

DETERMINANTS OF FIRM VALUE IN THE  
MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL  
ANALYSIS OF FIRM CHARACTERISTICS

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BY

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- (3) Equal contribution has been made by each member in completing the FYP.
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LIST OF ABBREVIATIONS

CS	Capital Structure
EVIEW	Econometric Views
FEGLS	Fixed Effect Generalized Least Square
FEM	Fixed Effect Model
FG	Firm Growth
FS	Firm Size
GLS	Generalized Least Square
ID	Investment Decision
POLS	Pooled Ordinary Least Square
PROF	Profitability
REM	Random Effect Model
ROA	Return on Assets

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## PREFACE

This study is significant for completing our undergraduate course, Bachelor of Finance (Hons) Research Project, offered by University Tunku Abdul Rahman. The topic of this study is “Determinants of Firm Value in Malaysian Property Sector: An Empirical Analysis of Firm Characteristics.” Thus, this study is carried out to find out what firm characteristics will have a direct significant impact on firm value in the Malaysian property sector.

Due to the volatility in firm value has introduced challenges and uncertainties to the Malaysian economy and the property sector in Malaysia also serves an essential function in boosting the economy. Therefore, it is critical to perform a specific study to identify the influence of these characteristics on property industry firms. Understanding these relationships can help property industry firms improve their internal circumstances, making them more resilient to macroeconomic uncertainty and more prepared to face the difficulties of the property market.

However, this study determines whether firm characteristics will have a direct significant impact on firm value in the Malaysian property sector. This study studies the impact of five characteristics, which are capital structure, profitability, firm size, investment decision and firm growth. This study can offer scholars the chance to go deeper into their comprehension, investigate novel approaches, and add to the scholarly conversation, promoting cooperation and expanding knowledge within the academic community.

## ABSTRACT

In the competitive landscape of Malaysia's property sector, maintaining a strong firm value is crucial for attracting investors and ensuring stability. However, there has been a concerning decline in market capitalization from 2017 to 2020, highlighting the need for firms to strategically leverage their controllable characteristics to enhance their value. This study conducts empirical analysis on five key firm characteristics—profitability, capital structure, firm size, investment decisions, and firm growth—and their impact on firm value for publicly listed property firms in Malaysia. This study employs signalling theory to examine how firm characteristics affect firm value. Also, the study used secondary data provided by Refinitiv software focusing on 76 out of 100 property firms listed on Bursa Malaysia for the period from 2005 to 2019. Fixed effect generalized least square model was employed to study the relationship between firm characteristics and firm value. From the empirical results, our findings showed that profitability and firm growth positively influence firm value, while the capital structure, firm size and investment decision negatively influence firm value in Malaysian property sector. This research offers insights for property firms to increase firm value and attract investors by leveraging these firm characteristics effectively.

## **CHAPTER 1: INTRODUCTION**

### **1.0 Introduction**

In the opening chapter, the background of this study is initially explored. This is followed by explain the issue related to this study with the description of the problem statement. After that, the objectives of the study, the research questions, and the significance of the study are stated respectively. Subsequently, the conclusion summaries for chapter 1 are presented.

### **1.1 Reasearch Background**

#### **1.1.1 Overview of Firm Value**

Firm value, also known as enterprise value or market capitalization, is a financial metric that represents the total worth of a firm in the eyes of investors and the market and the firm's performance. It is the worth or valuation of a business at a specific date (Jihadi et al., 2021). In theory, it represents the sum required to acquire and assume control of a business entity. Like an asset, the firm's valuation can be assessed either based on its book or market value (Tyochir et al., 2022). In most cases, it pertains to the market value of a firm. Thus, a notable and meaningful correlation exists between a firm's financial performance and value. Investors predominantly rely on the strong financial performance of a firm when making investment

choices. When a firm's financial performance improves, it is anticipated that its value will also increase (Jihadi et al., 2021).

Investigating the firm value is essential for making an informed investment decision, evaluating financial performance, and facilitating various corporate transactions (Angrist et al., 2019). It offers a thorough and measurable evaluation of a firm's worth, enabling stakeholders to make well-informed choices and accurately evaluate its financial well-being and future potential. Looking ahead, the firm's ultimate objective is to optimize its overall value, aiming to achieve a higher level of prosperity for its owners. This enhanced firm value holds significant importance for investors as it directly reflects the shareholders' and investors' financial well-being and success (OECD, n.d.). Consequently, stakeholders will continue to focus on the firm value as a crucial metric for assessing its performance and potential. Thus, the evaluation of a firm's performance is discernible through an analysis of its capital structure and profitability. Investors typically perceive a strong correlation between the firm value and the stock price, suggesting that a higher stock price also leads to a higher firm value (Beattie, 2023). The firm's primary objective is maximizing its assets or overall value which increase the firm size. Thus, they enhance shareholders' prosperity which is directly aligned with increasing the firm value and firm growth too. The firm's characteristics, including elements such as capital structure, profitability, firm size, investment decisions, and firm growth, are intricately linked to its overall value. These factors collectively play a crucial role in shaping the perceived worth and financial standing of the firm.

Generally, when a firm's share price is higher and there is a large number of shares outstanding in the market, the firm's market capitalization tends to be greater. Assuming a constant number of outstanding shares, that is, without the cases of buyout or share splits, the firm value is predominantly influenced by its market price (Lestari & Armayah, 2016). Regarding the outstanding shares, it refers to the total number of shares issued by a firm

that are currently held by investors (Chen, 2024). As of the current situation, the outstanding shares of property firms in Malaysia may vary depending on individual firms and market condition. Factors such as market performance, firm-specific developments, investor confidence and economic trends can influence the outstanding shares of these firms. A high number of outstanding shares may indicate broader ownership and investor interest, while a lower number may suggest more concentrated ownership or limited market demand.

### **1.1.2 Overview of Firm Characteristics**

As discussed by Mansor and Zakaria (2007) and Susanti and Restiana (2018), the performance of property firms is closely tied to the property market. The ups and downs in firm performance contribute to fluctuations in the value of firms within the property sector. Firm characteristics, such as firm size, growth, investment decisions, profitability, and capital structure decisions, are factors mostly under management control (Nyabaga & Wepukhulu, 2020). Numerous studies, including those by Nyabaga and Wepukhulu (2020), Chabachib et al. (2020), Pindalo et al. (2010), and Komarundin and Affandi (2019), establish a close link between these firm characteristics and both firm performance and value.

In a general way, property firms should have strong firm characteristics in order to maintain a good survival performance in the face of macroeconomic uncertainty and a changing business environment. The firm value is probably influenced by five key characteristics, namely profitability, capital structure, firm growth, investment decisions, and firm size. To illustrate, in the year 2017, Mah Sing Group experienced a decline in profitability, dropping from 5.4% in 2017 to 3.9% in 2018. This substantial decrease in profitability contributed to a significant reduction in the firm's overall value,

plummeting from RM3517.8 million to RM2221.3 million by the end of 2018 (MahSing, 2018). Therefore, Magna Prima Berhad raised its capital structure from 36.9% in 2017 to 40.6% in 2018. This shift had a considerable impact on the firm value, leading to a decrease of nearly RM 163 million in the year 2018 (Magna Prima Berhad, 2018). In this instance, it is evident that both profitability and capital structure probably in influencing the firm value. The illustration of Mah Sing Group and Magna Prima Berhad demonstrates that alterations in profitability and capital structure might collectively impact the overall value of the firm.

Moreover, during the year 2017, MKH Holding Berhad had decrease the investment decision with reduce the non-capital asset which lead to the firm value drops. The firm investment decision reduces from 58.23% in year 2017 to 55.12% in year 2018 and the firm value has dropped from RM 1,229.6 million to RM 739.1 million (MKH Holding Berhad, 2018). The investment decision significantly impacts the firm value, suggesting that it is a pivotal factor in augmenting shareholder value. Firms with high investment ratings are viewed favorably by the market, signalling potential growth prospects in the future. Thus, the significant drop in Malton Berhad's growth from 18.22% in year 2017 to 5.15% in year 2018 corresponded with a decrease in the firm value from RM1150.5 million to RM432.70 million (Malton Berhad, 2018). This example highlights how changes in firm growth affect its overall firm value. In contrast, Paramon Corporation Berhad experienced a slight growth in its firm size from 3.4% to 3.42% in 2018, resulting in a corresponding increase in firm value from RM751 million to RM873.7 million (Paramon Corporation Berhad, 2018). This might indicate that a larger firm size is positively associated with higher firm value. In brief, these firm characteristics are closely linked and collectively influence a firm's overall value.

### **1.1.3 Overview of the Market Capitalization of property sector among the neighborhood countries**

Referring to the Figure 1.1.3.1, the overall trend indicates that Malaysia's property firm value remained relatively stable between 2014 and 2023 when compared to neighbouring countries. Upon closer examination, it becomes apparent that Malaysian property firm values have demonstrated slower growth compared to countries like Singapore, Thailand, the Philippines, and Vietnam. Figures 1.1.3.1 indicate minor fluctuations and modest growth in Malaysian property firm values, ranking second lowest overall. In the figure for neighboring countries like Singapore have larger economies and more developed property markets, leading to higher market capitalization in their property sectors while Malaysia is a developing country compared with Singapore (Services, 2023). Moreover, the structure of Malaysia's property sector, including the variety of properties and companies listed on its stock exchange, may differ from that of neighboring countries. For instance, Malaysia's property sector may be characterized by a prevalence of smaller or less diversified companies, potentially leading to lower market capitalization (The Malaysian Reserve, 2023). Hence, despite the drop, the overall trend suggests a gradual decline, indicating relative stability with other countries.

However, based on Figure 1.1.3.2, the firm value in the property sector has exhibited fluctuations, experiencing a significant drop from 2017 and reaching a minimum point in 2020. These fluctuations could be attributed to uncertainties and firm characteristics. Subsequently, the firm value continued to fluctuate from 2020 and saw an increase in 2023. This could be attributed to the recovery of Malaysia from the Covid-19 pandemic which stimulated economic activities leading to a gradual rise in demand for stock and stock prices. Despite this recent increase, the overall trend line for the firm value of the property sector depicts a slight downward trajectory, indicating ongoing instability and potential underperformance.



