

UNIVERSITI TEKNOLOGI MARA

**THE INFLUENCE OF FINANCIAL
LEVERAGES ON PROFITABILITY:
CASE STUDY OF THE COMPANIES IN
TECHNOLOGY SECTOR IN MALAYSIA**

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2020982741

Bachelor of Business Administration (Hons)

Investment Management

February 2022

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Final Year Project Paper submitted in fulfillment of the
requirements for the degree of
Bachelor of Business Administration
(Investment Management)

Faculty of Business and Management

AUTHOR'S DECLARATION

I declare that the work in this final year project paper was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

This research is an attempt to initiate a theoretical relationship between financial leverage and profitability using four companies of the technology sector in Malaysia over the period 2011-2020. The research is performed using the Net Profit Margin (NPM) to examine the relationship between the financial leverages ratios. Previous research results shows that some of the independent variables have a significant relationship and some of the independent variables have insignificant relationship with the dependent variables which is profitability of the technology sector. This study uses secondary data from the four companies of the technology sector listed in Bursa Malaysia. This study uses panel data to examine the collected data. Result shows that only one insignificant result towards profitability and other 3 independent variables are significant. Other than that, the correlation analysis shows that ER and DCR have a positive relationship to the dependent variable which is profitability of technology sector. Meanwhile, DR and DER showing that it has a negative relationship to the profitability of technology sector. Based on the results for this study, it shows that financial leverage has an influence towards the profitability of technology sector in Malaysia. For the recommendation for this study, it should be adding more variables for this study. Other than that, replicating and expanding the study to the other sectors.

ACKNOWLEDGEMENT

First, thanks to Allah for his mercy and guidance in giving me full strength to complete this individual assignment although I face some difficulties in completing this assignment, I still managed to complete it. I was blessed to have Dr. Basaruddin Shah Basri for guiding me in the process of finishing this assignment.

Then, I would like to thank my parents for supporting me mentally and physically not just during finishing tasks but also during my whole studies.

In addition, grateful acknowledgement to all my friends who never give up in giving their support to me in all aspects of life. A lot of experience and lessons I gained creating this final year project paper.

TABLE OF CONTENT

AUTHOR’S DECLARATION	4
ABSTRACT	5
ACKNOWLEDGEMENT	6
CHAPTER ONE: INTRODUCTION	9
1.1 Introduction	9
1.2 Background of Study	11
1.3 Problem Statement	12
1.4 Research Questions	13
1.5 Research Objectives	13
1.6 Significance of the Study	13
1.7 Scope of the Study	14
1.8 Limitation of the Study	14
1.9 Definition of key terms	15
1.10 Summary	16
CHAPTER TWO: LITERATURE REVIEW	17
2.1 Introduction	17
2.2 Financial Leverage on Profitability	17
2.3 Debt Ratio	19
2.4 Equity Ratio	20
2.5 Debt-to-Equity Ratio	20
2.6 Debt-to-Capital Ratio	21
2.7 Theoretical / Research Framework	22
2.8 Summary	23
CHAPTER THREE: RESEARCH METHODOLOGY	24
3.1 Introduction	24
3.2 Sampling	24
3.3 Data Collection	24
3.3.1 Annual Report	25
3.3.2 Thomson Reuters Eikon	25
3.3.3 Bursa Malaysia	25
3.4 Variables	26
3.5 Research Design	26
3.5.1 Purpose of Study	27
3.5.2 Types of Investigation	27

3.5.3 Study Setting	27
3.5.4 Unit of Analysis	27
3.6 Hypothesis Statement.....	28
3.7 Research Methodology	29
3.7.1 Descriptive Analysis	29
3.7.2 Correlation Analysis	30
3.7.3 Multicollinearity Test.....	30
3.7.4 Regression Analysis.....	30
3.8 Summary	32
CHAPTER FOUR: RESEARCH ANALYSIS	33
4.1 Introduction.....	33
4.2 Descriptive Analysis	33
4.3 Correlation Analysis	36
4.4 Multicollinearity Test.....	38
4.5 Regression Analysis.....	39
4.5.1 T-test	40
4.5.2 F-test	41
4.5.3 Coefficient of Determination (R-squared)	41
4.6 Summary	42
CHAPTER FIVE: CONCLUSION AND RECOMMENDATION.....	43
5.1 Introduction.....	43
5.2 Conclusion	43
5.3 Recommendation	44
5.4 Summary	45
REFERENCES.....	46

CHAPTER ONE

INTRODUCTION

1.1 Introduction

All stakeholders, particularly common equity owners, need to understand the elements that affect a company's profitability. Many organizations use debt to leverage their capital in order to increase profit, and financial leverage is one of the most effective ways for a company to increase profit. Financial leverage is the use of debt instruments to improve the expected level return on a firm's equity, and the degree of financial leverage of a corporation is evaluated by calculating the total value of debt and equity, as well as the debt-to-equity ratio. The usage of high levels of debt in the capital structure affects the return on owners' capital, either increasing or decreasing it. The return on equity (ROE) is the monetary gain made by shareholders in exchange for the capital they would have invested in a company. If a company makes a lot of money, it's usually a good idea to take on debt since it means more money for the shareholders.

In the past, empirical studies of the relationship between profitability and firm size have yielded mixed results. The nature of the link between business size and profitability is a crucial question that could offer light on the elements that optimise earnings. According to the above-mentioned literature, the link between company size and profitability might be positive or negative depending on the firm size range. Furthermore, once a certain size is reached, further size growth may further divide ownership from control. These theories show that the relationship between business size and profit can deteriorate once a firm reaches a certain size barrier (Amato and Wilder, 1985). It demonstrates that Du Point chart analysis may be used to depict the relationship between profitability and debt use as expressed by a company's return on equity ratio, and that proper debt use can enhance the return on equity ratio. It simply means that the company's management can use debt to boost profits. Aside from that, the company's management can demonstrate its ability to maximise its asset operation in order to generate profit (Brigham and Ehrhardt, 2005).

Other than that, net profit margin measures how much profit out of each sales dollar is left after all expenses are subtracted-that is, after all operating expenses, interest, and income tax are subtracted (Andrew,2007). A higher margin means the firm is more profitable.

