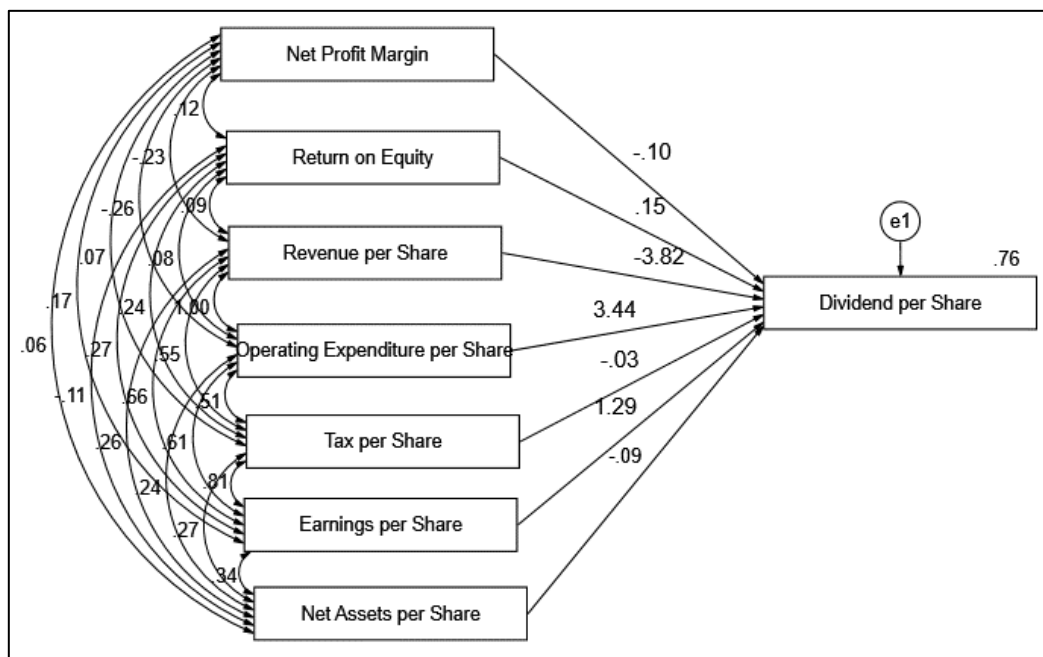
Table 4.26 Regression Weights (Data 2016)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-22.062	6.857	-3.217	.001	-.102
DPS	<---	ROE	16.643	3.288	5.061	***	.147
DPS	<---	RPS	-.212	.057	-3.726	***	-3.821
DPS	<---	OEPS	.204	.058	3.524	***	3.436
DPS	<---	TPS	-.090	.127	-.710	.478	-.034
DPS	<---	EPS	.904	.075	12.071	***	1.294
DPS	<---	NAPS	-.518	.166	-3.123	.002	-.093

The Coefficient of Determination, R^2 for the model is 0.765 or only 76.5% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 23.5% of the DPS.

Table 4.27 Analysis of Independent Variable influence on Dependent Variable

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has significant influence on prediction of DPS, with $P < 0.05$	When NPM goes up by 1, DPS goes down by 22.062
ROE	ROE has significant influence on prediction of DPS, with $P < 0.05$	When ROE goes up by 1, DPS goes up by 16.643
RPS	RPS has significant influence on prediction of DPS, with $P < 0.05$	When RPS goes up by 1, DPS goes down by 0.212
OEPS	OEPS has significant influence on prediction of DPS, with $P < 0.05$	When OEPS goes up by 1, DPS goes up by 0.204
TPS	TPS has no significant influence on prediction of DPS, with $P > 0.05$	When TPS goes up by 1, DPS goes down by 0.090
EPS	EPS has significant influence on prediction of DPS, with $P < 0.05$	When EPS goes up by 1, DPS goes up by 0.904
NAPS	NAPS has significant influence on prediction of DPS, with $P < 0.05$	When NAPS goes up by 1, DPS goes down by 0.518

Only Independent Variable TPS has no significant influence on Dependent variable, DPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows;

Table 4.28 Ranking of IV based on relationship with DV

IV →	ROE	EPS	OEPS	TPS	RPS	NAPS	NPM
Ranking	1	2	3	4	5	6	7
DV (DPS)	+ 16.64	+ 0.90	+ 0.20	- 0.09	- 0.21	- 0.52	- 22.06

8. Year 2017 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis is conducted on 2017 data to verify the hypotheses test. The 2017 Financial data for the below firms have been selected for the regression analysis.

Table 4.29 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	21
2	Consumer	CP	75
3	Energy	EN	8
4	Financial	FI	23
5	Healthcare	HE	9
6	Industrial Products	IP	91
7	Plantation	PL	20
8	Property	PR	28
9	Technology	TE	16
10	Transportation & Logistics	TL	11
11	Telecommunication & Media	TM	9
12	Utilities	UT	10
		TOTAL	321 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

Figure 4.8 AMOSS Pictorial Regression Analysis for year 2017
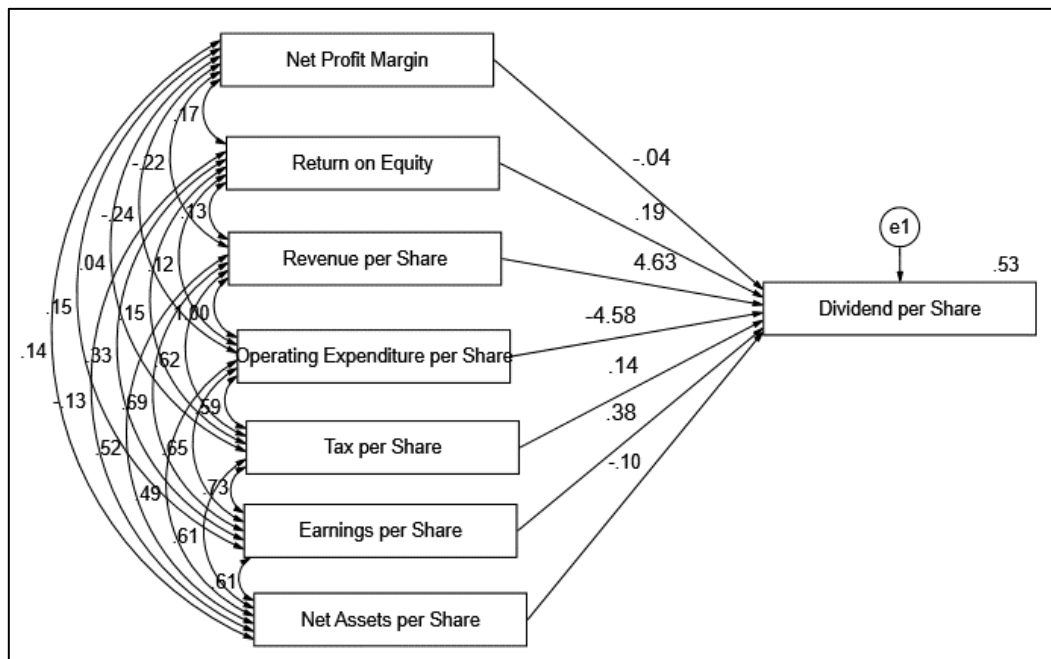
Table 4.30 Regression Weights (Data 2017)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-7.479	8.884	-.842	.400	-.039
DPS	<---	ROE	20.801	5.025	4.139	***	.191
DPS	<---	RPS	.179	.113	1.575	.115	4.631
DPS	<---	OEPS	-.187	.114	-1.633	.103	-4.584
DPS	<---	TPS	.240	.118	2.031	.042	.138
DPS	<---	EPS	.212	.100	2.118	.034	.376
DPS	<---	NAPS	-.864	.506	-1.707	.088	-.102