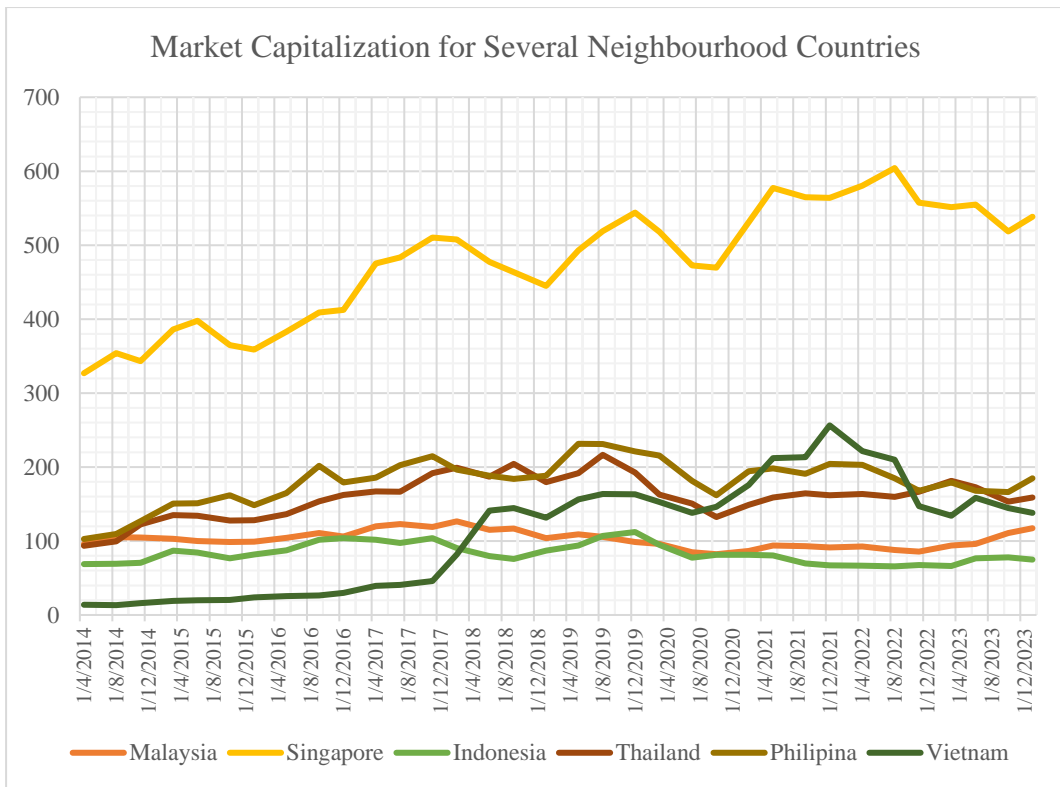


Figure 1.1.3.1 Market Capitalization for Several Neighbourhood Countries. Adapted from Simply Wall Street Pty Ltd. (2024). <https://simplywall.st/markets/my/real-estate>

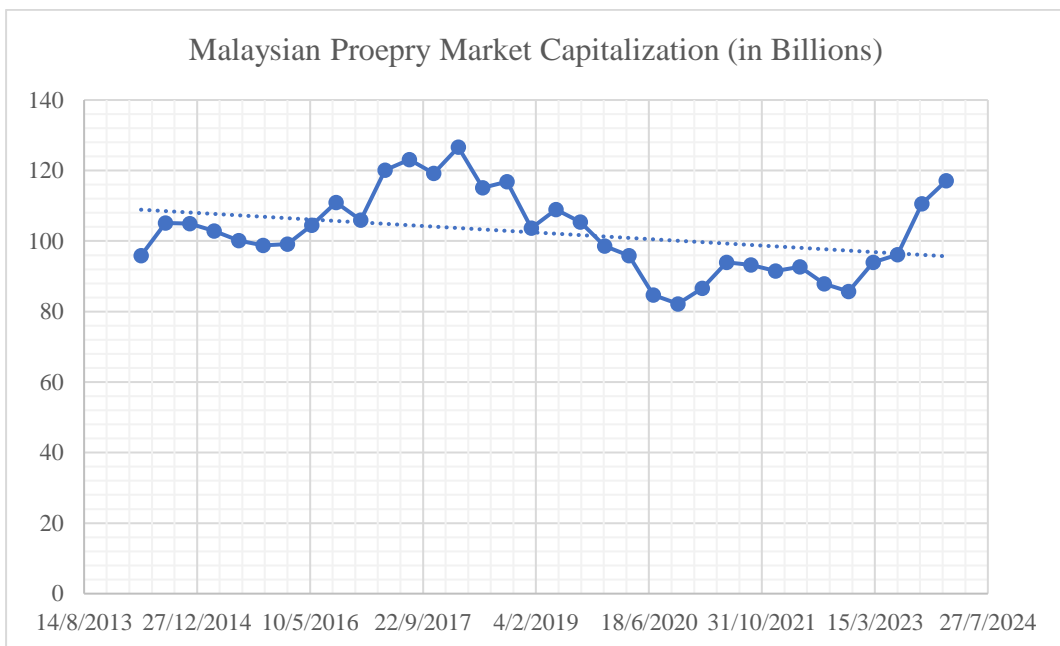


Figure 1.1.3.2 Market Capitalization of Malaysian Property Sector. Adapted from Simply Wall Street Pty Ltd. (2024). <https://simplywall.st/markets/my/real-estate>

### **1.1.4 Malaysian Property Sector Outlooks**

The property segment is pivotal in shaping future developments in Malaysia, serving as a crucial component that significantly influences the nation's overall image and attractiveness for foreign investment considerations. Malaysia's property industry drives economic expansion, urban transformation, and infrastructure advancements (Moaz, 2023). The property sector often mirrors the overall economic growth indicated by GDP. During periods of robust GDP growth, there is typically increased demand for property, including residential, commercial, and industrial properties. This demand can lead to higher property prices, increased construction activity which increase the employment in the country, and overall expansion within the property sector. For example, in 2022, the GDP attributed to property in Malaysia reached around 23 billion Malaysian ringgit, marking an increase of over five billion Malaysian ringgits compared to the previous year (Statista Research Department, 2024). Also, approximately 1.16 million individuals were employed in Malaysia's property and business services industry in 2022 (Statista Research Department, 2023). It suggests a marginal uptick in employment figures compared to the previous year. Hence, property sector is a tangible representation of Malaysia's development aspirations, showcasing its potential for growth and innovation to the international community (Olga & Antonios, 2019).

Nowadays, property firms in Malaysia must confront uncertainties in the dynamic and evolving risk landscape. Indeed, the property sectors are quite responsive to economic changes, with prices going up in good times and decreasing during challenging periods (Mohamad & Murugesu, 2020). Previously, the issue of property overhang in Malaysia escalated in 2018, with a notable 30.6% surge in volume, reaching 32,313 units, as compared to 24,738 units in the preceding year, accompanied by a 27% rise in value

to RM19.86 billion (Samantha, 2019). Based on Figure 1.1.4.1, it reveals that the overhang dilemma is more severe in the residential sector compared to the shop sector. This is because the average housing prices in Malaysia stand at approximately five times the annual median household income, exceeding the international affordability standard of three times.

Since 2021, the operational landscape for businesses has been disrupted due to Covid-19 pandemic measures. Many property developers have reported a slowdown or postponement of property launches in that year. Even if 2022 returns to a pre-pandemic normal, it is unlikely to see an immediate improvement in sector profits or returns (Eu, 2021). Nearly two years into the global pandemic, which significantly impacted economic and social activities, the property sector is currently undergoing a slow recovery, albeit with a cautious outlook (PropertyGuru, 2022). This is reflected by an downward trend in overhang issue in 2022 as shown in Figure 1.1.4.1. Yet, with the rise in interest rates and an uncertain economic recovery outlook, the sales demand index recorded a decline of 6.4% compared to the previous year (PropertyGuru, 2022). Therefore, the property sector continues to face challenges, including an oversupply issue, despite government measures aimed at controlling speculation and discouraging developers from excessive building (Malaysia Real Estate Market, n.d.).

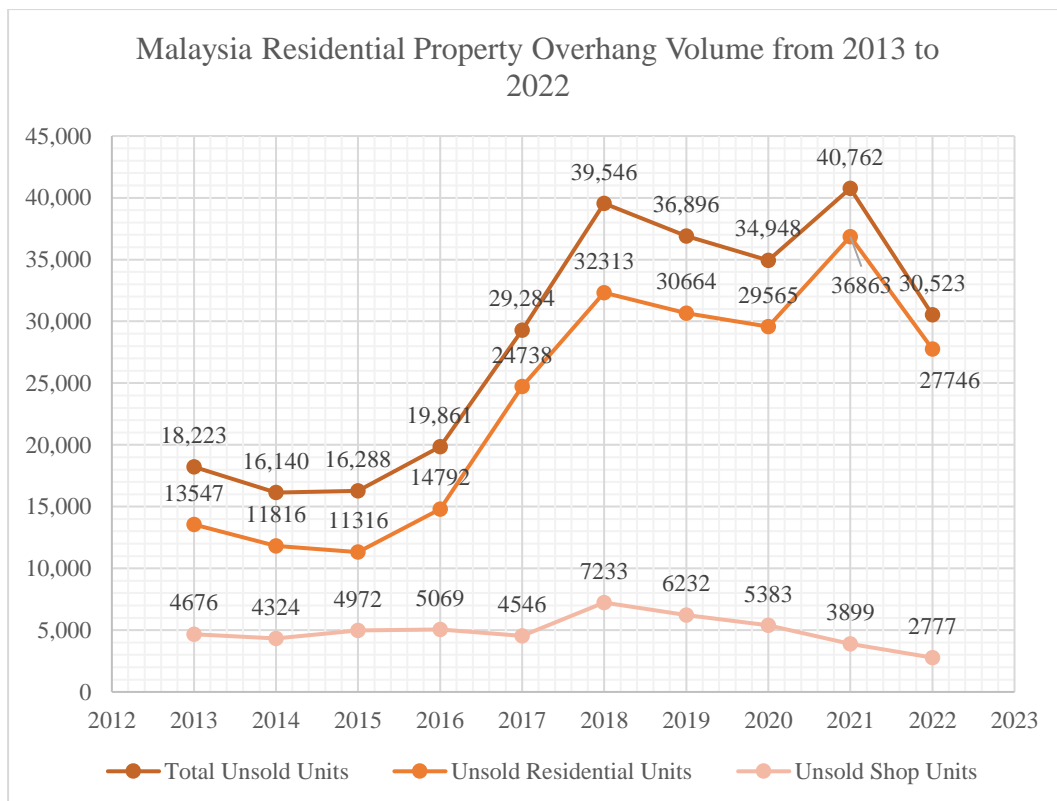


Figure 1.1.4.1 Unsold Residential and Shops Units in Malaysia. Adapted from Valuation & Property Services Department Ministry of Finance

Regarding the current outlook of property sector during Q3 2023, the property sector's highest transaction volume, approximately 23.6%, is concentrated within the price range of RM0 to RM100,000, indicating an oversupply of properties in the country. According to Figure 1.1.4.2, the total number of property transactions decreased from 4,956 in the Q3 of 2022 to 4,716 in the Q3 of 2023. Residential property accounted for the largest portion of the total property transactions as in Q3 2023, with 2968 residential property transactions, followed by development (831), agriculture (413), commercial (367) and industrial (135). In the case of residential, from Q3 2022 to Q3 2023, the percentage of residential transactions in the price range of RM1 million and above dropped significantly by 45.9%, while the percentage of transactions in the price range of RM500,000 to RM600,000 dropped by 43.3%. Then, this sharply

decline due to the high prices that exceed affordability for many citizens. On the other hand, there is another situation in Johor state, where prices and transaction volumes surpass the national average due to the development of the Iskandar Region International Zone, which attracts foreign buyers. Hence, comparing with previous overhang issue, currently this issue has recovery.