1.2 Background of Study

As we all know, the main goal of every business is to increase profits for its owners or stakeholders. The management is concerned with the effective and efficient utilisation of resources in accordance with the company's goal of expanding the business and increasing profitability (Shodiya, Sanyaoulu, Ojenike, Ogunmefun, 2019). To maximise earnings or fulfil goals, financial decision making is critical for every company's long-term and short-term sustainability, requiring both long-term and short-term judgments. Both are critical for the company's dividend and liquidity considerations. Financial management is in charge of identifying the best debt-equity balance to maximise shareholder capital.

Financial leverage is mostly used by businesses that require financing to purchase a new asset, improve output, or conduct operational tasks. Financial leverage is one of the most effective ways for an organisation to fulfil its goals while simultaneously increasing the value of its shareholders. As we all know, financing is critical for any organisation, whether it is new or established. Any financial or non-financial institution requires capital to carry out its daily operations. Financial leverage is advantageous when the returns on debt are greater than the interest expense connected with the debt. Many businesses employ financial leverage rather than raising more equity capital, which may affect earnings per share for existing shareholders.

1.3 Problem Statement

Financial leverage is the most crucial factor that might affect a company's profitability. As a result, capital structure management methodologies are compromised. The financial leverage ratio represents the amount of borrowed money used to fund the company's capital structure. Mandelker and Rhee (1984) demonstrated that the most profitable firm in many sectors also has the lowest leverage ratio. They also discovered that high positive irregular earnings for a firm's shareholders are correlated with an increase in leverage, such as a repurchase of securities or a loan for a stock swap, rather than a decrease in leverage, such as the issuance of shares. Higher financial leverage favours enterprises during times of economic boom, but it has a detrimental impact on company profitability during times of economic collapse. As a result, the issue is how financial leverage affects the profitability of the Malaysian technology industry.

The technology industry is one of the fastest expanding in the Malaysian market, with a projected growth rate of 22.6 percent by 2025. Malaysia's technology sector is now focusing on connectivity, satellite broadband, digital infrastructure for buildings, 5G ecosystems, and smart automation. Thus, the goal of this research is to investigate the capabilities of Malaysian organisations in the technology sector in terms of how well they manage leverage situations, which can be gathered as internal elements that will impact the technology industry performance in terms of profitability. Net profit margin will be used to assess performance of the companies.

There has been various research conducted on the relationship between financial leverage and financial profitability. Nonetheless, just a few studies in the technology business addressed the relationship between it. As a result, in order to have a comprehensive grasp of the effect of leverage on profitability in technology sector organisations, this study will fill the gap by focusing just on the technology industry.

1.4 Research Questions

- i. What is the relationship between the debt ratio and the profitability of the technology sector in Malaysia?
- ii. What is the relationship between the equity ratio and the profitability of the technology sector in Malaysia?
- iii. What is the relationship between the debt-to-equity ratio and the profitability of the technology sector in Malaysia?
- iv. What is the relationship between the debt-to-capital ratio and the profitability of technology sector in Malaysia?

1.5 Research Objectives

- i. To investigate the relationship between the debt ratio and the profitability of the technology sector in Malaysia.
- ii. To investigate the relationship between the equity ratio and the profitability of technology sector in Malaysia.
- iii. To investigate the relationship between the debt-to-equity ratio and the profitability of the technology sector in Malaysia.
- iv. To investigate the relationship between the debt-to-capital ratio and the profitability of the technology sector in Malaysia.

1.6 Significance of the Study

The research study could provide information on the concerns of leverage in the technology industry, which can have an impact on the firm's profitability and the wealth of the shareholders. The study's conclusions will be beneficial to both businesses and investors. Companies use leverage to finance their assets and to assess their leverage level based on their financial performance. Investors, on the other hand, will employ leverage to increase their purchasing power in the market.

1.7 Scope of the Study

This research is based on Malaysian Technology Sector firms. From 2011 through 2020, this study will examine four technological companies: Malaysia Pacific Industries Berhad, ViTrox Corporation Berhad, Unisem (M) Bhd, and Inari Amertron Bhd. We chose these four organisations because we could acquire adequate data from each company's annual report and other relevant platforms such as Data Stream, which are the key sources for data analysis. This study used a quantitative method.

1.8 Limitation of the Study

Time restrictions for study are high since the ratio is measured manually in such a way that panel details can be made. Aside from that, neither the ratio nor the data source is mentioned in the commercial bank's annual report. Project timelines have been impacted because of these concerns.

1.9 Definition of key terms

TERMS	DEFINITION
Leverage	: The sum of debt that firms use to fund their assets
Leverage	: A management on how the firms finance their assets by using debt
Management	
Leverage Ratio	: A numerous financial measurements that look at the extent to which debt financing is employed by the firm
Net Profit Margin	: A measurement how much net income or profit is generated as a percentage of revenue
Debt to Equity Ratio	: A measurement on debt usage in financing assets relative to the value of shareholders' equity
Debt Ratio	: A computation of the proportion of a company's assets that are financed or being paid by using debt
Equity Ratio	: A measurement that specifies the amount of equity that is being used to fund the firms' assets
Debt to Capital Ratio	: A measurement of a company's leverage calculated by taking the company's interest-bearing debt, both short- and long-term liabilities and dividing it by the total capital
Technology Sector	: A sector that consists of companies that contains businesses revolving around the manufacturing of electronics, creation of software, computers, or products and services related to information technology

1.10 Summary

This chapter offers research material on the study's framework, an overview of the challenges and goals of the research, the significance of the research, the purpose of the research, and the significance of words used in the research. In short, by establishing a relationship between the variables, this analysis investigates the influence of leverage on profitability in Malaysian technology businesses Malaysia Pacific Industries Berhad, ViTrox Corporation Berhad, Unisem (M) Bhd, and Inari Amertron Bhd. Where the profitability in the dependent variable is Net Profit Margin while the independent variables are the Debt-to-Equity Ratio (DER), Debt Ratio, Equity Ratio and Debt to Capital Ratio.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will focus on explaining and examining the writing and the explanation on the independent variables and the relationship between the financial leverage on profitability. Generally, financial leverage refers to the amount of money used to finance asset for a company. The level of leverage for each company depends on the level of the debt consumption and equity in their own company.