The Coefficient of Determination, R^2 for the model is 0.526 or only 52.6% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 47.4% of the DPS.

Table 4.31 Analysis of Independent Variable influence on Dependent Variable

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has no significant influence on prediction of DPS, with $P > 0.05$	When NPM goes up by 1, DPS goes down by 7.479
ROE	ROE has no significant influence on prediction of DPS, with $P > 0.05$	When ROE goes up by 1, DPS goes up by 20.801
RPS	RPS has no significant influence on prediction of DPS, with $P > 0.05$	When RPS goes up by 1, DPS goes up by 0.179
OEPS	OEPS has no significant influence on prediction of DPS, with $P > 0.05$	When OEPS goes up by 1, DPS goes down by 0.187
TPS	TPS has significant influence on prediction of DPS, with $P < 0.05$	When TPS goes up by 1, DPS goes up by 0.240
EPS	EPS has significant influence on prediction of DPS, with $P < 0.05$	When EPS goes up by 1, DPS goes up by 0.212
NAPS	NAPS has no significant influence on prediction of DPS, with $P > 0.05$	When NAPS goes up by 1, DPS goes down by 0.864

Independent Variable such as NPM, ROE, RPS, OEPS and NAPS has no significant influence on Dependent variable, DPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows;

Table 4.32 Ranking of IV based on relationship with DV

IV →	ROE	TPS	EPS	RPS	OEPS	NAPS	NPM
Ranking	1	2	3	6	4	5	7
DV (DPS)	+ 20.80	+ 0.24	+ 0.21	+ 0.18	-0.19	- 0.86	- 7.48

9. Year 2018 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis is conducted on 2018 data to verify the hypotheses test. The 2018 Financial data for the below firms have been selected for the regression analysis.

Table 4.33 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	21
2	Consumer	CP	72
3	Energy	EN	5
4	Financial	FI	21
5	Healthcare	HE	10
6	Industrial Products	IP	81
7	Plantation	PL	16
8	Property	PR	24
9	Technology	TE	15
10	Transportation & Logistics	TL	10
11	Telecommunication & Media	TM	4
12	Utilities	UT	8
	TOTAL		287 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

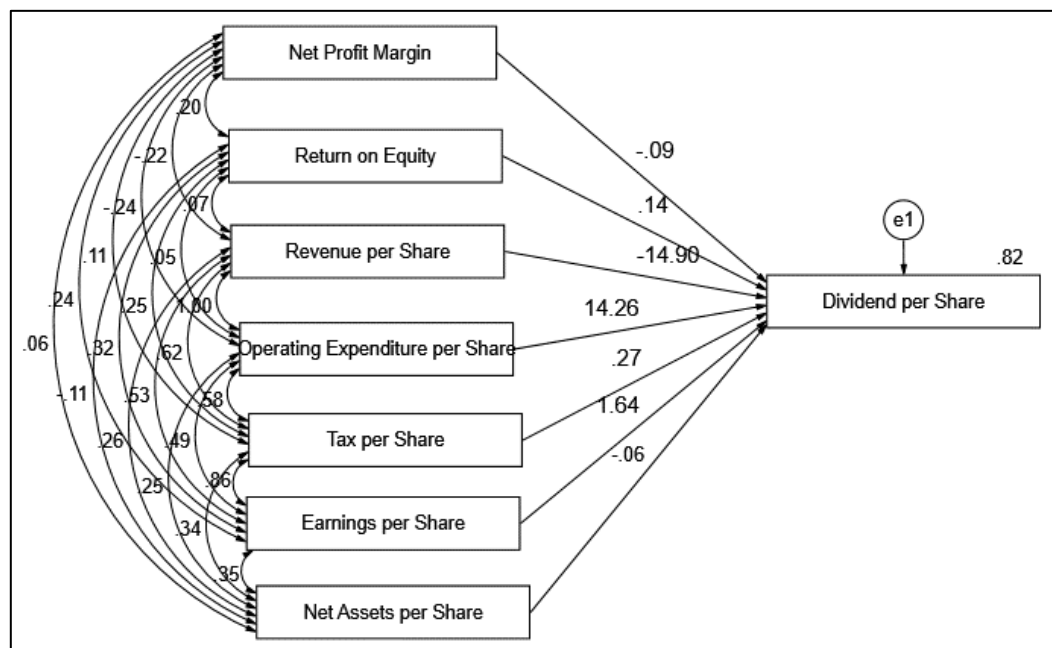Figure 4.9 AMOSS Pictorial Regression Analysis for year 2018

Table 4.34 Regression Weights (Data 2018)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-19.557	6.616	-2.956	.003	-.088
DPS	<---	ROE	18.348	3.645	5.034	***	.141
DPS	<---	RPS	-.684	.092	-7.406	***	-14.896
DPS	<---	OEPS	.680	.093	7.344	***	14.265
DPS	<---	TPS	.596	.135	4.422	***	.269
DPS	<---	EPS	1.235	.087	14.197	***	1.636
DPS	<---	NAPS	-.294	.144	-2.048	.041	-.058

The Coefficient of Determination, R^2 for the model is 0.816 or only 81.6% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 18.4% of the DPS.