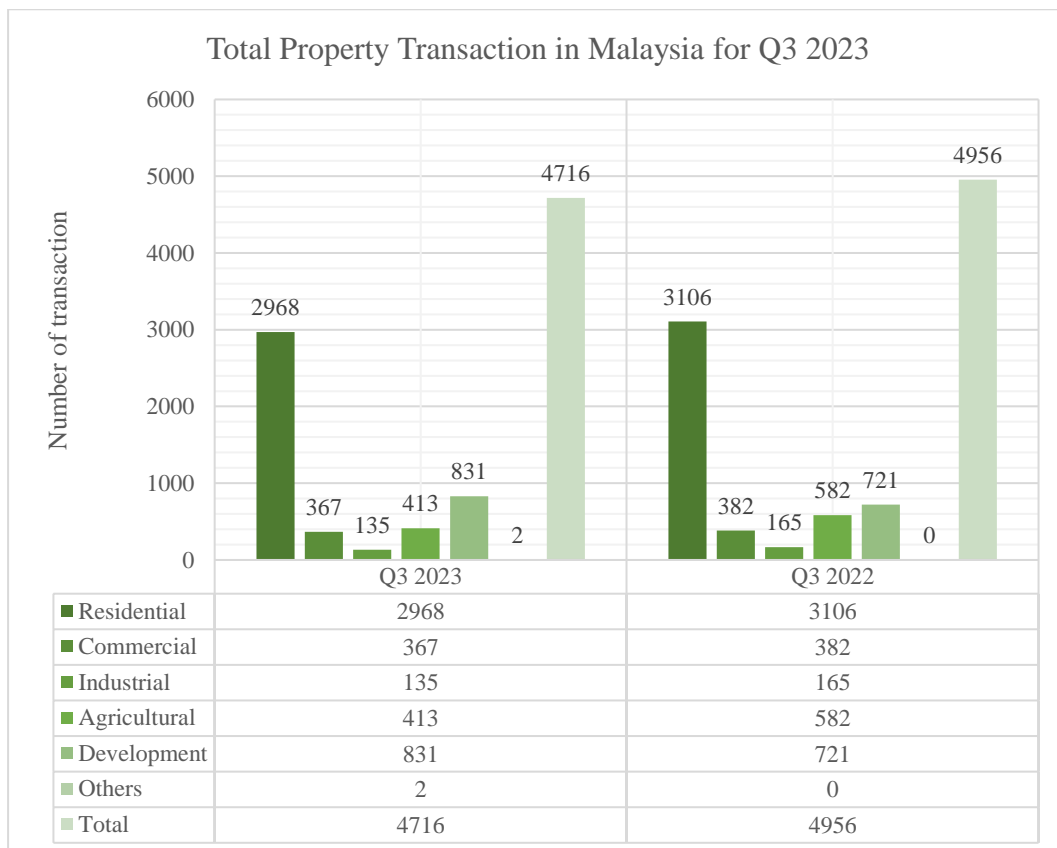


Figure 1.1.4.2 Total Property Transaction Table in Malaysia for Q3 2023. Adapted from Valuation & Property Services Department Ministry of Finance.

Firm value, often linked to stock prices, reflects how investors perceive a firm. According to Susanti and Restiana (2018), when stock prices are high, the firm value tends to be high, and vice versa. A higher firm value instills confidence in investors and shareholders, as it suggests the firm can potentially offer substantial dividends (Hidayah, 2014). In the Malaysian

property sector, stock prices have exhibited significant fluctuations. Referring to Bursa Malaysia Properties Index data, there was a sharp drop in 2008, followed by continuous fluctuations. Notably, there was a large drop from 1225.8 in 2017 to 874.87 in 2018, further decreasing to 639.84 in 2022. Based on Figure 1.1.3.2 and Figure 1.1.4.3 describe a similar pattern, showing a significant drop in both firm value and the property stock index from 2017 to 2019, with a sustained decline in 2020 and a gradual rise in subsequent years. This suggests a link between property firm value and stock price.

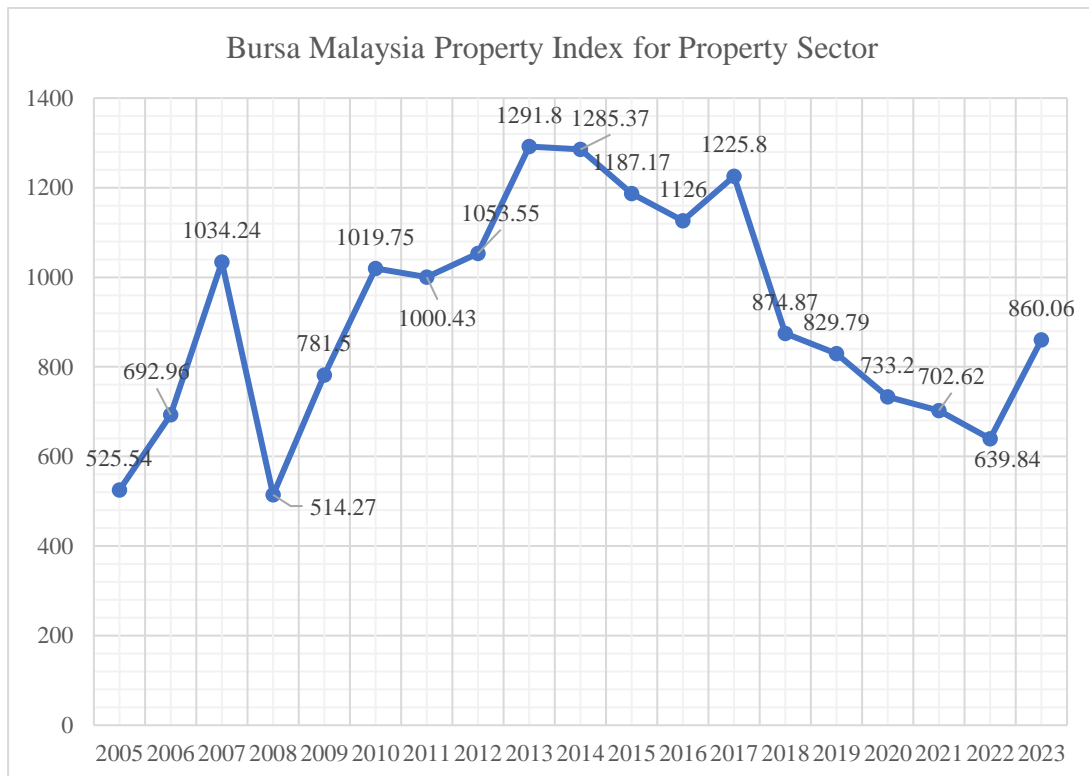


Figure 1.1.4.3 Bursa Malaysia Property Index for Property Sector. Adapted from TradingView. (n.d.).

<https://www.tradingview.com/chart/bbt3sXFx/?symbol=MYX%3APROPERTIES>

Moreover, the Star (2024) say that the Kuala Lumpur Property Index recorded an impressive return of 34.5% on Bursa Malaysia. In 2023, all

property stocks covered experienced a significant positive return, signalling a sector-wide reevaluation, as a result, the average return for property firms is expected to rise (The Star, 2024). Referring to Figure 1.1.4.4, despite improvements in returns for property sectors in Malaysia, the overall average returns in the Malaysian market remain at a concerning negative 2.96%, with the property sector exerting a notable influence with a negative 8.26% average return. Looking ahead, the projected growth for the property sector in Malaysia stands at a modest 5.60%, ranking it among all the sectors with the lowest forecasted growth rates in the future. This suggests that the in Malaysia, property sector faces challenges compared to other sectors, such as technology sector, in the foreseeable future.

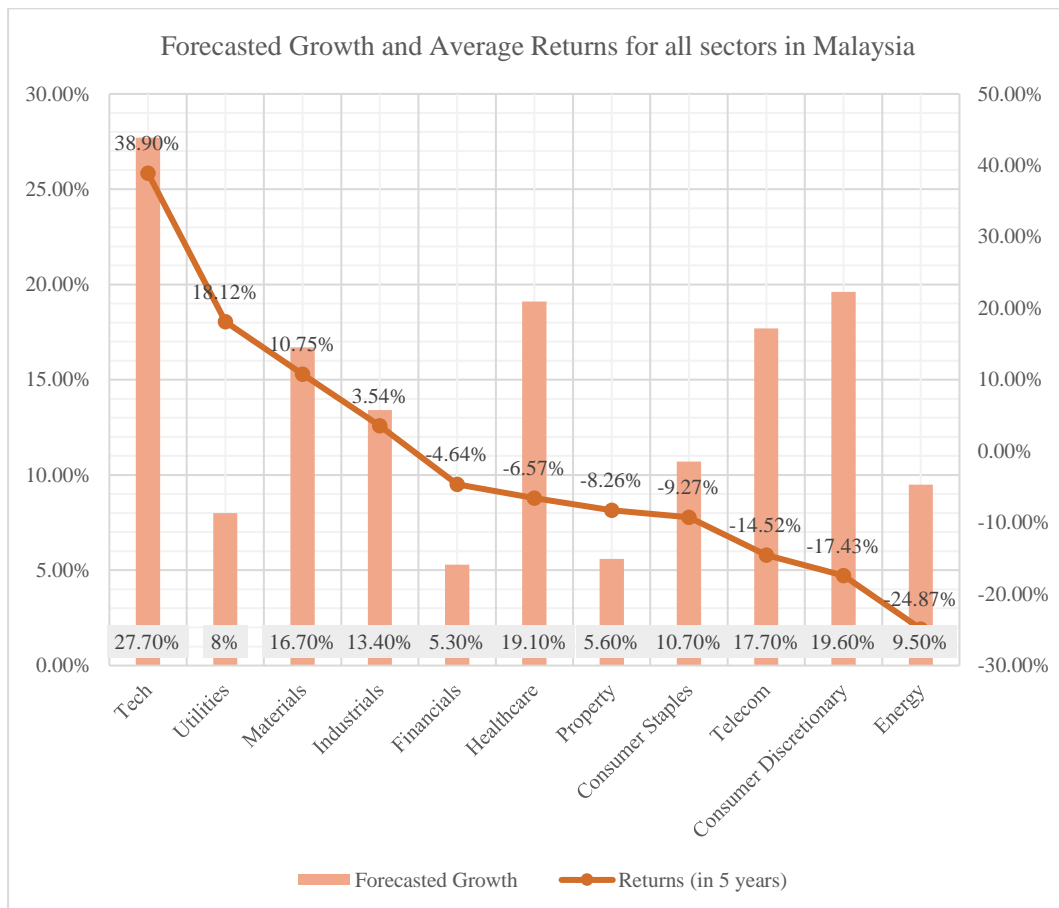


Figure 1.1.4.4 Forecasted Growth and Average Returns for all sectors in Malaysia.

Adapted from Simply Wall Street Pty Ltd. (2024).