Other than that, the profitability ratio is being used to measure the level of efficiency of a company. Profitability ratios are a class of financial metrics that are used to assess a business's ability to generate earnings relative to its revenue, operating cost, balance sheet assets, or shareholders equity over time, using data from a specific point in time.

In this chapter, it will go into definition on the theory and the mechanism for leverage ratios which is debt, equity debt to equity and debt to capital in order to understand about the effect of the leverage on profitability. On this chapter also, we will include the relationship between the leverage on profitability based on the past researchers.

2.2 Financial Leverage on Profitability

Many finance professors believe that financial leverage is the most essential factor influencing a firm's profitability, above all others. Most companies use a debt and equity to fund their assets and it is critical for any company's manager to use that combination. In general, financial leverage is defined as the ratio of a corporation's total debts to its total assets. The financial leverage ratio shows how much borrowed money a company has used to fund its capital structure. Higher financial leverage benefits the firm during an economic boom phase; however, during an economic downturn, this financial leverage has a detrimental impact on the company's profitability. When economic is decreasing, it may cause cash flow issues and the companies may be unable to pay its interest. Leverage is a financial strategy planning

tool that assists in increasing the rate of return by creating a higher return on borrowed money than the cost of using that money. If a firm's return on assets exceeds its before-tax interest rate on debt, we can argue that leverage is positive. If the firm's return on assets is less than the before-tax interest rate, we can say that leverage is negative (Larry and Stulz, 1995). Other than that, financial leverage also affects the profit after tax or earnings per share.

Wald (1999) suggested in his research study that the debt-to-asset ratio has a substantial negative relationship with corporate profitability. Sheel (1994) found a negative relationship between debt to assets ratio and firm previous profitability in his study. Deesommsak (2004) also found a negative relationship between financial leverage and net profit margin. Larry and Stulz (1995) conducted a study on the effect of debt on enterprises in Ghana, which found a positive significant relationship between total debt and total assets, as well as net profit margin. It demonstrates that the study found both a negative and positive influence of financial leverage on profitability.

2.3 Debt Ratio

The word debt ratio refers to a financial ratio that gauges the level of a company's indebtedness and is calculated by dividing total debt by total assets. The impact of liabilities on corporate investment decisions has received a lot of attention in the field of corporate finance. The Modigliani-Miller Theorem (MM Theorem) states that in a perfect market, the quantity of liabilities has no effect on business investment behavior. In a nutshell, there is no correlation between fund procurement and debt ratio. However, it involves a detrimental influence of liabilities on business management in two ways. First, increased obligations increase the risk of bankruptcy. Following that, larger loans result in increased interest payment pressures, reducing cash on hand; hence debt has a detrimental influence on the investment activities of companies that have attractive investment possibilities. This is known as the "debt overhang hypothesis" (Myers,1977, Hart,1995).

According to Majumdar and Chhibber (1999), a test was performed to demonstrate that debt has a negative effect on profitability factors such as return on asset, return on equity, and net profit margin. Berger and Bonaccorsi (2006), on the other hand, conducted a test that revealed a favorable influence of debt ratio on profitability. Finally, Baum et al. confirmed a test that demonstrated a non-significant effect (2007). Several considerations may disclose causes for the contradictory outcomes in empirical research where the debt ratio is seen differently in terms of profitability.

2.4 Equity Ratio

According to Investopedia, the shareholder's equity is the net sum of an undertaking's total assets and liabilities stated in its statement of financial position. The shareholder equity ratio indicates how much of a company's assets have been generated by issuing shares rather than by taking on debt. It indicates the lower the ratio result, the more debt of a company has used to pay for its assets. The closer a firm's ratio result is to 100%, the more assets it has financed with stock rather than debt. The ratio is an indicator of how financially stable the company may be in the long run. Asma Salman and Nauman Munir (2012) have performed a research analysis on the option of debt and capital and its effect on business performance. The findings shown are more positive relationship for this sample of equity finance. However, on the result from another researcher which is Gatchev (2009) shows that it has a negative relationship between profitability.

2.5 Debt-to-Equity Ratio

The debt-to-equity ratio is a metric used in corporate finance to assess a firm's financial leverage. It is a measure of the extent to which a corporation finances its operations through debt versus fully owned capital. It expresses the ability of shareholder equity to satisfy all outstanding debts in the case of a business downturn. The higher these ratios, the more funds that must be guaranteed by personal capital (Rudianto, 2013). According to Hantono (2015)'s research, the debt-to-equity ratio has a considerable effect on the return on equity, return on asset and net profit margin which are the profitability measure. Other than that, in China, Yuan and Kazuyuki (2011) carried out a study on the impact of the debt ratio on profitability. Using example of Chinese scheduled firms presented that total debt ratio had a negative impact on profitability. Additional if debt is employed in the capital structure of a firm, the business risk will also increase. Next, the results for the findings from Lusy, Hermanto, Panjaitan & Widyastuti (2018) shows that the debt-to-equity ratio has a significant effect on returns on equity. This ratio basically wants to separate the organizations equity from the organization debt. Basically this ratio shows the organizations replacement of total equity and total income. The link between total capital and total debt is represented by this ratio.

2.6 Debt-to-Capital Ratio

This ratio basically is a liquidity metric where it can compare a organizations total commitments to total capital compares the proportion of debt used to finance an organizations operations to its capital. Because it emphasizes the relationship between debt and equity funding, this ratio is a true indicator of risk and allows us to determine how effectively a company can endure a sales downturn. For the debt to capital ratio, the business with high ratios for debt to capital is considered risk as it must retain the same amount of income to meet the debt payment obligations. For this ratio, greater than 0.6 implies that the company owes far than it owns. The results for the findings from Kenn-Ndubuisi (2019) shows that the debt to capital ratio has an insignificant relationship with the profitability. Next, the results obtain by Juliet I, Onyema JI (2018) shows that it has a positive relationship with the profitability.