Table 4.35 Analysis of Independent Variable influence on Dependent Variable

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has significant influence on prediction of DPS, with $P < 0.05$	When NPM goes up by 1, DPS goes down by 19.557
ROE	ROE has significant influence on prediction of DPS, with $P < 0.05$	When ROE goes up by 1, DPS goes up by 18.348
RPS	RPS has significant influence on prediction of DPS, with $P < 0.05$	When RPS goes up by 1, DPS goes down by 0.684
OEPS	OEPS has significant influence on prediction of DPS, with $P < 0.05$	When OEPS goes up by 1, DPS goes up by 0.680
TPS	TPS has significant influence on prediction of DPS, with $P < 0.05$	When TPS goes up by 1, DPS goes up by 0.596
EPS	EPS has significant influence on prediction of DPS, with $P < 0.05$	When EPS goes up by 1, DPS goes up by 1.235
NAPS	NAPS has significant influence on prediction of DPS, with $P < 0.05$	When NAPS goes up by 1, DPS goes down by 0.294

All Independent Variable have significant influence on Dependent variable, DPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows;

Table 4.36 Ranking of IV based on relationship with DV

IV →	ROE	EPS	OEPS	TPS	NAPS	RPS	NPM
Ranking	1	2	3	4	5	6	7
DV (DPS)	+ 18.35	+ 1.24	+ 0.68	+ 0.60	-0.29	-0.68	- 19.56

10.   Year 2010 – 2018 Dividend payout and the influence of other Variables

SPSS AMOS basic regression analysis on long-term analysis between 2010 – 2018 data to verify the hypotheses test. The 2010 – 2018 Financial data for the below firms have been selected for the regression analysis.

Table 4.37 Number of Firms analyzed for each Sector on Bursa Malaysia

No	Sector Name	Code	No. of Firms
1	Construction	CO	29
2	Consumer	CP	124
3	Energy	EN	18
4	Financial	FI	27
5	Healthcare	HE	11
6	Industrial Products	IP	152
7	Plantation	PL	31
8	Property	PR	54
9	Technology	TE	22
10	Transportation & Logistics	TL	25
11	Telecommunication & Media	TM	13
12	Utilities	UT	11
		TOTAL	517 Firms

AMOS Regression will also explain Regression coefficient (ß), Significance test (P-Value) and Coefficient of determination (R^2). The outcome of the analysis as follows;-

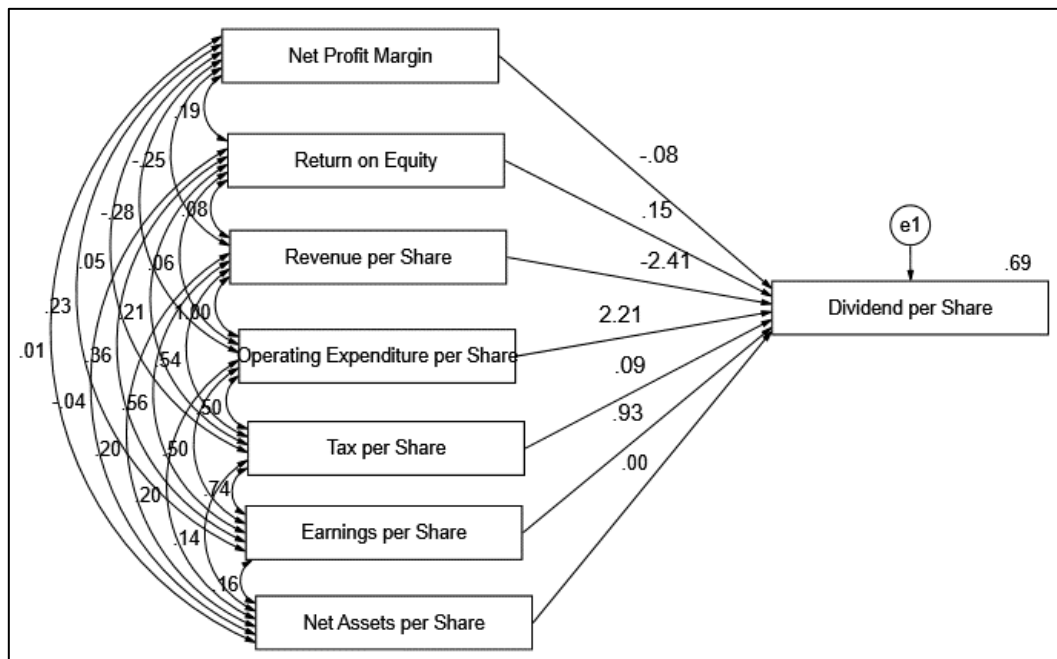Figure 4.10 AMOSS Pictorial Regression Analysis for year 2010 – 2018

Table 4.38 Regression Weights (Data 2010 – 2018)

DV		IV	Estimate	S.E.	C.R.	P	Standard
DPS	<---	NPM	-16.754	2.538	-6.602	***	-.082
DPS	<---	ROE	15.147	1.210	12.514	***	.153
DPS	<---	RPS	-.131	.027	-4.888	***	-2.414
DPS	<---	OEPS	.126	.027	4.671	***	2.214
DPS	<---	TPS	.197	.036	5.547	***	.092
DPS	<---	EPS	.674	.029	23.483	***	.932
DPS	<---	NAPS	.005	.026	.178	.859	.002

The Coefficient of Determination, R^2 for the model is 0.688 or only 68.8% of this model can estimate the dependent variable, DPS. In other words, the model's error variance is approximately 31.2% of the DPS.