<https://simplywall.st/markets/my/real-estate>

Besides, Simply Wall Street Pty Ltd. (2021) reports a pessimistic outlook among investors for the Malaysian Property industry, anticipating lower long-term growth rates compared to historical trends. According to Figure 1.1.4.5, this sentiment is reflected in the property industry's current P/E ratio of 16.2x, notably lower than its 3-year average PE of 26.9x. Additionally, Figure 1.1.4.5 reveals that investors show a strong preference for the Telecom sector for future growth, with a high P/E ratio of 659x. Conversely, the property sector ranks second-least preferred, with a P/E ratio of 16.2x. This suggests that investors may lack confidence in the property sector, showing a preference for investing in telecom, industrial, technology or healthcare sectors instead. In the end, to navigate uncertainty in stock returns, investors require detailed information to make informed decisions on which firms' stocks to invest in, considering the firm characteristics that influence performance and value in the property sector.

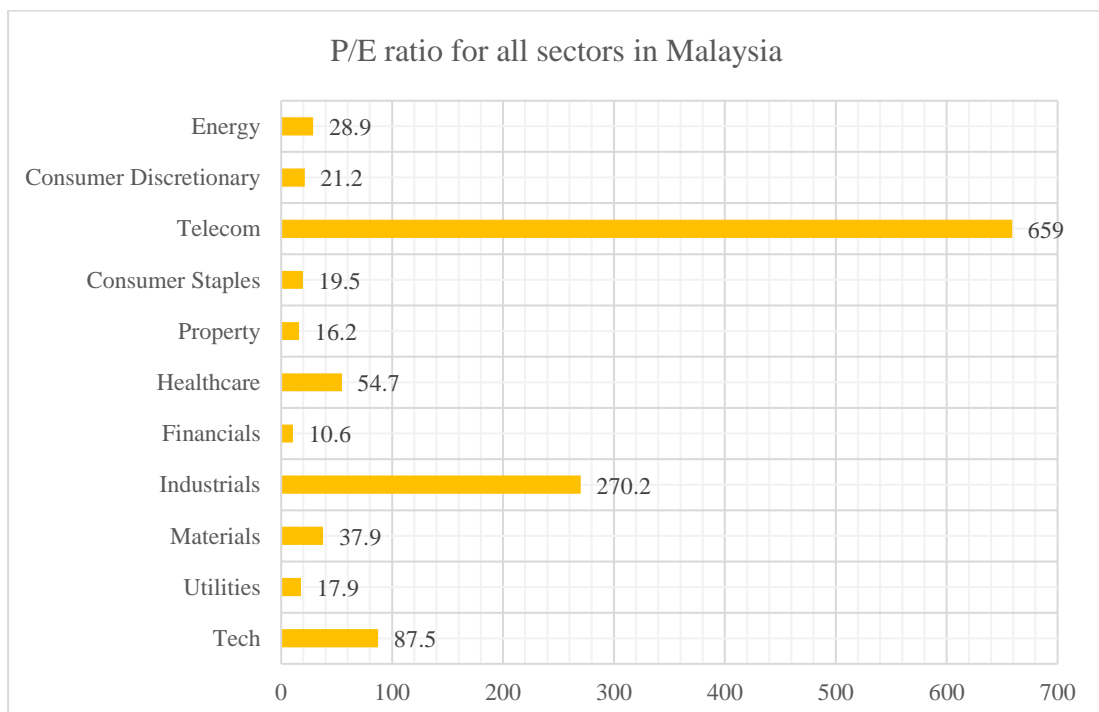


Figure 1.1.4.5 P/E Ratio of all sectors in Malaysia. Adapted from Simply Wall Street Pty Ltd. (2024). <https://simplywall.st/markets/my/real-estate>



To conclude, the property sector in Malaysia serves an important function in boosting the economy through the development of property activities as well as facilitating the purchase of residential, commercial, or industrial properties. Therefore, it is important for Malaysian property firms to effectively manage the internal firm characteristics in order to consistently achieve good performance and firm value so as to maintain investor confidence in the face of macroeconomic uncertainty and to be better prepared to face the difficulties in the market. This in turn will further develop the property sector and ultimately contribute to the development of the Malaysian economy.

## 1.2 Problem Statement

Based on the research background, Malaysia's property firm value remained relatively stable from 2014 to 2023, in comparison to neighboring countries, albeit with slower growth. Firm value fluctuations can be related to uncertainties and firm characteristics, which influence investors' perceptions of future prospects. These changes have presented issues to the property firms, with lowering firm values resulting in loss of shareholders' confidence on property industry firms' performance which can lead to difficulties of firms' fundraising activities. The volatility in firm value has also posed issues for the Malaysian economy, potentially limiting growth and increasing unemployment. Investors have taken a wait-and-see stance due to fears about economic slowdowns and oversupply challenges. To break the cycle and increase firm value, firms should focus on improving profitability, optimizing capital structure, and making smart investment decisions to attract investors and promote long-term growth potential.

In addition, refer to the data of property stock index, P/E ratio of property sector among all sectors in Malaysia, and forecasted growth and average return of property sector, these fluctuations of data may reflect a loss of investors' confidence due to their concerns about Malaysian property firms' long-term prospects, such as growth potential, profitability, and competitiveness. Natasha and Hassan (2015) highlight the uncertainties like overhang issue, specifically the surplus of properties, as a factor deterring investors from engaging in property investment. Also, strong performance, like companies with high value, can draw attention and build trust among investors (Sukesti et al., 2021). Therefore, decreasing property firm value can result in a loss of investor confidence in the property industry which can have serious consequences for property firms. One immediate effect is a decrease in demand for property-related stocks, which reduces liquidity in these securities. This makes it more difficult for investors to quickly convert their shares into cash. With lower liquidity and higher perceived risks, investors may be less willing to invest, resulting in lower cash inflows for businesses. Thus, this can cause difficulties in funding operations and expansion. A drop in investor confidence can also affect a

firm's capital structure, making it more difficult to obtain loan approvals or issue bonds, limiting its ability to raise funds. These issues can lead to a negative cycle in which firms' performance and value deteriorate. Firms may struggle to maintain operations while seeking growth opportunities, resulting in a significant drop in firm value in the future.

The volatility in firm value has also introduced challenges and uncertainties to the Malaysian economy. Since based on the research background, the property sector is considered an indicator of the Malaysia's economic health, a significant drop in property firm values could pose risks to the economy. Researchers like Mohamad and Murugesu (2020) have indicated that a weakened property market has the potential to impede economic growth and lead to higher unemployment. In 2016, the property-related sectors contributed significantly, accounting for 10% of the gross domestic product (GDP) and providing employment to 1.4 million Malaysians. These data showed that property sector contributes a significant portion of employment in Malaysia. Therefore, amidst the challenging and dynamic uncertainties of the Malaysian property sector, if property firm value performs a decreasing trend, investors have been adopting a wait-and-see approach due to concerns about the economic slowdown, the possible resurgence of oversupply issues, and the characteristics of the property firms might be affecting overall firm performance (Sharen, 2023). As a result, property firms might face the problem of lack of funds due to the divestment from the investors, and it will lead to a significant drop in their business activities which lastly contribute a lower GDP. Also, this situation might reflect that the property firms are not doing well, which leads to a poor performance. In addition, the problem of lack of funds might force the property firms laying off their employees to reduce operating costs and survive in weakened property market, this will also aggravate the problem of unemployment. This result will significantly and negatively impact the economy and also lead to higher unemployment in Malaysia. An increase in unemployment will cause more severe social issues, which will spread social resources and cause chaos in society. This will have a further detrimental impact on the country's economy.

The problems mentioned above show how important the firm value is. To encounter these problems brought by decreasing property firm value, improving property firm value is crucial. Profitability, capital structure, firm size, firm growth and investment decisions have all been shown in past studies to have a significant impact on performance, even during uncertain economic times. Yet, after reviewing the journal, it is clear that firm growth is a gap variable because of a limited support from the existing literature. Moreover, the relationship between firm growth and firm value remains controversial. Therefore, our study will also find out the relationship between firm growth and property firm value in Malaysia to examine whether the firm growth will significantly affect the property firm value.

In the end, property firm value can be improved by improving these firm characteristics. In addition, by improving these aspects, firms can attract more investors, increase cash inflows, and secure resources for long-term growth and Research and Development (R&D) investment. However, the impact of these firm characteristics on firm value varies by industry, and research results have been mixed. As a result, specific studies are required to understand how these characteristics affect property industry firms. Identifying these relationships allows property firms to improve their internal conditions, become more resilient to economic uncertainty, and better navigate the property market's challenges.

## **1.3 Research Objective**

### **1.3.1 General Objectives**

The overall objective of this study is to deepen the understanding of Malaysian adults on the relationship between firm characteristics and firm value. The main objective is to determine whether firm characteristics will have a direct significant impact on firm value in the Malaysian property sector. This study aims to show how firm characteristics, such as capital structure, profitability, firm size, investment decision and firm growth affect firm value in the property industry.

### **1.3.2 Specific Objectives**

The study's focus tends to be on:

1. To investigate the effect of a firm's capital structure on its firm value in the Malaysian property sector;
2. To investigate the effect of a firm's profitability on its firm value in the Malaysian property sector;
3. To investigate the effect of a firm size on its firm value in the Malaysian property sector;
4. To investigate the effect of an investment decision on its firm value in the Malaysian property sector;

5. To investigate the effect of a firm growth on its firm value in the Malaysian property sector.

## **1.4 Research Question**

1. How does the capital structure of firms affect firm value in the Malaysian property sector?
2. How does the profitability of firms affect firm value in the Malaysian property sector?
3. How does the firm size of firms affect firm value in the Malaysian property sector?
4. How does the investment decision of firms affect firm value in the Malaysian property sector?
5. How does the firm growth of firms affect firm value in the Malaysian property sector?

## **1.5 Significance of Study**

In the beginning, this study will make clear the firm characteristics factors that affect the firm value of publicly traded firms. We would be able to pinpoint the crucial elements of the firm characteristics factors that will influence the firm value of publicly traded firms in Malaysia's property sector industry. We can describe how firm size, investment decision, profitability, capital structure, and firm growth as

our independent variables may be influenced and enhanced firm value, particularly among Malaysia's property sectors. During our research, we found that firm growth is a component that is rarely looked at in earlier studies on firm value. As a result, we tried to find any relationships in this study between the independent variables, especially firm growth, and firm value.

Next, the research serves as a comprehensive guide, furnishing valuable insights that enable those property firms, investors, and academics to systematically monitor and comprehend fluctuations in firm value along with the underlying influencing factors. By capitalizing on these nuanced findings, they are well-positioned to proactively institute measures that can adapt to and mitigate the impact of evolving dynamics. Besides, it is noteworthy that this study does not only stands as a crucial resource for crafting effective strategies aimed at enhancing the firm value of listed firms confronting of those various firm characteristics challenges, particularly within the Malaysian property sector.