2.7 Theoretical / Research Framework

INDEPENDENT VARIABLES

Debt Ratio

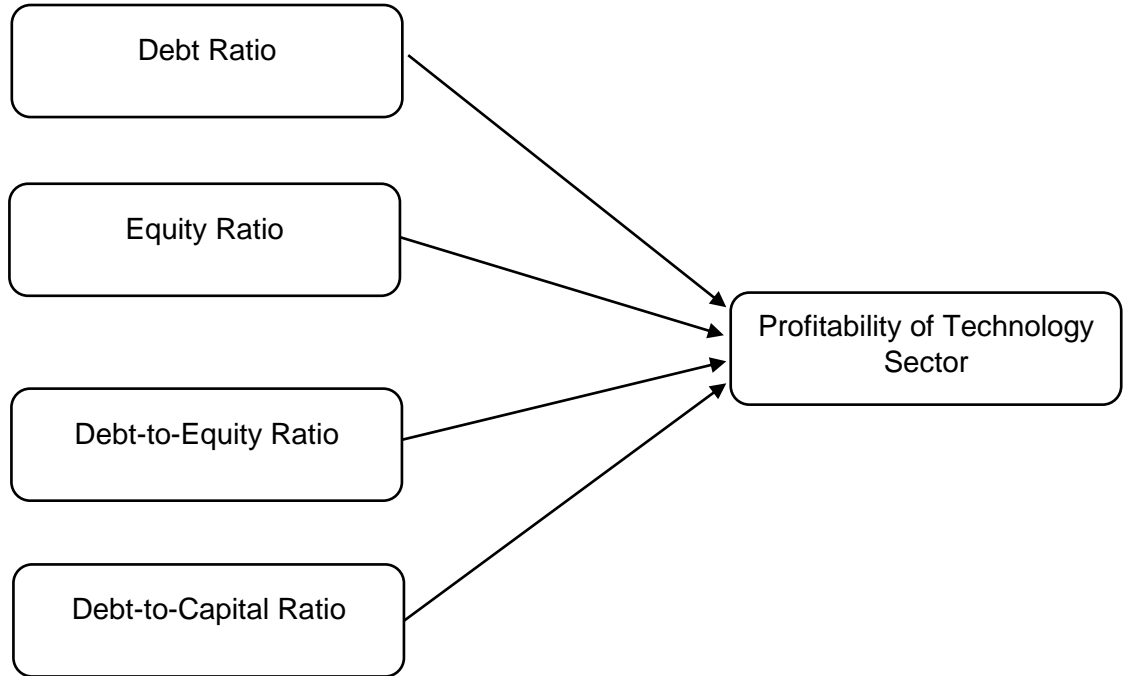
Equity Ratio

Debt-to-Equity Ratio

Debt-to-Capital Ratio

DEPENDENT VARIABLE

Profitability of Technology Sector



2.8 Summary

The chapter contains a summary of the link between profitability which is our dependent variables, and the elements included in the research, such as debt ratio, equity ratio, debt to equity ratio and debt to capital ratio. The chapter explains on the relationship between those dependent variables and independent variables based on the past researchers. It provides comprehensive research study based on facts and information from journals and reports.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is one of the ways to solve the problem of research. The research can accomplish their objectives of the studies by choosing several methods, procedures, and models of research methodology. It must employ the best way to illustrate clearly if the independent variable has a substantial or insignificant connection with the dependent variable as well as whether the relationship is positive or negative.

In this research, the study will be carried out using secondary data and collected from various sources such as annual report, Thomson Reuters Eikon and Bursa Malaysia. Each data was collected for ten years from 2011 to 2020.

3.2 Sampling

Financial institutions listed on the Bursa Malaysia are included in the population and sampling. There are other institutions listed on Bursa Malaysia; nevertheless, only four (4) were chosen. This is due to the fact that the data for all companies is sufficient. This study spans the years 2011 through 2020, with data collected over ten (10) years. A panel data regression model is employed for this investigation, with both cross section and time dimensions incorporated in the model.

3.3 Data Collection

This study basically based on secondary data from the secondary sources. Secondary sources are research materials that use primary data to address research problems and collect information, such as annual reports, databases, other journals, papers, and so on. The data was gathered from four (4) selected companies in the technology industry that are listed on the Bursa Malaysia.

3.3.1 Annual Report

The data used to calculate the ratios of the listed technology sector's companies will be gathered from the company's annual report on an annual basis for each year covered in this research. Each data set was collected between 2011 and 2020.

3.3.2 Thomson Reuters Eikon

Furthermore, because UiTM has previously subscribed to the DataStream, this research makes use of Thomson Reuters DataStream to discover some reliable material to include in the research. Thomson 31 Reuters DataStream is a framework that provides extensive and detailed financial content, all inside a workspace adapted to the user's needs and workflow. The worldwide financial and macroeconomic information portal provides data on equities, currencies, and other topics for 175 countries, including Malaysia, and 60 markets.

3.3.3 Bursa Malaysia

Bursa Malaysia Berhad is headquartered in Kuala Lumpur, Malaysia. It is the country's stock exchange, which offers a variety of market-related products and services to enterprises, organisations, and governments that have been approved by Section 15 of the Capital Markets and Services Act 2007 to sell shares to the public. This study has chosen four (4) companies from the technology industry that are listed on the Bursa Malaysia. Table 1 shows the companies that were chosen:

No.	Company Name	Acronym
1.	Malaysia Pacific Industries Berhad	MPI
2.	ViTrox Corporation Berhad	VITROX
3.	Unisem (M) Bhd	UNISEM
4.	Inari Amertron Berhad	INARI

Table 1: List of companies in the technology sector in Malaysia

Source: Bursa Malaysia

3.4 Variables

A variable is a concept or procedure whose value changes or varies. Based on variables, there are four primary variables: independent variables, moderating variables, and mediating variables. This study will employ two sorts of variables: dependent variables and independent variables.