Table 4.39 Analysis of Independent Variable influence on Dependent Variable

Variable	Significance Value, P	Regression Coefficient, ß
NPM	NPM has significant influence on prediction of DPS, with $P < 0.05$	When NPM goes up by 1, DPS goes down by 16.754
ROE	ROE has significant influence on prediction of DPS, with $P < 0.05$	When ROE goes up by 1, DPS goes up by 15.147
RPS	RPS has significant influence on prediction of DPS, with $P < 0.05$	When RPS goes up by 1, DPS goes down by 0.131
OEPS	OEPS has significant influence on prediction of DPS, with $P < 0.05$	When OEPS goes up by 1, DPS goes up by 0.126
TPS	TPS has significant influence on prediction of DPS, with $P < 0.05$	When TPS goes up by 1, DPS goes up by 0.197
EPS	EPS has significant influence on prediction of DPS, with $P < 0.05$	When EPS goes up by 1, DPS goes up by 0.674
NAPS	NAPS has no significant influence on prediction of DPS, with $P > 0.05$	When NAPS goes up by 1, DPS goes up by 0.005

All Independent Variable have significant influence on Dependent variable, DPS except for NAPS. Ranking of the Independent variables with the direction and magnitude on DPS as follows;

Table 4.40 Ranking of IV based on relationship with DV

IV →	ROE	EPS	TPS	OEPS	NAPS	RPS	NPM
Ranking	1	2	3	4	5	6	7
DV (DPS)	+ 15.15	+ 0.67	+ 0.20	+ 0.13	+ 0.01	- 0.13	- 16.75

4.4   Discussion

Outcome of SPSS AMOS Regression analysis for the period 2010 to 2018 is compared with the hypotheses test for the significance of P-value of each variable. The results as tabulated below;

Table 4.41 Outcome of Hypotheses Test

Hypotheses testing on IV	Hypothesis Expected influence	Outcome of Regression coefficient	Reject or Accept Hypotheses
H1 Return of Equity (ROE)	Positive, +0.30	+15.15	Accepted with higher magnitude
H2 Revenue per Share (RPS)	Positive, +0.20	- 0.13	Accepted but change in direction with lower magnitude
H3 Earnings per Share (EPS)	Positive, +0.20	+0.67	Accepted with higher magnitude
H4 Operating Expenses per Share (OEPS)	Positive, +0.10	+0.13	Accepted with higher magnitude
H5 Net Profit Margin (NPM)	Positive, +0.10	- 16.75	Accepted but change in direction and magnitude
H6 Tax per Share (TPS)	Positive, +0.05	+0.20	Accepted with higher magnitude
H7 Net Assets per Share (NAPS)	Positive, +0.05	+0.01	Reject because no significant influence (P>0.05)

Squared multiple correlation (R^2) or Coefficient of determination for long-term analysis has resulted in 69%, which explains the variation in the model. R^2 is always between 30-40% in social sciences study such as attitude, behavior, and satisfaction. In this instance, Dividend distribution is the decision taken by top leadership of the firm; consequently it's a behavioral decision influenced by behavior/attitudes, therefore reflection of $R^2 > 50\%$ is considered good. Thus, this research project for long run analysis, $R^2 = 69\%$, is considered very good due to the nature being related to behavioral science in dividend decision-making. In addition, this research is confined to hypotheses testing and attempt to develop Dividend Distribution Model (DDM).

A further related explanation is such that Earnings Per Share (EPS) can be forecasted but dividend per share cannot be forecasted. Dividend per share is very

crucial for management and leadership because if money is retained, it can be used to amplify board's power to have larger funds under discretionary control. In contrast, Forecasting model of exchange rate or interest rate will result in higher $R^2 > 95\%$ due to pure analytical data for regression analysis. The importance of accuracy of regression model accuracy in order to make good judgment and manage losses anticipated.

Table 4.42 Short term Coefficient of Determination analysis on year-on-year basis for the same period between 2010 to 2018

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
R^2	77%	78%	72%	75%	71%	70%	77%	53%	82%
F	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

The above R^2, Coefficient of determination has also resulted in a range between lowest, 53% (2017) and the highest 82% (2018). As explained earlier, behavioral analysis with $R^2 > 50\%$ is considered very good because the variables are dynamic in nature.

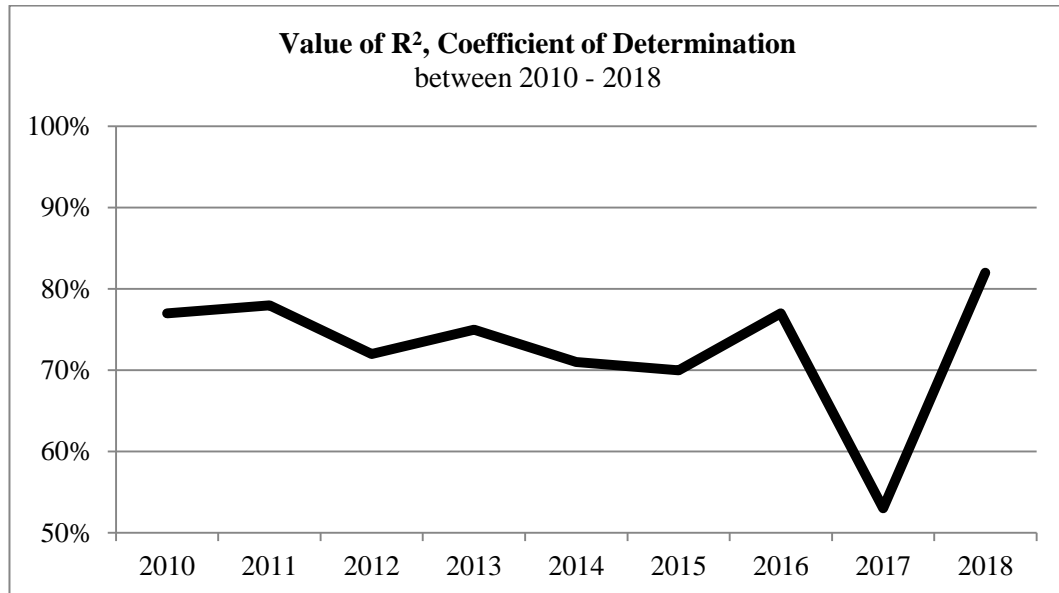Figure 4.11 A graphical comparison of R^2 during years 2010 to 2018

Table 4.43 Short term (year-on-year) Regression Coefficient analysis for the same period between 2010 to 2018

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
β_{xy}									
NPM	-21.11	-15.48	-10.07	-27.53	-10.54	-23.36	-22.06	-7.48	-19.56
ROE	9.79	27.71	6.53	20.20	8.54	21.37	16.64	20.80	18.34
RPS	-0.62	-0.57	-0.56	-0.21	-0.18	0.32	-0.21	0.18	-0.68
OEPS	0.61	0.57	0.56	0.19	0.18	-0.33	0.20	-0.19	0.68
TPS	0.02	0.19	0.32	0.53	-0.08	-0.15	-0.09	0.24	0.60
EPS	1.34	1.18	1.15	0.75	0.71	0.34	0.90	0.21	1.24
NAPS	-.018	-0.78	-.012	0.11	-0.99	-0.58	-0.52	-0.86	-0.29

Standardized regression coefficient, ß will replace every variable including 1 dependent variable, Y and 7 independent variables, X with an interception to form a formula or equation. Example for year 2010, the equation as follows;

$$Y_{DPS} = \text{int.} - 21.11_{NPM} + 9.79_{ROE} - 0.62_{RPS} + 0.61_{OEPS} + 0.02_{TPS} + 1.34_{EPS} - 0.18_{NAPS}$$

The hypotheses were all having s positive direction to the dependent variable, however NPM, RPS and NAPS all have negative direction to dependent variable, DPS. Therefore, the hypotheses will be rejected and altered accordingly.