### **1.5.1 Property Firms**

Furthermore, we may assess the degree of correlation between the independent variables and the firm value of publicly traded firms. After this study is complete, we will be able to appropriately discuss the significant impact of five independent criteria, including firm size, investment decision, profitability, capital structure, and firm growth, on the firm value of publicly traded property firms. We can increase Malaysia's property sector's understanding of the significance of firm value of publicly listed businesses by including the independent variables among the significant elements that have the capacity to influence them. Other than that, this study on property firms reveals the critical role that internal control and management play in property businesses. By focusing on these internal controls, we may improve corporate attributes and serve as a driving force behind an increase

in the total value of the firm. A stronger business is better equipped to manage market volatility and produce long-term profits. This win-win situation increases the value of the business and is crucial in gaining investors' respect and confidence. Aside that, the research delves into the realm of corporate governance within the property sector, shedding light on its efficacy and potential wielding influence over the enhancement of governance practices and policies within the industry.

### **1.5.2 Investors**

Moreover, a comprehension of the empirical study of the selected independent variables can provide investors with significant insights from our research on the determinants of firm value in the Malaysian property sector. The report provides investors with important information to help them make well-informed decisions shedding light on important independent variables impacting firm value in the Malaysian property industry. Investors often examine a firm's financial and non-financial data among other things when evaluating it for investment. The majority of the independent variables in our study, including capital structure and profitability, came from financial statements, giving investors a thorough grasp of how to evaluate the viability of investments. For example, a firm's declared profitability serves as a signal to draw in investors, improve their impression, and encourage more investments, all of which have an effect on stock prices and firm value. Through the guidance of their investment plans, risk assessments, and portfolio diversification, this information can assist investors in making better-informed judgements and aligned investing approaches in the dynamic Malaysian property sector.



### **1.5.3 Academics**

Apart from that, academic institutions can benefit greatly from this study as it offers an effective application of theoretical concepts and methodologies. The study gives academics the chance to evaluate the validity of theories or models pertaining to firm valuation in the Malaysian property sector and to determine how robust the empirical evidence is. Not only that, it also creates avenues for future research by pointing out areas of incomplete information, enabling scholars to pose fresh queries and work on initiatives that advance the ongoing investigation of firm value drivers in property, finance, and economics. In addition, academics can make use of these results to improve upon already-existing theories, create fresh frameworks, and add to the expanding corpus of knowledge in the area. By fostering a connection between academia and practical ramifications, this improves the academic knowledge of the intricacies involved in assessing firm value in the Malaysian property market. To summarize, this research project offers academics a chance to delve deeper into the concept of firm valuation as well as understand which of the firm characteristic will affect property firm value, investigate novel methodologies, and add to the scholarly discourse within the particular context of the Malaysian property sector. This can lead to opportunities for cooperation, educational enhancement, and the advancement of theoretical and empirical knowledge within the academic community.

## **1.6 Chapter Layout**

### **Chapter 1: Research Overview**

This chapter commences by establishing the research background, offering a broad perspective on the thesis topic, and introducing the central concepts that will underpin the study. Subsequently, the problem statement delineates the issues to be tackled, and followed by research objectives and questions that focus on the purpose of performing this study. Furthermore, the significance of study is emphasized, elucidating the potential value it offers and explaining how its findings will benefit the intended audience. This chapter ends by providing the layouts for the following chapters and conclusion.

## **Chapter 2: Literature Review**

This section encompasses a thorough documentation of previous studies conducted by various researchers on the same topic. It encompasses a review of the variables, theoretical frameworks, and conceptual frameworks utilized in these prior studies. In addition, the constructed of hypotheses developed based on the literature reviews and research framework in this study are presented in this chapter.

## **Chapter 3: Methodology**

This chapter covers the research methodology. It explains the research design related in this study. Moreover, data collection method, sampling design, variable specification, data processing and proposed data analysis tool will be highlighted in this part also.

## **Chapter 4: Data Analysis**

This chapter is about the analysis result by using the method which has mentioned in chapter 3. Thus, the descriptive analysis is discussed. Then, there are preliminary testing, diagnostic testing, hypothesis testing, and inferential analysis cover in this chapter. It will be making the comparison between REM, POLS, REM and how GLS method used in this study.

## **Chapter 5: Discussion, Conclusion and Implications**

In this final chapter, the research results derived from the data analysis will be comprehensively summarized and compared with findings obtained from previous studies. Then, the implications of the study, limitations of the study, and recommendations will be discussed in this chapter.

### **1.7 Conclusion**

In conclusion, property sectors are quite responsive to economic changes, with prices going up in good times and decreasing during challenging periods. The uncertainties, like the overhang issue, specifically the surplus of properties, are a factor deterring investors from engaging in property investment. Thus, firm value is not only affected by uncertainties but also by firm characteristics. Therefore, this study attempts to deepen the understanding of Malaysian adults on the relationship between firm characteristics and firm value. The factors that will be studied are profitability, capital structure, firm size, investment decisions, and firm growth.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.0 Introduction**

Chapter 2 follows this structured sequence. It commences with a literature review focusing on the dependent variable, which is the firm value. Subsequently, its relationship with five independent variables, which are capital structure, profitability, firm size, investment decisions, and firm growth, are presented. Thirdly, the signalling theory for theoretical framework is explained. Next, the conceptual framework is outlined. Lastly, the study formulates the hypotheses.

### **2.1 Review of the Literature**

#### **2.1.1 Dependent Variable: Firm Value**

Firm value is a crucial metric which can be measured by using Tobin's Q. Firm value reflects effective resource management for profitability and fosters investor confidence in a firm's sustainability and future prospects. Next, this value increase can attract foreign investments, leading to broader economic benefits and global opportunities for domestic firms. The main objective of publicly traded firms is to raise its value to increase owner and shareholder wealth and draw in new investors. In addition, a consistently rising share price and demand of shares in the capital market signifies ongoing growth and enhances a firm's overall worth (Rachim & Setiany, 2021; Ahmad & Muslim, 2022; Sutihat & Pramuka, 2023).

Besides, the size of a firm, measured using the natural logarithm of total assets, is a factor that can affect the value of a corporation. For instance, numerous researchers have utilised the firm size to assess the firm value on their studies, including Ilyas et al. (2023), Ratnawati et al. (2018), Akmalia and Aliyah (2022), and Hirdinis (2019). According to Ratnawati et al. (2018), larger firms possess stronger capacities for efficient risk management, making them more suitable for managing market risks. Consequently, less uncertainty and a decreased likelihood of suffering losses result from this. Whereas, small enterprises, while confronting greater risks, present investors with advantages in the form of higher dividend payments and capital gains (Duy & Phuoc, 2016). However, another factor that affects the firm value is an investment decision, which measured using fixed assets to total assets (FATA). Based on Bon and Hartoko (2022) stated that, a firm's stock price can be positively impacted by wise investment decisions, which are indicated by money issued for future growth. This can reflect improved investors' trust who will buy more shares to increase their outstanding shares and ultimately increase the value of the firm. While, the stock price rises in direct proportion to the profit earned from the firm's investment operations, adding to the firm value (Syamsudin et al., 2021).

Furthermore, the profitability of the firm was evaluated by Akhmadi and Januarsi (2021), who used the Return on Assets (ROA) ratio. This measures a firm's capacity to maximise profit from its resources (Leman et al., 2020). Low profitability denotes financial difficulties, which results in unfavourable investor reactions, whereas high profitability signals excellent prospects and attracts positive investor response, thereby raising the firm's worth (Endri & Fathony, 2020). In addition, the debt-to-equity ratio (DER), which measures the capital structure, is another important aspect that affects a firm value (Hirdinis, 2019). According to Ahmad and Muslim (2022), a higher DER value signifies a firm's more reliance on external creditors and therefore higher risk. Poor management reduces a firm value, but a well-

managed capital structure maximizes firm value while minimizing capital costs (Sutanto & Hariadi, 2023). Finally, firm growth that measured by using the total asset growth (TAG), which compares total assets across time periods, can be used to gauge firm value. According to Fajaria and Isnalita (2018), efficient asset utilisation can enhance earnings and firm value, making the growth ratio a measure of a firm's potential to grow and hold onto its competitive edge as the economy advances.

But during the researching, we also found that there are numerous additional aspects that will also have an impact on the firm value in addition to the five elements mentioned above that we specifically researched. These factors include dividend policy, foreign direct investment, inflation, liquidity, and more. For instance, liquidity, or a firm's ability to meet short-term obligations, is a key indicator of investor perception of performance. Firms with higher liquidity ratios are thought to be more able to fulfil their obligations, which attracts investors and may lead to higher stock prices and increased firm value (Putri & Wiksuana, 2021). Another example came from the research of Isma et al. (2023), which said that declining stock prices frequently follows rising inflation since there is less economic activity, which lowers business value and earnings. Besides, Camino-Mogro et al. (2023) state that the findings demonstrate that businesses with foreign direct investment expand more quickly than their counterparts, and that firms with a larger percentage of foreign direct investment in total revenue often have higher levels of total revenue, which results in higher firm value.

In the end, our research will be focused on how firm characteristics, such as capital structure, profitability, firm size, investment decision and firm growth, influence the firm value in Malaysian property sector.

### **2.1.2 Firm Characteristics: Capital Structure**

Prior research offers diverse insights on capital structure. Valaskova et al. (2019) highlight its impact on firm valuation, risk, cash flow, and investor interest, while Aisha (2016) emphasizing the need to balance debt and equity for optimal value and reduced capital expenses. Maintaining an ideal structure is vital, as excessive debt can devalue a firm and heighten bankruptcy risk (Hirdinis, 2019). Besides, Tuovila (2023) as well as Susanti and Restiana (2018) add that prudent businesses avoid excessive reliance on external capital, particularly debt, to ensure financial stability.

The literature on the relationship between capital structure and firm value in the sector produces mixed results. Based on the previous multiple studies, including those by Susanti and Restiana (2018), Hirdinis (2019), Chabachib et al. (2020), Pangestuti and Tindangen (2020), Setyowati et al. (2020), Suzulia and Saluy (2020), Syaifuddin (2021), Ulum (2022), and Dang and Do (2021), consistently affirm a positive correlation between capital structure and firm value. Suzulia and Saluy (2020) emphasize that a more precise and optimal capital structure (DER) corresponds to an increased firm value (PBV). Additionally, Susanti and Restiana (2018) reveal that a higher capital structure enhances overall firm value while balancing considerations of value, benefits, and costs.

However, based on the research conducted by Dang and Do (2021), Carino and Teano (2022), Khairunnisa (2017), Sutanto and Hariadi (2023), Fajaria and Isnalita (2018), Ahmad and Muslim (2022), and Sonjaya and Muslim (2023) have identified that there is a negative impact of capital structure on firm value. Firstly, Sutanto and Hariadi (2023) asserted that firms employing a capital structure with more long-term debt face increased bankruptcy risk as the debt-to-equity ratio rises. Sonjaya and Muslim (2023) also explain that higher debt usage for financing operations leads to increased firm

burden, subsequently reducing value. Moreover, Ahmad and Muslim (2022) reveal that an increase in firm value follows a decrease in the debt-to-equity ratio (DER). This highlights the importance of managerial decisions and cautions against excessive gearing, as it can potentially harm firm value (Carino & Teano, 2022).