A dependent variable is one that is influenced by independent variables. The dependent variable in this analysis is net profit margin. It will correspond to the company's profitability. The measurement for net profit margin is:

$$\text{Net Profit Margin} = \text{Net Income} / \text{Net Sales} \times 100$$

An independent variable is one that has an effect on the dependent variable, either positively or negatively. The debt-to-equity ratio, debt ratio, equity ratio, and debt-to-capital ratio are the independent variables in this research. The following information is provided for independent variables:

Table 2: Independent Variables

Variables	Measurement
Debt Ratio	Total Debt / Total Assets
Equity Ratio	Total Equity / Total Assets
Debt to Equity Ratio	Total Debt / Total Equity
Debt to Capital Ratio	Total Debt / Total Equity + Total Debt

3.5 Research Design

A research design is a series of rational decisions that make choices about the goal of the study, the forms of investigation, the study setting, and the unit of analysis. The purpose of this research is to explore hypotheses about the impact of various variables on the profitability of Malaysia's technology sector.

3.5.1 Purpose of Study

The research might also be exploratory, analytical, theoretical, or case study based. This study employs an overview of hypothesis testing. The study's goal is to examine the financial firm's vulnerability to leverage management in the setting of an economic firm listed on the Bursa Malaysia. The influence of leverage on the company's sales revenue, according to Hussan (2016). As loan funding increases, the company's sales income rises, indicating that the company will be profitable in the future. In other words, if the leverage reduces the company's sales revenue, the company's potential liabilities increase.

3.5.2 Types of Investigation

There are two kinds of research: causal and correlative. Because the variables' relationships are associated, the types of studies used for this research are known as correlations. This study aims to offer access to the leverage effect of the debt ratio, equity ratio, debt to equity ratio, and debt to capital ratio in order to evaluate the effects of leverage management on the profitability of Malaysian technology enterprises.

3.5.3 Study Setting

Study settings can be allocated to one of two classes: customized and unconfigured. This study is based on secondary data from an annual report, Thomson Reuters DataStream, and the Bursa Malaysia. As a result, the study is conducted in a non-contrived setting where it occurred in a natural and continuous manner.

3.5.4 Unit of Analysis

The company used by the researcher to collect data is referred to as the analysis unit. This is because the researcher compares the findings of four (4) selected companies in the technology sector that are listed on the Bursa Malaysia.

3.6 Hypothesis Statement

Debt Ratio

H0: Debt Ratio has no significant relationship with the profitability of the technology sector in Malaysia

H1: Debt Ratio has a significant relationship with the profitability of the technology sector in Malaysia

Equity Ratio

H0: Equity Ratio has no significant relationship with the profitability of the technology sector in Malaysia

H1: Equity Ratio has a significant relationship with the profitability of the technology sector in Malaysia

Debt-to-Equity Ratio

H0: Debt-to-Equity Ratio has no significant relationship with the profitability of the technology sector in Malaysia

H1: Debt-to-Equity Ratio has a significant relationship with the profitability of the technology sector in Malaysia

Debt-to-Capital Ratio

H0: Debt-to-Capital Ratio has no significant relationship with the profitability of the technology sector in Malaysia

H1: Debt-to-Capital Ratio has a significant relationship with the profitability of the technology sector in Malaysia

3.7 Research Methodology

The relationship between variables may also be used in this study to analyze the influence towards the profitability of the companies in technology sector in Malaysia. The data used in this study is collected from annual report, and Thomson Reuters Eikon for each variable. There are many analyses to be carried out using the panel data analysis method, including descriptive analysis, correlation analysis, multicollinearity test and regression analysis.

3.7.1 Descriptive Analysis

Descriptive statistics is the most straightforward method of inferring measurements and depicting the essential properties of the data in the study. The most frequent descriptive analytic methods to characterize the data set are mean, median, and mode for the central trend, and standard deviation, variance, minimum and peak variables, and skewness for dispersion.

The function is used to assess the average value of the data category, and the mean is used to evaluate the central tendency. The median is used to identify the data group's midway value, and the data is arranged from smallest to biggest series. The last one is called mode. This is the value that appears the most in the sample.

When it comes to dispersion, the usage of variance and standard deviation is used to assess the dispersion or distribution of raw data based on its mean. However, because the standard deviation is equal to the square root of the variance, the unit's standard deviation would be the same as its original values. In reality, a narrow spread is preferable since the data are more tightly connected, resulting in a more linear connection. The minimum and maximum variables are the sample's smallest and greatest values. Furthermore, kurtosis examines the peak, outlier, or tail of a normal distribution. Skewness is a measure of the asymmetry 36 of a normal distribution. (Kaur, Stoltzfus, & Yellapu, 2018).

3.7.2 Correlation Analysis

Correlation analysis is a statistical approach for determining the strength of a connection between two numerically measured continuous variables (e.g., height and weight). This type of study is useful when a researcher wants to examine whether there are any likely correlations between variables. This test basically can be misunderstood sometimes as it can identify cause and effect. In this case researchers should look for other important independent variables in order to achieve a more reliable study result. The hypothesis is as below:

$$H_0: \rho = 0$$

$$H_1: \rho \neq 0$$

3.7.3 Multicollinearity Test

The presence of strong intercorrelations between two or more independent variables in a multiple regression model is referred to as multicollinearity. When a researcher or analyst seeks to identify how well each independent variable can be used most effectively to predict or explain the dependent variable in a statistical model, multicollinearity can lead to skewed or misleading conclusions. In this study, the researcher used the correlation coefficient r to determine if there is a low correlation or a high multicollinearity. If the r value is less than 0.8, there is a low correlation, but if it exceeds 0.8, there is a strong multicollinearity (Keshminder, 2019).

H₀: There is no multicollinearity problem

H₁: There is multicollinearity problem

3.7.4 Regression Analysis

Regression analysis is a powerful statistical method for investigating the relationship between two or more variables of interest. While there are several types of regression analysis, they always focus on how one or more independent variables influence a dependent variable.

Panel Least Square

The "least squares" approach is a type of mathematical regression analysis that determines the best fit line for a collection of data, displaying the connection between the points visually. The link between a known independent variable and an unknown dependent variable is represented by each piece of data.

F – test

To calculate the overall meaning value between the dependent and independent variables, the F-test is utilized. When researchers evaluate fitted statistical models with data sets, the most fitting model with the population is typically picked, according to (Editor, 2015).

T – test

The T-test is used to determine if the independent variables are related to the dependent variable. The test is to calculate the true value of the independent variables either its positive or negatively related relationship. To calculate the T – test, the approximate formula regression value of the standard deviation is required.