Standard coefficient, ß expresses one unit change in Independent variable will change Y dependent variable according to the strength and direction of the influence of each independent variable. In terms of ranking the higher coefficient value will bring about greater change in the dependent variable, DPS. An example for year 2018, the ranking for Regression Coefficient as follows;

Table 4.44 Ranking of Significance by Variable

Ranking 2018	Variable	Value
1	ROE	+18.33
2	EPS	+1.24
3	OEPS	+0.68
4	TPS	+0.60
5	NAPS	-0.29
6	RPS	-0.68
7	NPM	-19.95

And the regression equation for year 2018 –

$$Y_{DPS} = -2.13 + 18.35_{ROE} + 1.24_{EPS} + 0.68_{OEPS} + 0.60_{TPS} - 0.29_{NAPS} - 0.68_{RPS} - 19.96_{NPM}$$

Table 4.45 Short-term (year-on-year) Significance analysis for the same period between years 2010 to 2018.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
P-value									
Intercept	0.06	0.10	0.08	0.51	0.68	0.48	0.63	0.23	0.07
NPM	0.001	.004	0.138	***	0.197	0.006	0.001	0.400	0.003
ROE	0.111	***	0.004	***	0.013	***	***	***	***
RPS	***	***	***	0.015	0.024	***	***	0.115	***
OEPS	***	***	***	0.025	0.022	***	***	0.103	***
TPS	0.716	0.017	***	***	0.631	0.390	0.478	0.042	***
EPS	***	***	***	***	***	***	***	0.034	***
NAPS	0.273	0.258	0.063	***	0.052	0.002	0.002	0.088	0.041

The P-value indicated statistically significant if the value <0.05, which means the observed results fall within 95% probability. P-value > 0.05 have been indicated in the table above, which means those indicated have the hypotheses rejected because insignificant to the model. A summary of the significant is indicated in the table below;

Table 4.46 Frequency of significance annually for the same period 2010 to 2018

P-value 1.4.1 (Year 2010 – 2018)	Mode frequency of 1.4.2 P-Value > 0.05	Mode frequency of 1.4.3 P-Value < 0.05
NPM	3	6
ROE	1	8
RPS	1	8
OEPS	1	8
TPS	5	4
EPS	-	9
NAPS	5	4

Based on the assumption, more than 50% of 9 years sample size, i.e. >4 shall be considered as non-significant to the overall model. As a result, the independent variable Net Assets Per Share (NAPS) and Tax per Share (TPS) has very less significance to the model. Thus, the short-term regression analysis supports that hypotheses should be rejected for both NAPS and TPS.

In conclusion, the independent variable with the lowest P-value, contributing significantly to the model is Earnings Per Share (EPS), without any P-value exceeding 0.05 throughout the period. Besides that, ROE (Return of Equity), RPS (Revenue per Share) and OEPS (Operating Expenses per Share) have all indicated 8 out of 9 times with P-Value < 0.05.

Primary purpose of this study is to conduct a series of hypotheses testing on the relationship between seven (7) independent variable and dependent variable being Dividend per Share (DPS). Throughout the testing process, SPSS AMOS regression analysis was conducted on two groups having slightly different relationship outcome with Dependent variable, DPS. The two groups representing a cross sectional analysis based on year-on-year financial performance and long term 9-years analysis of the same data. Outcome of both types of group have emerged a result that is consistent and comparative. Here is the snapshot of hypotheses testing based on P-value for the two types of groups

Table 4.47 Outcome of Hypotheses Test for Short term and Long term analysis during the same period, 2010 to 2018

| No	Independent variables	Short-term (Year-on-year analysis between 2010 and 2018)	Long-term Analysis (2010 – 2018)
1	NPM	Acceptance	Accepted
2	ROE	Acceptance	Accepted
3	RPS	Acceptance	Accepted
4	OEPS	Acceptance	Accepted
5	TPS	Rejected	Accepted
6	EPS	Acceptance	Accepted
7	NAPS	Rejected	Rejected

Firstly, five out of the seven independent variable, namely Net Profit Margin (NPM), Return on Equity (ROE), Revenue per Share (RPS), Operating Expenses per Share (OEPS), Earnings per Share (EPS) have indicated significant influence on Dividend per Share (DPS). Out of which, EPS has the lowest P-value or most significant influence for both types of analysis.

While Net Assets per Share (NAPS) has been rejected for both types of group. NAPS are derived from the formula between the difference of Total Assets and Total Liabilities divided by No of Shares Outstanding. Therefore, a dividend payment would require cash payment that affects the total assets, resulting in lower NAPS. However, the regression analysis has indicated NAPS is has no significant value to the dependable variable in research, Dividend per Share (DPS). Which means, not withstanding the value of NAPS, top leadership have distributed dividends under either circumstance

Tax per share (TPS) is seen as an insignificant variable to the Dividend per Share (DPS) based on the outcome of regression analysis conducted on an year-on-year basis between 2010 to 2018. However, the contrary results for long-term regression analysis for the same period. A deeper look into corporate tax in Malaysia (Trading Economics, 2020) indicates a reducing corporate tax over the same period from 25% between years 2010 to 2014 and 24% from 2015 to 2018. Nevertheless, TPS has P-value was above 0.05 with no significance influence especially with lower tax rate between 2015 onwards. Even though, a well-executed tax planning can improve the PAT (Profit After Tax) available for distribution, there seem to be no relationship with Dividend per Share (DPS). Thus, leadership decision has no bearing on TPS. On the other hand, long-term Regression analysis (2010 to 2018) has resulted in TPS having significant relationship with DPS, with a P-value of 0.042. This is an important indicator, explaining a well-executed tax planning over longer period does have a

significant influence over dividend payment. TPS is ranked as the third most significant variable based on magnitude and direction with Regression Coefficient, ß of + 0.20.