Moreover, the authors of Endri and Fathony (2020), Rachim and Setiany (2021), Sihombing and Indriaty (2022), Sutihat and Pramuka (2023), Utami et al. (2023), and Dang and Do (2021) have not managed to establish a significant relationship between capital structure and firm value. Rachim and Setiany (2021) found that the limited impact of leverage on firm value is connected to how firm size attracts investors and manufacturing firms' tendency to rely on internal funding. The structure of a firm's capital, which includes long-term debt, preferred stock, and shareholder capital, represents a stable financing framework. Therefore, every firm naturally has a capital structure involving both debt and investments, emphasizing that this should not be the sole criterion for evaluating a firm (Mukti & Winarso, 2020).

Due to the multitude of factors, such as industry variations, diverse global settings, disparate data collection timeframes, as well as distinctions between emerging and developed economies, and the application of various methodologies, the research landscape concerning the value relevance of capital structure is characterized by divergent and conflicting outcomes. For instance, Pangestuti and Tindangen (2020) investigated Indonesian mining firms between 2016 and 2019, uncovering a positive correlation. In contrast, Sutanto and Hariadi (2023) concentrated on food and beverage firms across Indonesia, Malaysia, and Singapore from 2019 to 2021, revealing a negative correlation. On a different note, Endri and Fathony (2020) examined financial sector firms listed on the Indonesia Stock Exchange from 2013 to 2017 and found no significant relationship.



### **2.1.3 Firm Characteristics: Profitability**

Diverse viewpoints regarding profitability have surfaced from previous studies. The profitability ratio is a financial indicator business proprietors, investors, and analysts utilize to evaluate a firm's earnings (QuickBooks Australia, 2023). The rate of return on asset (ROA) is a profitability ratio to assess the ability of the firm's asset management to generate profit efficiently (Leman et al., 2020). Typically, the method for calculating the return of assets (ROA) involves dividing the firm's net income by its average total assets during a designated timeframe (QuickBooks Australia, 2023). Dang et al. (2020) said higher profitability will enhance the firm value. Leman et al. (2020) provides another perspective, the firm value was still high despite losses in profitability in previous years.

The literature on the relationship between profitability and firm value in the industry produces mixed results. Firstly, previous empirical research in specific industries such as Dang et al. (2020), Sutanto and Hariadi (2023), Akhmadi and Januarsi (2021), Septyanto and Nugraha (2021) and Osazuwa and Che (2016) found a positive association between profitability and firm value. When a firm demonstrates high profitability, it becomes an attractive prospect for investors looking to allocate their funds (Djashan, 2019). A firm exhibiting substantial profitability will likely garner increased investor confidence and enhance its firm value. This appeal extends to both internal and external sources of funding. The influx of both funds allows the firm to invest in research and development and then improve future performance as the firm's profitability-driven initiatives yield positive results, often translating into high stock prices and enhancing firm value (Akhmadi & Januarsi, 2021).

However, contrary to prior studies, Leman et al. (2020) found a negative between profitability and firm value. Theoretically, a rise in profitability

should lead to an increase in the firm value. Nonetheless, it is crucial to acknowledge that investors' perceptions of the firm's potential can also sway its stock price. In case the firm has suffered losses, the investors are of the opinion that the firm's prospects remain bright in the years to come. Consequently, the firm's share is still highly valued despite losses in previous years (Leman et al., 2020).

Furthermore, the authors of Sulistiyani and Noor (2022) and Dewi et al. (2021) documented no significant effect on this relationship. Dewi et al. (2021) provides that profitability does not directly affect firm value but indirectly affects financial distress. A firm value cannot be determined solely by looking at its profitability because it does not reveal the firm's entire financial health. Thus, investors will also pay attention to the firm's financial status and prefer firms without financial distress. Even in the presence of profitability, financial distress can significantly impact investor confidence and ultimately lead to a decline in the firm value.

The diversity in viewpoints can be ascribed to variation in the country, industries under examination, the timeframe of data collection, and the methodologies in various research. For instance, with panel data regression, Sulistiyani and Noor (2022) focuses on automotive firms that were publicly listed on the Indonesia Stock Exchange during the period from 2015 to 2019. Another author, Dang et al. (2020), focuses on listed firms from Vietnam Stock Exchange Market from 2010 to 2018 with GLS regression that excludes firms in the field of firms, securities, and insurance.

### **2.1.4 Firm Characteristics: Firm Size**

Various perspectives on firm size have been explored in previous research. Firstly, as explained by Afinindy et al. (2021), firm size refers to a firm's capacity to generate funds for different production capacities or services. Larger firm sizes generally correspond to higher firm values, making them more appealing to investors. Additionally, Nursetya et al. (2020) propose that firm size serves as an indicator of a firm's economic strength, revealing its financial prowess through total assets. In essence, firm size is a measure of a firm's financial robustness and maturity, often demonstrated by positive cash flows and sustained positive prospects (Lambey et al., 2021).

The existing literature on the correlation between firm size and value within industries presents varied findings. Studies by Siahaan (2014), Lumapow and Tumiwa (2017), Nursetya and Hidayati (2020), Husna and Satria (2019), Ratnawati et al. (2018), Ayuba et al. (2019), Lambey et al. (2021), and Sudrajat and Setiyawati (2021), a consistent finding emerges, indicating a positive relationship between firm size and value. Based on Lumapow and Tumiwa (2017), this relationship can be attributed to the accessibility of large and well-established firms to capital markets, offering them increased flexibility to secure necessary funds for lucrative investment opportunities. Ratnawati et al. (2018) further suggest that larger firms possess enhanced capabilities to navigate market risks, fostering better risk management and minimizing uncertainties, thereby reducing the likelihood of losses. Nursetya and Hidayati (2020) emphasize that greater firm size correlates with higher firm value, as larger firms are perceived as more reliable with promising prospects, instilling investor confidence to demand more share and augmenting overall stock prices and firm value.

However, in the context of developing countries, such as evident in studies by Ilyas et al. (2023), Hirdinis (2019), Susanti and Restiana (2018),

Septyanto and Nugraha (2021), Niresh and Thirunavukkarasu (2014), Duy and Phuoc (2016), and Cho (1998), an opposing perspective emerges, suggesting a negative impact of firm size on firm value. Duy and Phuoc (2016) argue that smaller enterprises offer more advantages to investors in terms of dividend payment and capital gain, potentially due to higher risks faced by smaller firms. Despite being smaller in size, these firms may exhibit higher values compared to larger counterparts. According to Niresh and Thirunavukkarasu (2014), the inverse correlation between firm value and size stems from the separation of ownership and management in contemporary corporations, diverting managers' attention from profit maximization to prioritizing their own utility. Plus, the presence of inflexible organizational structures, the adoption of specific technologies, and shifts in the strategic approach of firms are proposed as potential reasons for this negative association. Also, Septyanto and Nugraha (2021) stated that opined that the total assets of a firm include various components such as equity, retained earnings and external liabilities. When liabilities constitute a large portion of the total assets, it creates a risk for the firm. In this case, a high proportion of liabilities can reduce the firm value even if the total assets look substantial.

Several studies, including those by Goh et al. (2022), Aprilyani et al. (2021), Mule et al. (2015), Endri and Fathony (2020), Akmalia and Aliyah (2022), Afinindy et al. (2021), and Setiadharna and Machali (2017), have found no relationship between firm size and firm value. Endri and Fathony (2020) argue that in specific sectors, a firm value cannot be solely determined by its size due to suboptimal asset management. Larger firms do not guarantee greater profits compared to their smaller counterparts. Also, Akmalia and Aliyah (2022) assert that investors, when evaluating a firm, do not necessarily consider its size, as total assets may come from external funding sources like debt. Thus, firms may prioritize using profits to fulfill obligations, such as debt repayment, rather than enhancing shareholder prosperity. Therefore, investors are advised to focus on positive indicators, such as Corporate Social Responsibility (CSR).

The discrepancies in research outcomes can be attributed to variations in countries, sectors under examination, data collection periods, and research methodologies utilized. Specifically, differences in the selection of sectors may account for divergent findings in studies investigating the impact of firm size on firm value. For instance, Akmalia and Aliyah (2022) and Afinindy et al. (2021) examined firms in the consumer goods and food and beverage industries listed on the Indonesia Stock Exchange, finding an insignificant correlation. In contrast, Nursetya and Hidayati (2020) focused on the 30 manufacturing firms listed on the Indonesia Stock Exchange and identified a positive correlation.

### **2.1.5 Firm Characteristics: Investment Decision**

Investment is the act of a firm placing money into an asset with the expectation of obtaining a return in the future. A firm's investment decisions are critical to the survival of the businesses involved. This is because investment decisions concern the money utilized to invest, the type of investment, the return on investment, and the investment risk that may develop (Triani & Tarmidi, 2019). According to Aqimissolati et al. (2020), the goal of investing decisions is to maximize firm value by generating high earnings while taking reasonable risks. Investment decisions indicate future investments (investment prospects), such as the introduction of new products or the expansion of existing products, the replacement or purchase of new equipment, research and development, and exploration.

The research on the relationship between investment decisions and firm value yields varied results. According to Agung et al. (2021), Syamsudin et al. (2020), Simatupang and Janrosl (2019), Utami (2021), and Faisal et al. (2021), they concluded that investment decision has a positive and significant relationship with firm value based on their study conducted through a comprehensive analysis. The rationale for this association between investment decision and firm value is that the average fixed asset investment that supports a firm's operations in this industry is still fairly low, but the outlook for most enterprises in this area remains very broad. This indicates that there are still prospects for growth in this area (Santoso, 2019). Sulistyoyo et al. (2017) stated that investment decisions are an essential aspect in enhancing shareholder value. As a result, organizations that have made significant investments are viewed positively by the market as a sign of future growth.

However, there are some researchers have made vary results with the above. According to Salama et al. (2019), Maimunah and Hilal (2014), Nurlela et

al. (2019), and Suteja et al. (2023), their research show that there is a significantly negative relationship between investment decision and firm value. It indicates that the more investment decision being made, the more its firm value will drop. According to Suteja et al. (2023), descriptive analysis results suggest that non-financial sector businesses' investment decisions decline near the end of the study, although the firm value represented by Tobin's Q grows. And the decline in investment decisions was due to the COVID-19 pandemic in 2020 by 16.89% compared to the previous year. Furthermore, in industries with quickly changing technology or market conditions, organizations may need to update or replace fixed assets on a frequent basis in order to remain competitive. In such industries, a high fixed asset to total asset ratio may suggest that the firm is failing to adapt to these changes, which may have a negative influence on its Tobin's Q ratio and overall firm value. Besides, according to Hasanuddin (2021), the study also looks at the influence of dividend policy on firm value, with results that have a significant positive effect. This means that the additional flow of funds for productive assets will affect retained earnings and the amounts of dividend paid to owners of capital, which in turn will affect the firm value.