Coefficient of Determination (R^2)

R-squared is a goodness-of-fit statistic for linear regression models. This graph depicts the percentage of variance in the dependent variable that the independent factors account for when all components are included. R-squared estimates the strength of the correlation between your model and the dependent variable on a convenient 0–100 percent scale.

3.8 Summary

In summary, this chapter discusses the sample and data collected in order to suit the required template for this analysis. It also describes the theoretical context for the analysis and the research architecture, which explains the basic phase of the research. Aside from that, Chapter 3 frequently refers to the study theory as well as the test technique, which comprises descriptive analysis, association analysis, regression analysis, and inference management.

CHAPTER FOUR

RESEARCH ANALYSIS

4.1 Introduction

The hypothesis supported by the empirical results of all experiments carried out, which are evaluated after several studies have been carried out on the data collected, will be explained, and addressed in this chapter. To determine the relation between independent and dependent variables, the tests are conducted using E Views software. The approach used in this study is descriptive analysis, correlation analysis, multicollinearity test, and regression analysis. This study uses the data from secondary data from the website. We retrieve all the data from Eikon Thomson Reuters and Annual Report of the company.

4.2 Descriptive Analysis

	NPM	DR	ER	DCR	DER
Mean	13.60500	8.891750	69.18500	11.51925	14.43900
Median	13.00000	7.180000	71.62000	9.525000	10.53000
Maximum	28.90000	29.05000	83.44000	33.45000	50.26000
Minimum	-11.00000	0.000000	42.43000	0.000000	0.000000
Std. Dev.	9.295241	7.471713	11.08161	9.395360	13.79519
Skewness	-0.320792	1.270319	-0.759696	0.970490	1.309974
Kurtosis	2.892267	4.079934	2.542786	2.959430	3.722319
Jarque-Bera	0.705392	12.70184	4.195991	6.281754	12.30978
Probability	0.702791	0.001745	0.122702	0.043245	0.002123
Sum	544.2000	355.6700	2767.400	460.7700	577.5600
Sum Sq. Dev.	3369.659	2177.234	4789.284	3442.639	7421.988
Observations	40	40	40	40	40

Table 4.2

Notes: The dependent variable is Net Profit Margin. The independent variables are Debt Ratio, Equity Ratio, Debt to Capital Ratio, and Debt to Equity Ratio

Based on the table 4.2, the results show descriptive analysis of the panel data for the net profit margin as a dependent variable and debt ratio, equity ratio, debt to capital ratio and debt to equity ratio as an independent variable. The sample period use in this study is annually data from year 2011 to year 2020. The table above shows the values of mean, median, maximum, minimum and standard deviation for each of the variables. Mean identify the average value while for minimum and maximum value identify the lowest and highest value of the variables while for the standard deviation, it indicates the quantity of variation for the set of values.

For the dependent variable which is net profit margin, it shows that the mean is 13.605 and the greatest percentage recorded at 28.9 and the lowest at -11 percent. During these ten 10 years, the average NPM was 13%. The standard deviation is 9.295241 while for the data skewness is -0.320792. Basically, it shows that profitability distribution is negative in value and that the profitability distribution has a greater tail on the left.

The debt ratio is the first independent variable in this study. This independent variable has an average value of 8.891750. This DR's greatest percentage recorded is 29.05000, while the smallest % recorded is 0. The debt ratio has a standard deviation of 7.471713, indicating that it deviates from the mean.

The next independent variable is the equity ratio, which has an average value of 69.18500. This independent variable has a maximum percentage of 83.44000 and a minimum percentage of 42.43000. This independent variable's standard deviation is 11.08161, indicating that it is separated from its mean.

The third independent variable is the debt to capital ratio, which has a mean of 11.51925. The highest recorded percentage is 33.45000, while the lowest recorded percentage is 0. The debt to capital ratio has a standard deviation of 9.395360, indicating that it is scattered from its mean.

The debt-to-equity ratio is the final independent variable in this research. The mean for this independent variable is 14.43900, the greatest percentage recorded is 50.26000, and the smallest percentage is 0. This independent variable's standard deviation is 13.79519, indicating that it is separated from its mean.

The skewness of NPM and ER is negative, indicating that the probability distribution is negative in value and that the probability distribution of the data has a larger tail on the left. Meanwhile, the skewness for DR, DCR, and DER is positive, indicating a positive probability distribution with a large tail on the right.

The debt ratio and debt to equity ratio have a kurtosis value more than 3, indicating that the dataset has a heavier distribution than a normal distribution (more in the tails). Meanwhile, a value less than 3 for NPM, ER, and DCR indicates that the dataset has lighter tails than a normal distribution (less in the tails).

4.3 Correlation Analysis

Covariance Analysis: Ordinary
 Date: 12/29/21 Time: 23:03
 Sample: 2011 2020
 Included observations: 40

Correlation		NPM	DR	ER	DCR	DER
t-Statistic						
Probability						
NPM		1.000000				

DR		-0.547435	1.000000			
		-4.032534	-----			
		0.0003	-----			
ER		0.451553	-0.627834	1.000000		
		3.119724	-4.972374	-----		
		0.0034	0.0000	-----		
DCR		-0.532967	0.977163	-0.758934	1.000000	
		-3.882862	28.34764	-7.184611	-----	
		0.0004	0.0000	0.0000	-----	
DER		-0.549863	0.978886	-0.735675	0.993701	1.000000
		-4.058137	29.52085	-6.695371	54.66002	-----
		0.0002	0.0000	0.0000	0.0000	-----

Table 4.3

The goal of correlation study is to discover the relationship between variables. Table above shows the displays of the correlation matrix between the changes in the dependent variable and the independent factors. Near -1 shows a significant negative link while +1 meaning that a strong positive relationship. Value of 0 meaning no link between variables and 5% is the level of significance.

According to the results, the DR and NPM have a moderate negative association with a value of -0.547435, which is the closest to the value of -1, indicating that they have a moderate negative relationship. The probability values of DR for the level of significance are 0.0003, which is less than 5% of the level of significance. This implies that DR and the NPM have a significant link.