Figure 4.12 Malaysian Corporate Tax over the last 20 years
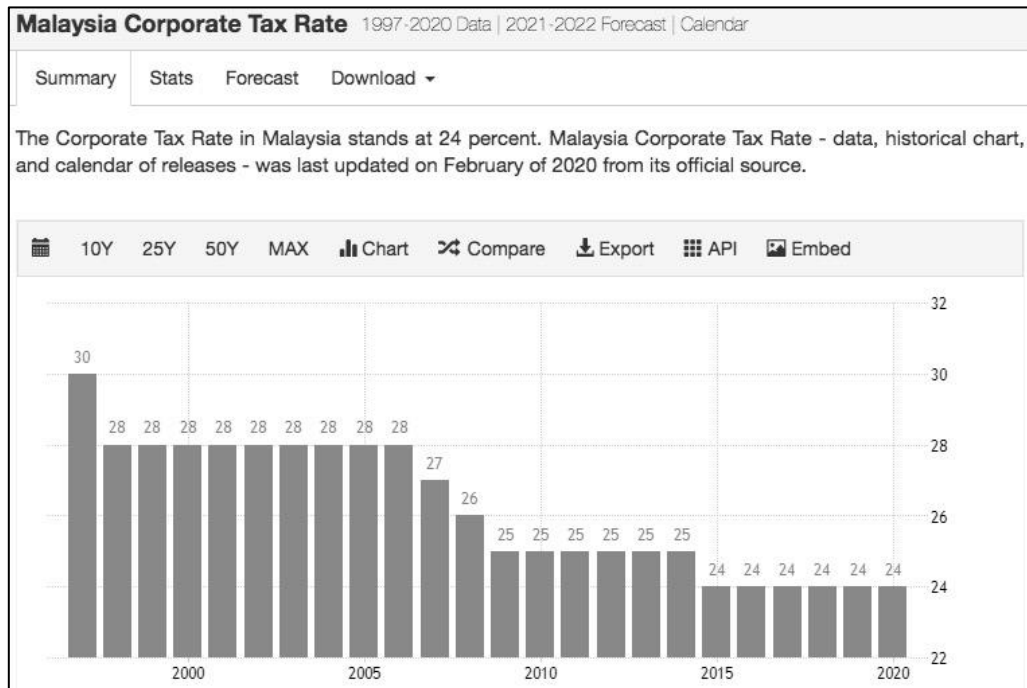
Summary

Chapter 4 provides the sampling characteristics of data to ensure its reliable and relevant for the purpose of hypotheses testing. It provides a set by step guide to eliminate the irrelevant data and prepare for the balance data for regression Analysis. AMOS SPSS regression analysis was conducted on two types of group, short-term year-on-year regression between 2010 and 2018 and long-term analysis for 2010 – 2018. The results of both groups were   analyzed and discussed in terms of Significance test, Regression Coefficient and Coefficient of determination.

5.1   Recap Major Findings

Regression analysis on cross sectional data for a 9 year period as summarized in Chapter 4 has resulted in 68.8% of the Dividend per share (DPS) can be explained by Dividend Distribution Model. Further the DDM model was also found to be consistent with year-on-year regression of data from 2010 to 2018, with a minor exceptional year 2017 with 53% Coefficient of Determination. Further each and every of the seven (7) hypotheses can be concluded as follows;

H1: Independent variable, Net Profit Margin (NPM) is positively correlated with Dependent variable, Dividend per Share (DPS). The hypotheses is further supported by significance test P-value < 0.05 for the same period. However, the regression coefficient is negatively correlated (-16.754) with DPS with its magnitude ranking the last, no 7. The average magnitude of year-on-year regression between 2010 to 2018 has even higher value (-17.47) and considered as a static variable with same direction along the period. A similar research on the impact of Profits on Dividend (Kitur, 2014) payout produced R Square of 66.1% for commercial banks listed on Nairobi Stock Exchange (NSE) for a period from 2008 to 2012.

H2: Independent variable, Return on Equity (ROE) is positively correlated with Dependent variable, Dividend per Share (DPS). The hypotheses is further supported by significance test P-value < 0.05 for the same period. However, the regression coefficient is positively (15.147) correlated with DPS with its high level of magnitude ranking no 1 among the 7 variables. The average magnitude of year-on-year regression between 2010 to 2018 has even higher value (16.66) and considered as a static variable with same direction along the period. This relationship is supported by a research report on correlation between DPS and

ROE (Templeton, 2009) for 3,200 stocks by market capitalization on New York Stock Exchange (NYSE). The outcome of analysis suggest high ROE firms are more likely to generate income in excess of expenses, thus allowing it to pay dividends. 20% of the highest ROE Firms tend to increase dividend payment > 60%.

H3: Independent variable, Revenue per Share (RPS) is negatively correlated with Dependent variable, Dividend per Share (DPS). The hypotheses is further supported by significance test P-value < 0.05 for the same period. However, the regression coefficient is negatively (-0.131) correlated with DPS with its low level of magnitude ranking no 6 among the 7 variables. The average magnitude of year-on-year regression between 2010 to 2018 has lower value (-0.28) and considered as a static variable with same direction along the period except for year 2015 and 2018. In a logical approach, RPS should have a positive correlation with DPS, however due to operational costs not well management by Company Leadership, thus the profitability could have been adversely effected. This contributes to the negative relationship between RPS and DPS. While RPS has significant influence on DPS, the magnitude is very small. This is further supported by a regression analysis conducted (IJSER.org, 2015) on 73 firms on Karachi Stock Exchange for the period of 2003 to 2008. Outcome of the research suggest the increase or decrease in revenue does not have any change in dividend payout.

H4: Independent variable, Operating Expenses per Share (OEPS) is positively correlated with Dependent variable, Dividend per Share (DPS). The hypotheses is further supported by significance test P-value < 0.05 and regression coefficient is positively (0.126) correlated with DPS with its low level of magnitude ranking no 4 among the 7 variables. The average magnitude of year-on-year regression between 2010 to 2018 has higher value (0.27) and considered as a dynamic variable with changing direction along the period.

H5: Independent variable, Tax per Share (TPS) is positively correlated with Dependent variable, Dividend per Share (DPS). The hypotheses is further supported by significance test P-value < 0.05 and the regression coefficient is positively (0.197) correlated with DPS with its low level of magnitude ranking no 3 among the 7 variables. The average magnitude of year-on-year regression between 2010 to 2018 has slightly lower value (0.18) and considered as a dynamic variable with changing direction along the period. This variable can be manipulated with proper tax planning and have direct impact on government decision for corporate tax. A similar study (George-YiKang, 2003) on taxation impact on Dividend payout for S&P 500 firms except for Utilities, for the period of 1984 to 2002. The outcome of research suggest that Taxation has high level of significance with Dividend payout for large size companies. On the other hand, dividend policies may be insensitive to any tax rate changes.