On the other hand, there are some past studies proved that investment decisions have no significant effect on firm value. According to Salama et al. (2019) and Hasanuddin (2021), they indicate that investment decisions have an insignificant negative effect on firm value. Based on the results of the test conducted by Salama et al. (2019), the lack of effect on investment decisions is caused by future uncertainty, which presents itself in changes in technology, socioeconomic situations, and government regulations. Moreover, according to Triani and Tarmidi (2019), it is discovered that investment decisions do not significantly affect the firm value. This is because the result of investors' reactions to market share is firm value and according to this study, investors do not like and react to this information, therefore making more investment decisions would not boost firm value.

The diverse results of the impact of investment decisions on firm value is due to the different industries under examination and the timeframe of data collection in the past studies. For instance, Agung et al. (2021) who indicates that investment decision positively affects firm value, included firms in the food and beverage industry as the sample of the research for the period from 2016 to 2018 while Suteja et al. (2023) who concludes that investment decision negatively affects firm value conducted the study with non-financial sector firms for the period from 2018 to 2020. Also, Salama et al. (2019) who indicates that investment decision has no significant effect on firm value conducted the study with banking industry firms for the period from 2014 to 2017. Hence, these results of vary relationship between investment decisions and firm value might be due to the above reasons.



### **2.1.6 Firm Characteristics: Firm Growth**

Various perspectives regarding firm growth have emerged from prior research. The growth of a firm demonstrates its capacity to expand and advance, encompassing the augmentation of its asset base (Fajaria & Isnalita, 2018). If the management effectively capitalizes on the firm's assets, it will result in a rise in the firm's profit (Fajaria & Isnalita, 2018). Thus, the growth ratio indicates firm expansion, gauging the firm's capacity to sustain its industry standing and its alignment with broader economic progress. When evaluating firm growth, the total asset growth (TAG) can be employed by comparing the total asset in the period with a total asset in the previous period (Endri & Fathony, 2020).

The literature on the relationship between firm growth and firm value in the industry produces mixed results. Firstly, previous empirical research in specific industries such as Fajaria and Isnalita (2018), Gustian (2017) and Puspitasari and Wiagustini (2019) identified a positive correlation between firm growth and firm value. By the theory of signal, a substantial increase in assets suggests that the firm has promising prospects for significant future gains through extensive production (Fajaria & Isnalita, 2018). Therefore, it is expected that with substantial growth, the firm will be a consideration for investors to invest so that the stock will be in high demand, then the firm value will increase (Puspitasari & Wiagustini, 2019).

However, contrary to prior studies, Suzulia and Saluy (2020) and Sinaga (2016) found a negative between firm growth and firm value. Suzulia and Saluy (2020) provides that higher firm growth results in diminished value due to the tendency of such firms to employ high levels of debt compared with low growth. The firm's high growth causes funds needed are also high because of managing a growing firm logically requires large funds for its operations (Sinaga, 2016).

Furthermore, the authors of Endri and Fathony (2020) and Antoro et al. (2020) documented no significant effect on this relationship. Antoro et al. (2020) show that the high profitability of a firm is a reason for investor and trader to buy shares. In this case, investors and traders ignore the firm growth, but if the firm has high profitability, investors and traders will purchase firm shares with the hope of a significant return.

The diversity in viewpoints can be ascribed to variation in the country, industries under examination, the timeframe of data collection, and the methodologies in various research. For instance, food and beverage firms registered in Indonesia Stock Exchange throughout 2015 to 2017 with the path analysis method (Puspitasari & Wiagustini, 2019). Another author Endri and Fathony (2020) focused on financial sector firms listed on the Indonesia Stock Exchange from 2013-2017 with the method of panel data regression.

## 2.2 Theoretical Framework

### 2.2.1 Signalling Theory

Michael Spence introduced signalling theory in 1973, whose original idea was to use the job market to illustrate how education functions as a signal for individuals to showcase their skills when employers lack information about them (Spence, 1973). This concept later extended to corporate contexts, including voluntary information disclosure in financial statements (Ross, 1979). Signalling theory in the corporate field revolves around how firms provide positive or negative signals through information disclosure for shareholders and investors. This need arises due to information asymmetry between the firm and external parties, with the firm having more knowledge about its future prospects than outsiders, such as investors and creditors (Agung et al., 2021). In essence, signalling theory explains the motivation for firms to share financial reports, bridging the information gap between management and outsiders, and providing insights into a firm's potential (Priyambudi and Thamrin, 2021).

This signal also represents a managerial decision that imparts insights to investors regarding a firm's potential. The signal hypothesis, essentially linked to data availability, determines an entity's quality (Sormin et al., 2023). Its core focus is on deliberate communication to assist investors and others seeking organizational data (Mappadang, 2021). As emphasized by Machmuddah et al. (2020), signalling theory underscores the importance of firms sharing information with external parties, as it can impact firm value, as demonstrated by changes in stock prices. Syamsudin et al. (2021) further highlight the emergence of information asymmetry problems causing investors to undervalue a firm's shares, leading to a tendency for pooling equilibrium. This is a situation where both good and poor-quality firms are

assessed together. Consequently, firms with high-performance quality strive to provide unique signals to investors, particularly those that are challenging to imitate by firms with poor performance. It is essential for firms to disclose comprehensive information, covering both financial and non-financial aspects. Ultimately, investors are expected to engage in rational thinking, enabling them to differentiate between firms with adequate and inadequate performance, resulting in what is known as separating equilibrium.

Triani and Tarmidi (2019) explained that a signal is an action taken by a firm to inform investors about how management perceives the firms' prospects, whether in terms of financial performance or compliance. The information, particularly regarding corporate performance, holds significant importance as it directly influences investor reactions and decisions in the market. Presently, corporate information serves as valuable insight for investors regarding future prospects. Thus, the disclosure of information can update analysts and investors on the firm's quality, value, and long-term outlook (Hamrouni et al., 2015). This information, whether in financial reports or voluntary disclosures, serves as signals from firms, guiding investors about the firm's prospects (Priyambudi & Thamrin, 2021).

Figure 2.2.1 features two key actors: the signaller (typically executives or managers) possessing non-public information and the receiver (outsiders) seeking this information about individuals, products, or organizations (Spence, 1973; Kirmani & Rao, 2000; Ross, 1977). Insiders hold both positive and negative information that could benefit outsiders, who, in turn, desire this data. The communication of signals is the bridge between them, with outsiders potentially making decisions, like investors benefiting from firms signalling promising futures (Connelly et al., 2011).

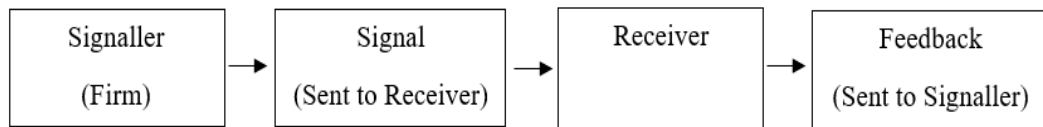


Figure 2.2.1 Signalling Concept. Adapted from Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signalling theory: A review and assessment. *Journal of management*, 37(1), 39-67.

Firm characteristics serve as signals that shareholders can analyse through financial performance (Komara et al., 2020). A rise in a firm's financial performance acts as a favourable signal for investors, driving up demand for firm shares and enhancing the firm's perceived value among investors (Afandi et al., 2022).

The concept of capital structure pertains to the extent of debt usage, or the level of debt held by a firm, encompassing both internal and external funding sources (Komara et al., 2020). It serves as a signal conveyed by managers to the market, indicating favorable prospects and performance for the firm. When managers believe in the positive prospects of the firm and aspire for an increase in stock value, they aim to communicate this to investors (Chabachib et al., 2020; Agung et al., 2021). In line with signalling theory, a high level of debt usage sends a positive signal to investors, suggesting that the firm plans to undertake profitable investments requiring substantial funding, ultimately contributing to an increase in firm value (Sari et al., 2020; Chabachib et al., 2020).

Profitability is a crucial component of financial information that holds significance for investors when assessing a firm's year-over-year profit growth. Investors interpret increasing profitability as a positive signal, indicating potential benefits from their investments in the firm (Machmuddah et al., 2020). In alignment with signalling theory, the profits generated by a firm serve as a managerial signal, offering insights into the

firm's prospects based on its profit levels. Thus, profitability plays a role in influencing the overall value of the firm (Reschiwati et al., 2020).

In the context of firm size, firms with a substantial asset base are indicative of robust financial health, suggesting greater stability, efficiency, and profitability. Such firms also instill confidence in investors, acting as a positive signal due to the perception that firm size correlates with overall financial well-being (Panda et al., 2023). Investors frequently favor large firms, viewing them as having strong growth potential and the capacity to enhance overall firm performance (Bon & Hartoko, 2022). Consistent with signalling theory, information provided by management about the firm's assets becomes a pivotal factor in investment decision-making. The larger the firm size, the more investor confidence is bolstered, the greater the number of shares outstanding, ultimately reflected in the increased value of the firm (Komara et al., 2020).

Investment decisions involve long-term capital commitments with the expectation of future corporate profit outcomes. When a firm allocates funds for investments, it serves as a positive signal for the firm's anticipated growth, potentially leading to an increase in stock prices, reflecting the firm value (Bon & Hartoko, 2022). Correctly executed investment decisions that generate profits foster investor trust, resulting in an uptick in the firm's stock price and, consequently, an increase in firm value. The level of profit derived from corporate investment activities directly correlates with the firm's stock price, with higher profits contributing to a higher stock price. In accordance with signalling theory, investment expenditures act as a significant signal of the firm's future performance, influencing stock price increases and, by extension, enhancing the firm value (Triani & Tarmidi, 2019).

Additionally, firm growth, particularly in terms of asset expansion, is a crucial indicator of firm's development. Substantial growth is not only

anticipated but also signifies positive performance and advancement within the firm. Aligned with signalling theory, the observed growth in a firm signals its robust performance and developmental trajectory, serving as a positive indicator for potential investors to demand more shares. Hence, this positive reception is anticipated to elevate the firm value, discernible through the pricing of its shares (Putri, 2023).

Numerous previous studies, including Agung et al. (2021), Bon and Hartoko (2022), Putri (2023), Machmuddah et al. (2020), Triani and Tarmidi (2019), Komara et al. (2020), Chabachib et al. (2020), Reschiwati et al. (2020), Sari et al. (2020), and Panda et al. (2023), have utilized signalling theory to investigate how firm characteristics act as signals influencing firm valuation. Hence, it aligns seamlessly with our research focus on determining factors affecting Malaysian property firms.

## 2.3 Conceptual Framework

In the preceding section, we introduced a conceptual framework, as depicted in Figure 2.3.1, to investigate the determinants of firm value within the Malaysian Property Sector. This framework contains five independent variables, categorized into firm specific factors. Specifically, these variables include profitability, capital structure, firm size, investment decision and firm growth. Drawing upon prior research, we believe that these independent variables wield significant influence over the valuation of property firms listed on Bursa Malaysia. Consequently, we shall formulate hypotheses based on this framework in the subsequent section. In our research work, we aim to examine the significant relationships between the above variables and the value of property firms in Malaysia.