Next, there is a moderate positive link between ER and NPM, with a value of 0.451553, indicating that they have a moderate positive relationship. Meanwhile, the probability values of ER for the level of significance are 0.0034, which is less than 5% of the level of significance. This implies that there is a strong link between ER and the NPM.

The DCR and NPM have a moderate negative association, with the value of -0.532967 being the closest to the value of -1, indicating that they have a moderate negative relationship. The probability values of DCR for the level of significance level are 0.0004, which is less than 5% of the threshold of significance, indicating that there is a significant association between DCR and NPM.

Finally, there is a moderate negative link between DER and NPM, with a score of -0.549863, indicating a moderate negative relationship. Meanwhile, the probability values of the DER for the level of significance are 0.0002, which is less than 5% of the level of significance. This implies that DER and NPM have a substantial link.

Based on the results above, it shows that there are 3 independent variables that have a negative association with the dependent variables, and one has a positive relationship with NPM. For the level of significance, all of it have a substantial link with the dependent variable

4.4 Multicollinearity Test

Variance Inflation Factors
Date: 12/29/21 Time: 23:05
Sample: 2011 2020
Included observations: 40

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	550.3864	389.8347	NA
DR	1.865795	176.4163	71.93195
ER	0.085946	298.6721	7.288724
DCR	2.521107	390.6341	153.6864
DER	0.681166	190.1077	89.52119

Table 4.4

To examine the multicollinearity in the E-views, the Variance Inflation Factors were applied (VIF). The VIF is a method for measuring the degree of multicollinearity by examining how well all of the other explanatory variables in the equation explain a specific explanatory variable. As a result, this test employs the rule of thumb that if the VIF is less than 10, the multicollinearity is severe. According to the findings of the centred VIF in the figure above, ER is the only independent variable with a VIF less than 10. Other three independent variables, DR, DCR, and DER, have VIF values more than 10, indicating a major multicollinearity problem. Thus, DR, DCR and DER may have multicollinearity.

4.5 Regression Analysis

Dependent Variable: NPM
 Method: Panel Least Squares
 Date: 12/29/21 Time: 23:04
 Sample: 2011 2020
 Periods included: 10
 Cross-sections included: 4
 Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-37.13431	23.46031	-1.582856	0.1224
DR	-3.017995	1.365941	-2.209462	0.0338
ER	0.686406	0.293166	2.341353	0.0250
DCR	3.705309	1.587799	2.333613	0.0255
DER	-0.872415	0.825328	-1.057053	0.2977
R-squared	0.413417	Mean dependent var		13.60500
Adjusted R-squared	0.346379	S.D. dependent var		9.295241
S.E. of regression	7.514906	Akaike info criterion		6.988123
Sum squared resid	1976.584	Schwarz criterion		7.199233
Log likelihood	-134.7625	Hannan-Quinn criter.		7.064453
F-statistic	6.166908	Durbin-Watson stat		0.398923
Prob(F-statistic)	0.000727			

Table 4.5

Regression analysis is used to assess the connection between more than two variables and to determine if independent factors explain the influence of the dependent variable. Table 4.5 displays the outcome of the regression analysis. The reported findings may be explained by evaluating the econometrics formula. The regression formula derived by test is as follows:

$$\text{NPM} = -37.1343068256 - 3.01799531482 \cdot \text{DR} + 0.686405804913 \cdot \text{ER} + 3.70530875449 \cdot \text{DCR} - 0.872414766736 \cdot \text{DER}$$

According to the equation above, equity ratio and debt to capital ratio have a positive association with net profit margin, however the other two independent variables, debt ratio and debt to equity ratio, have a negative correlation with technology sector profitability.

4.5.1 T-test

Debt Ratio

The debt ratio coefficient value is -3.017995. It is assumed that for every one percent rise in debt ratio, the profitability of the technology sector will decline by -3.018 percent, provided all other parameters stay equal. The debt ratio has a p-value of 0.0338, which is less than the 5% level of significance. This discovery was successful in rejecting the null hypothesis. It indicates that there is a substantial association between debt ratio and technology sector profitability.

Equity Ratio

The equity ratio coefficient value is 0.686406. It is assumed that for every one percent rise in equity ratio, the technology sector's profitability will improve by 0.684 percent, provided all other parameters stay unchanged. The equity ratio p-values are 0.0250, which is less than the 5% level of significance. This discovery was successful in rejecting the null hypothesis. It indicates that there is a substantial association between equity ratio and technology sector profitability.

Debt to Capital Ratio

The debt-to-capital ratio coefficient value is 3.705309. It is assumed that for every one percent rise in debt to capital ratio, the technology sector's profitability will improve by 3.705 percent, providing all other parameters stay unchanged. The debt-to-capital ratio p-value is 0.0255, which is less than the 5% level of significance. This discovery was successful in rejecting the null hypothesis.

Debt to Equity Ratio

The debt-to-equity ratio coefficient value is -0.872415. It is assumed that for every one percent rise in debt-to-equity ratio, the technology sector's profitability will decline by -0.872 percent, provided all other parameters stay unchanged. The p-values for the debt-to-equity ratio are 0.2977, which is greater than the 5% level of significance. The null hypothesis was not rejected as a result of this discovery. It indicates that there is no substantial association between debt-to-equity ratio and technology sector profitability.

4.5.2 F-test

Based on table 4.5, the F-statistic value is 6.166908 and the F-statistic P-value is 0.000727. Because the value has a significance level less than 5%, the null hypothesis must be rejected. As a result, it is concluded that at least three independent variables are beneficial in influencing the profitability of the technological industry.

4.5.3 Coefficient of Determination (R-squared)

It is used to show the percentage of total sum of squares variance where it will be explained by regression equation. According to the data, the R-squared is 0.413417, which suggests that the independent variables debt ratio, equity ratio, debt to capital ratio, and debt to equity ratio can explain 41.3417 percent of the dependent variable, which is the profitability of the technology sector. Other factors can account for the remaining 58.6583 percent.

The Adjusted R-squared is used to calculate the proportion of a dependent variable's variation around its mean. The figure above displays the findings of Adjusted R-squared using panel data, which is 0.346379, which suggests that 34.6379 percent of the dependent variable, which is the profitability of the technology sector (Net Profit Margin), can be explained by the independent variables chosen.