H6: Independent variable, Earning per Share (EPS) is positively correlated with Dependent variable, Dividend per Share (DPS). The hypotheses is further supported by significance test P-value < 0.05 and the regression coefficient is positively (0.674) correlated with DPS with its high level of magnitude ranking no 2 among the 7 variables. The average magnitude of year-on-year regression between 2010 to 2018 has higher value (0.87) and considered as a static variable with same direction along the period. A similar study (Kiboi, 2015) was conducted on 38 firms listed on Nairobi Stock Exchange for the purpose of determining the relationship between EPS and DPS. The study found that EPS has a positive and significant influence on DPS.

H7: Independent variable, Net Assets per Share (NAPS) is positively correlated with Dependent variable, Dividend per Share (DPS). The hypotheses is rejected because significance test P-value > 0.05 and the regression coefficient is positively (0.005) correlated with DPS with its lowe level of magnitude ranking no 5 among the 7 variables. The average magnitude of year-on-year regression between 2010 to 2018 has higher value (-0.44) and considered as a static variable with same direction along the period except for year 2013. Dividen policy has positively correlated effect (IJM, 2015) on Shareholders wealth (Net Assets) for 10 firms on the FMCG sector in India. Firms paying regular dividend will have their Shareholders Wealth maximized.

5.2   Implication of Study

According to this research, 4 variables (ROE, EPS, OEPS and TPS) have positive significant effect on Dividend per Share (DPS). While 2 variables (RPS and NPM) are negatively correlated with Dividend per Share (DPS). Only one variable, NAPS has no significance influence on Dividend per Share (DPS). These results will provide a clear indication of variables that determines dividend payment in companies listed on main market of Bursa Malaysia. The four positively correlated variables are directly related to profitability, being the most important component in dividend payout.

The results suggest that leadership's decision on dividend payout is not only depending on social sciences of behavior and attitude but a broader inclusion of both static and dynamic variables. These static variables (NPM, ROE, RPS, EPS and NAPS) have same direction of regression coefficient over the period of 9 years analysis. However, dynamic variables such as OEPS and TPS have changing directions of coefficient depending on various external factors such as corporate tax rate, interest rate and inflation rate.

Leadership is ultimately responsible to make the best and informed dividend decision, which can now be compared with outcome of Dividend Distribution Model (DDM) for comparison.

5.3 Limitation of Study

Through this research, significant relationship is established between variables and Dividend payout, even though a few limitations were made known. Regression analysis was based upon stratified purposive sampling (Given, 2008) for key dimension, which is an only dividend paying company were considered for this research. Companies declaring dividend in a particular year, which means highly profitable companies with no dividend payment we ignored. Example, annual report 2017 for SIMEPLT reported a RM 3.5 billion Net Profit attributable to Shareholder (NP to SH).

Dividend payment is a result of company generating profits from its business activity. In some instances, dividend payment may also include past year profits retained in company. Thus, the true reflection of dividend is distorted because it is not tied down to current year performance. Therefore, dividend payment is filtered to reflect up to current year profits only. Example, annual report 2013 and 2014 for MAXIS reported a RM 1.7 billion profit for both years but paid RM3 billion in dividend per year. Subsequently, for the purpose of this research, MAXIS dividend is capped up to Net Profit attributable to Shareholders (NP to SH) for current year.

Another key consideration is on Dividend management decision by companies in order to manage expectations of shareholders. The analogy is like an employee being paid a consistent salary every month, will expect the same through the period. Same scenario applies for shareholders wanting consistent income in terms of dividend. Thus, many companies with good profits choose to distribute dividend consistently not in tandem with growth in profits. The reason is dividend should be increase only if future profits are certain and consistent. Example, annual report 2013 and 2014 for DRBHCOM reported 572 mil and 462 mil respectively, however the dividend payment is capped at RM 116 million per year. This

would also cause the Coefficient of Determination R^2 to lower its predictability of Dividend Distribution Model.

Leadership is ultimately responsible to make the best and informed dividend decision, which can now be compared with outcome of Dividend Distribution Model (DDM). Thus Leadership must adopt a more structured process to assist in dividend decision, such as using the research variables to decide the appropriate dividend payout.

5.4   Recommendations for Future Research

This research is conducted for the entire population of main market of Bursa Malaysia between years 2010 to 2018 for hypotheses testing. However, a Dividend Distribution model is established with an impressive Coefficient of Determination, $R^2 = 69\%$. Hence, future research should directly benefit the stakeholders at large.

First research, to include more non-financial variables such as size of company (market capitalization) and ownership control (major shareholders executive role in company) to further expand the R^2 beyond 80%. Both of these variables have significant impact based on empirical research.

Second and the most interesting research is to develop a more reliable Dividend Distribution Model (DDM) in order to launch Kuala Lumpur Dividend Index (KLDI). An index trailed by 100 dividend-paying counters shortlisted by the model.