4.6 Summary

In summary, all the data have been shown in this chapter where it has 4 test. To analyse the data for this study, the outcomes of the analysis were doing in the E-views.

All of our findings in this study can answer the research goals since they indicate a link between debt ratio, equity ratio, debt to capital ratio, and debt to equity ratio and technology sector profitability.

The tests show that the independent variables are relevant to the dependent variable (Profitability of Technology Sector), as evidenced by a P-value less than 5%. There is just one independent variable, which is the debt-to-equity ratio, which is greater than 5%, indicating that it is inconsequential to the profitability of the technology sector.

The independent variables ER and DCR demonstrate a positive association with the dependent variable, which is the profitability of the technology sector. Meanwhile, DR and DER demonstrate a negative association with the profitability of the technology industry.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter will focus on the conclusion of this research based on the objective of the study which is to determine the variables for Profitability of Technology Sector and the hypothesis of this study. This chapter will be based on the study from the previous chapter which is Chapter 1 until the findings that obtained from the analysis which is required in Chapter 4. The flow of this chapter will start with the conclusion and recommendation. Lastly, the recommendations in this chapter will help other researcher to make research of the relevant topic in the future.

5.2 Conclusion

This study is to determine whether the financial leverage have an influence towards the profitability of technology sector in Malaysia. The dependent variable in this study is profitability of technology sector (Net Profit Margin) while debt ratio, equity ratio, debt to capital ratio and debt to equity ratio are the independent variables for this study. The sample period for this research is annually from year 2011 to year 2020.

The findings revealed that DR has a substantial association with the profitability of the technology industry. This conclusion addresses the research purpose of examining the association between DR and profitability in the technology industry.

Following that, the results revealed that ER had a substantial association with the profitability of the technology industry. This conclusion addresses the research purpose of examining the association between ER and profitability in the technology industry.

The following independent variable is DCR, which has a substantial association with the profitability of the technology industry. This conclusion addresses the research purpose of examining the association between DCR and profitability in the technology industry.

The final independent variable, DER, has a negligible connection with the profitability of the technology industry. This conclusion addresses the research purpose of examining the link between DER and profitability in the technology industry.

Based on the findings of this study, all independent factors are relevant to the dependent variable, which is the profitability of the technology sector, with the exception of debt-to-equity ratio, which is negligible to the dependent variable. Aside from that, ER and DCR show a positive link with dependent variables, however the other two independent variables, DR and DER, indicate a negative relationship with the profitability of the technological sector. It shows that in this study, the financial leverage has an influence toward the profitability of Malaysia's technology sector.

5.3 Recommendation

1. Adding more variables

By adding another different variable, it is suggested to do additional research on this topic. It may ultimately allow the researcher to gain more meaning from the relationship between leverage and profitability by introducing more variables to the analysis. Therefore, more studies with additional independent variables strongly recommended.

2. Replicating and expanding the study to other sectors

The findings of this study cannot be generalised since it's only emphasis in Malaysia on the technology field. Further studies will, however, attempt to overcome this limitation by replicating and extending the study to other sectors in Malaysia, such as the construction or banking sectors. This will allow cross-sector comparisons and recognise potential best practises in the decision-making process for the capital structure. It also clearly indicates from the findings of this study that more analysis should be considered in order to explore the relationship between leverage and profitability.

5.4 Summary

This chapter's conclusion is based on the overall input that may emphasise the major point of the investigation. The proposals also emphasise the need of future scholars conducting research on relevant themes.

REFERENCES

- Florinita Duca (2012). The impact of Financial Leverage to Profitability Study of Companies Listed in Bucharest Stock Exchange.
- Ahmad, N., Salman, A., & Shamsi, A. (2015). Impact of financial leverage on firms' profitability: An investigation from cement sector of Pakistan. *Research Journal of Finance and Accounting*, 6(7), 2222-1697.
- Salman, A., & Munir, N. (2012). Choice between debt and equity and its impact on business performance. *International Journal of Organizational Innovation*, 5(1), 284-295.
- Nasution, A. E., Putri, L. P., & Dunga, S. (2018). The Effect of Debt-to-Equity Ratio and Total Asset Turnover on Return on Equity in Automotive Companies and Components in Indonesia. *Advances in Economies, Business and Management Research (AEBMR)*, 92, 182-188.
- Al-Shubiri, F. N. (2012). Debt ratio analysis and firm investment: Evidence from Jordan. *International Journal of Economics and Financial Issues*, 2(1), 21.
- Kebewar, M. (2012). The effect of debt on corporate profitability: Evidence from French service sector. *Available at SSRN 2191075*.
- David Chesang (2016). Effect on Financial Leverage on Profitability of Listed Agricultural Firms at the Nairobi Securities Exchange
- Enekwe, C. I., Agu, C. I., & Eziedo, K. N. (2014). The effect of financial leverage on financial performance: Evidence of quoted pharmaceutical companies in Nigeria. *Journal of economics and finance*, 5(3), 17-25.
- Dita, A. H., & Murtaqi, I. (2014). The effect of net profit margin, price to book value and debt to equity ratio to stock return in the Indonesian consumer goods industry. *Journal of Business and Management*, 3(3), 305-315.
- Hayes, A. (2022, January 21). *What is a debt ratio?* Investopedia. Retrieved February 3, 2022, from <https://www.investopedia.com/terms/d/debtratio.asp>

Hayes, A. (2021, December 30). *The importance of profitability ratios*.

Investopedia. Retrieved February 3, 2022, from

<https://www.investopedia.com/terms/p/profitabilityratios.asp>

Hargrave, M. (2021, December 30). *How to best use the debt-to-capital ratio*.

Investopedia. Retrieved February 3, 2022, from

<https://www.investopedia.com/terms/d/debt-to-capitalratio.asp>

Fernando, J. (2022, January 1). *Debt-to-equity (D/E) ratio*. Investopedia.

Retrieved February 3, 2022, from

<https://www.investopedia.com/terms/d/debtequityratio.asp>

Hayes, A. (2021, May 19). *Understanding the shareholder equity ratio*.

Investopedia. Retrieved February 3, 2022, from

<https://www.investopedia.com/terms/s/shareholderequityratio.asp>