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APPENDICES

Appendix A: Summary of Empirical Research and Literature review

No	Author / Reference	Method of Data collection	Sampling	Context	Variables	Research Title / Focus of the study
1	H.Kent Baker, E. Theodore Veit Gary E.Powell (Kent-Theodore-Gary, 2005)	Qualitative	XX Respondents are managers	Financial and non-financial firm	22 variables factors that influence dividend decision	"Factors Influencing Dividend Policy Decisions of NASDAQ Firms" 9/22 factors have significant positive relationship with dividend policy
2	Ross N. Dickens K. Michael Casey Joseph A. Newman (Ross-Michael-Joseph, 2002)	Mix – survey for comments and feedback	Banking Firms	Barclay, Smith and Watts (1995) model on Industrial Firms	Investment opportunity, capital adequacy, size, signallin, ownership, dividend history, risk	"Bank Dividend Policy; Explanatory Factors" 5 guidelines for making dividend pay-out decisions
3	Sharon L. Kania (Sharon, 2005)	Quantitative	10,000 publicly traded firm	Multexinvestor.com database	Financial data	"What Factors Motivate the Corporate Dividend Decision" Effects on financial variables on Dividend policy
4	Anupam Mehta (Anupam, 2012)	Quantitative	Listed on Abu Dhabi Stock Exchange (except bank and investment concern)	UAE Firms (2005-2009)	Profitability, Risk, Liquidity, Leverage, Size	"An Empirical Analysis of Determinants of Dividend Policy: Evidence from UAE Companies" Most significant variables used by UAE Firms in determining Dividend decision
5	Mahira Rafique (Mahira, 2012)	Quantitative	53 companies from 11 sectors of non-financial firms	Karachi Stock Exchange (2005-2010)	Earnings, Firm size, Growth, Profitability, Corporate Tax, Financial Leverage	"Factors Affecting Dividend Payout: Evidence from Listed Non-financial Firms" Corporate tax and Firm's Size had significant relationship with Dividend Payout
6	Bogna Kazmierska-Jozwiak (Bogna, 2014)	Quantitative (Thomson Reuters database	Listed companies in Poland	Warsaw Stock Exchange (2000-2012)	Profitability, liquidity, size, leverage	"Determinants of Dividend Policy: Evidence from Polish Listed Companies" Size, P/E has positive relationship but insignificant results. Profitability and Leverage have negative significant relationship.
7	Duha Al-Kuwari (Duha, 2009)	Quantitative (Tobit models)	191 non-financial listed firms	Gulf Cooperation Council (GCC) country Stock Exchange (1999-2003)	7 variables; Government ownership, free cash flow, firm size, growth rate, growth opportunity, business risk and firm profitability	"Determinants of the Dividend Policy of Companies Listed on Emerging Stock Exchanges: The Case of the Gulf Cooperation Council (GCC) Countries" Dividend depend heavily on profitability and Positive relationship with government ownership, firm size, firm profitability. However negative relationship with leverage ratio.

No	Author / Reference	Method of Data collection	Sampling	Context	Variables	Research Title / Focus of the study
8	Nimalathasan Balasundaram (Nimalathasan, 2013)	Quantitative	Hotels and Restaurants (annual report)	Sri Lanka (2008-2015)	Financial ratios, ie ROI, ROE, EPS, P/B, PB, ROA	"Dividend Policy Ratios and Firm Performance: a case study of Selected Hotels & Restaurants in Sri Lanka" ROI/ROE have low impact on Div Ratios. EPS, P/E and PB significantsly correlated with ROA. P/E is significantly correlated with ROE
9	Hellstrom Gustav Inagambaev Gairatjon (Hellstrom-Inagambeav, 2012)	Quantitative (Ordinary least square – OLS and Tobit regression)	Large and Medium Capitalization Firms	Stockholm Stock Exchange (2006-2010)	5 factors; Free cash flow, Growth, Leverage, Profit, Risk and Size.	"Determinants of the Dividend Payout Ratios" Large caps significant relationship with Free cash flow, Growth and Risk Medium caps significant relationship Free cash Flow, Leverage, Risk and Size
10	Felix J. Lopex-Iturriaga Domingo J. J. Santana-Martin (Lopez-Domingo, 2015)	Quantitative (cross sectional data and time series)	115 non-financial listed companies (annual report and Securities Commission)	Spainish stock exchange (2003-2012)	Ownership structure (dorminant owner and shareholder coalition)	"Do Shareholder Coalitions Modify Dominant Owner's Control? The Impact on Dividend Policy" Shareholders coalition have negative impact to dividend payout to extract private benefit.
11	Rehana Kouser Rabia Luqman Asif Yaseen Muhammad Azeem (Kouser-Luqman-Yaseen-Azeem, 2015)	Quantitative Results analyzed through SPSS	285 non-financial sector companies	Listed on Karachi Stock Exchange (2001-2011)	Predict probability to pay dividends Size, investment opportunities, profitability and life cycle of firm	"Dividend payout policy and financial crisis: Evidence from the life cycle theory" Dividend payout depends on macroeconomic context. The larger, more profitable and low growth firms pay dividends
12	Ali Sheikhbahaei Mohd Hassan Mohd Osman Ismail Abd Rahman (Al-Hassan-Ismail, 2012)	mix	356 dividend announcements by 138 firms	Bursa Malaysia main market (2008-2011)	Dividend increase Constant dividend Decreasing dividend	"Information Content in Dividend Announcements, a Test of Market Efficiency in Malaysian Market" Market response to dividend announcement. Increasing dividend positive impact, while no significant impact to constant and decreasing dividend
13	Yong Teck Mui Mazlina Mustapha (Yong-Mazlina, 2016)	Quantitative	Random 100 samples from 854 companies (no specific company size) annual report	Listed firm on Bursa Malaysia, main market	Investment opportunity, liquidity and firm size	Determinants of Dividend Ratio: Evidence from Malaysian Public Listed Firms All 3 significantly influence the dividend payout in Malaysia
14	Ramesh Bhat, I M Pandey (Ramesh - I M, 1993)	Mix	425 companies	Centre for Monitoring Indian Economy	Dividend payment and retention	Dividend payment and retention: A study on Managers perceptions

Appendix B: Summary of internet searches

No	Author / Reference	Context	Variables	Research Title / Focus of the study
1	https://www.malaysiastock.biz/Dividend.aspx	Bursa Malaysia firm	Latest Dividend payment date	Dividend payout by companies
2	http://oer2go.org/mods/en-boundless/www.boundless.com/finance/definition/dividend-decision/index.html			Focusing on dividend decision – signal, expectation, impact
3	https://sol.du.ac.in/mod/book/view.php?id=829&chapterid=487	Dividend Theories	The Relevance Concept of Dividend a Theory of Relevance + Walters Approach + Gordon's Approach The Irrelevance Concept of Dividend or Theory of Irrelevance + Residual Theory + Modigliani and Miller approach	Dividend decision and valuation of Firms
4	https://www.dividend.com/dividend-education/what-is-an-ideal-payout-ratio/	America	Ideal dividend payout ratio	Loss making, Good, Healthy, High, Very High, Unsustainable, Very unsustainable, The bottom line
5	https://www.dividend.com/dividend-stocks/best-dividend-stocks/#dars		Dividend Advance Rating System (DARS) for dividend stocks	Relative strength, Overall Yield Attractiveness, Dividend uptrend, Earnings growth
6	https://www.dividendstocksonline.com/topdiv-premium/dividend-stock-screener/		Dividend screener	Dividend yield, dividend growth, free cash flow yield, payout ratio, revenue growth, and stock price appreciation

TITLE OF PROJECT PAPER: **LEADERSHIP AND DIVIDEND DETERMINANTS OF THE MALAYSIAN LISTED COMPANIES**

NAME OF AUTHOR: **MAHENDRARAJAH A/L SELVARAJA**

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