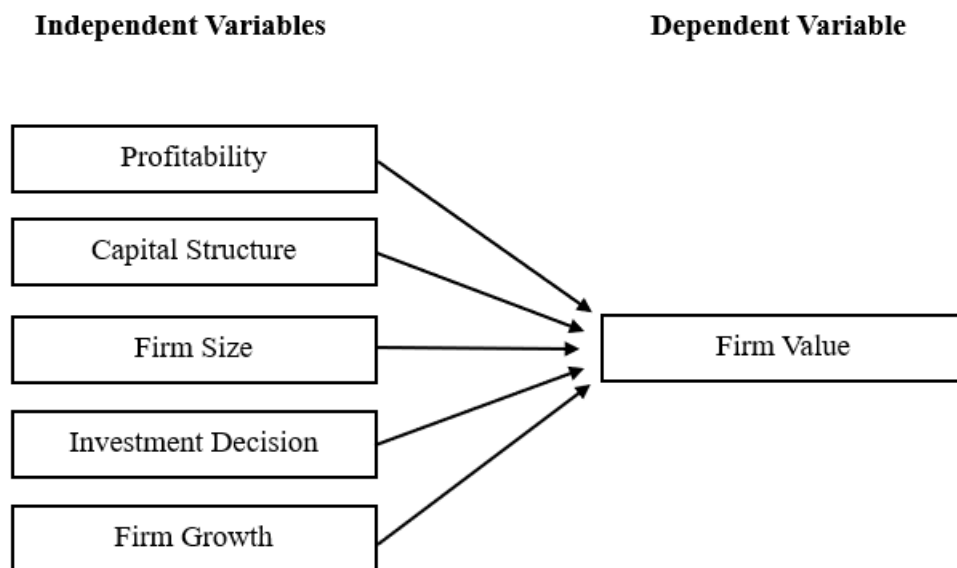


Figure 2.3.1 Proposed Theoretical Framework



## **2.4 Hypotheses Development**

### **2.4.1 Capital Structure and Malaysian Property Firm Value in Malaysia**

In our research, we anticipate a significant negative relationship between capital structure and the property firm value.

High debt loads in a property firm's capital structure can translate into increased risk associated with interest and principal payback obligations. These commitments may put a burden on cash flows, especially in times of market turbulence or recession, which could lower the property firm value. Likewise, an over-reliance on debt financing could make the property firms more vulnerable to financial difficulties or default, especially in the event of an unexpected increase in interest rates or a downturn in the property market. Furthermore, as explained by Sonjaya and Muslim (2023), using more debt to finance operations increases firm burden, which reduces investor confidence in continuing to hold stock. This will reduce stock prices and the number of outstanding shares as more investors are willing to sell their shares, ultimately reducing the value of the firm.

### **2.4.2 Profitability and Malaysian Property Firm Value in Malaysia**

In our research, we anticipate a significant positive relationship between profitability and the property firm value.

A profitable property firm demonstrates effective resource and operational management, sustaining earnings over time and thereby increasing its firm value. Additionally, profitability increases the firm's ability to reinvest, which allows it to finance plans for growth, purchase valuable properties, or seize market possibilities. According to Ahmadi and Januarsi (2021), a profitable firm has the potential to increase investor confidence and enhance its overall value by drawing in funding from both internal and external sources for research and development. This, in turn, can drive future performance through profitable initiatives. Hence, this leads to an increase in the number of shares outstanding and the price of the stock, as more investors are willing to buy profitable shares, thus increasing firm value.

### **2.4.3 Firm Size and Malaysian Property Firm Value in Malaysia**

In our research, we anticipate a significant positive relationship between firm size and the property firm value.

Greater ability to manage market risks and uncertainties by larger enterprises lowers the probability of losses. Larger firms can also more readily grow their operations, take on important projects, and buy valuable properties since they have easier access to capital markets and financing choices. According to Nursetya and Hidayati (2020), larger firms are thought to be more dependable, which boosts investor trust to demand more shares and increases stock prices as well as firm value.

#### **2.4.4 Investment Decision and Malaysian Property Firm Value in Malaysia**

In our research, we anticipate a significant positive relationship between investment decision and the property firm value.

Investment decisions are critical to raising the value of property firms because they indicate possibilities for future growth, especially in sectors with low fixed asset investment but significant growth potential. This improves market perception and shareholder value (Santoso, 2019). Additionally, wise investment choices that lead to the purchase of premium properties in sought-after areas or the use of value-adding strategies, such as renovations or redevelopment, can improve the property firms' capacity to provide income as well as their chances of appreciating in value. The property firm's entire value is positively impacted by the higher income and value appreciation, which attract investors to demand or acquire more shares. This will result in an increase in stock prices and firm value.

#### **2.4.5 Firm Growth and Malaysian Property Firm Value in Malaysia**

In our research, we anticipate a significant positive relationship between firm growth and the property firm value.

Substantial firm growth draws in investors, which raises the firm value and increases the demand for its stock (Puspitasari & Wiagustini, 2019). As the business grows, it usually generates more revenue as it develops new projects, adds more tenants, sells more properties, and extends its operations.

This leads to an increase in sales revenue, rental income, and other revenue streams. In addition, firm growth also conveys confidence in the firm's ability, which draws in additional funding sources and investors and fosters growth. This will increase investor interest in holding more of these prospective stocks, which will increase the shares outstanding and the stock price, and ultimately the firm value.

## **2.5 Conclusion**

This chapter presents a review of literature concerning both the dependent variable, firm value, and various independent variables, including capital structure, profitability, firm size, investment decisions, and firm growth. Therefore, the theoretical frameworks are explained. Moreover, the study establishes the conceptual framework and develops hypotheses.

## CHAPTER 3: METHODOLOGY

### 3.0 Introduction

The primary objective of this study is to determine whether firm characteristics will have a direct significant impact on firm value in the Malaysian property sector. To achieve this objective, research methodology discussed in this chapter is very important for following testing and final outcomes. Firstly, the research design is explained. Subsequently, the data collection methods are presented. Then, the chapter delves into discussions regarding the sampling design, variable specification, data processing, and proposed data analysis tool are discussed.

### 3.1 Research Design

Research design refers to the overall strategy or plan that outlines how a research study will be conducted (Bhat, 2023). It encompasses the framework for collecting, analyzing, and interpreting data to address specific research questions or hypotheses (Bhat, 2023). It plays a crucial role in ensuring that a study is valid, reliable, and capable of producing meaningful results.

This research study examines the relationship between firm value and its determinants, encompassing firm characteristics such as investment decision, firm size, profitability, capital structure, and firm growth. Therefore, the panel data sample of 76 publicly listed firms from property industries that have property development as a main business in Malaysia from year 2005 to 2019. Thus, the 15 years of data had been used in this research because this timeframe was more comprehensive and extensive in nature, allowing for a more comprehensive and

descriptive analysis of the phenomenon under investigation. The panel data is a structured collection of observations that combines elements of both cross-sectional and time series data (Buteikis, n.d.). It involves tracking multiple individuals over multiple periods to analyze changes and variations over both dimensions (Lithmee, 2018).

However, the data collection process also included a quantitative data method. Quantitative data, also known as numerical data, refers to information that can be measured and expressed using numbers (Surendran, 2023). It allows for mathematical analysis and statistical interpretation (Surendran, 2023). For example, the firm's annual net profit in MYR, total assets owned by the firm in MYR, and the firm's market capitalization in MYR. As such, it is appropriate in situations requiring systematic, standardized comparisons.

Therefore, quantitative research approach has been applied in this study. This research design was adopted by Endri and Fathony (2020) to investigate the factors that influence the firm value. Quantitative research is collecting and analyzing numerical data (Bhandari, 2023). The applied of a quantitative research approach offer several benefits. First, the ability to directly compare and replicate results across diverse cultural scenarios, time periods, or participant cohorts is a key advantage of the quantitative research approach, supported by a greater abundance of comparative statistical outcomes (Bhandari, 2023). Moreover, the research findings attain enhanced validity, reliability, and generalizability, particularly when dealing with a substantial sample size, within the realm of quantitative research (Bhandari, 2023). Consequently, the research interpretation will be simpler to comprehend and require less time and resources (Bhandari, 2023). Eyisi (2016) provides that hypothesis testing forms the crus of the research study; thus, reducing the necessity for speculative assumptions on the part of researchers; they can rely on structured guidelines and sequential processes.

## **3.2 Data Collection Methods**

### **3.2.1. Research Data**

#### **3.2.1.1 Timeline for Research Data**

Our research carries out an extensive examination spanning a 15-year duration, from 2005 to 2019, with a particular emphasis on the property firm value in Malaysia. A thorough analysis of long-term trends and patterns is made possible by this strategic period, which is essential in the fields of finance and economics. Our goal is to uncover the complex relationships between different firm characteristic and how they affect the property firm value by using a large amount of secondary data. This longer time period guarantees high-caliber and reliable study outcomes by deepening our understanding and improving the validity and statistical strength of our analyses.

The focus of our study is on data from 2005 to 2019 because Malaysia's property sector has grown significantly over the last 20 years and has been crucial to the nation's economic growth. This period provides a rich dataset for analysis, with property sales more than doubling and total transaction value over ten-folding between 1990 and 2019 (Team, 2021b). These increases are ascribed to population expansion, national economic development, and aspirations towards homeownership. Additionally, the stability observed in the property prices and the comprehensive availability of data throughout this period facilitate a detailed analysis of the firm attributes that impacts property firm value with precision (Shakirah, 2023).

In addition, the disruptive aftermath of the COVID-19 pandemic, which presented operational issues and concerns for the property sector, had a role in the decision to omit data from recent years. Construction site productivity and completion schedules have been impacted by supply chain disruptions, lockdowns, and mobility restrictions that have delayed property transactions. The entire influence of the pandemic of the property sector is still unknown, despite the fact that it is acknowledged as a critical driver of economic growth and home supply. Our study circumvents issues associated with the epidemic and allows for a more rigorous analysis by focusing on pre-2020 data, given the uncertainties surrounding the pandemic's aftermath (Jagun et al, 2022; Mariadas & Murthy, 2023; Team, 2021a). This helps to provide insights into the firm characteristics impacting property firm value.

### **3.2.1.2 Missing Data and Outliers**

Missing data refers to values that do not exist for a variable in a given observation. This is a common issue in research and can significantly influence the findings that can be derived from the data (Kang, 2013). Meanwhile, outliers are observations that are unusually distant from the rest of the values in a population random sample (NIST, n.d.).

In our research, we decided to exclude firms with severely missing data. This step was taken because severely missing data introduces bias even when we use imputation methods. Excluding missing values is a quick but not always ideal solution for dealing with missing data. In addition, some firms only provide data for a few years, such as Radium Development Berhad which only provides data for 2019. These limited data cannot provide reliable information for our study.



In our study, we recognise that the missing data encountered can be categorised as missing completely at random (MCAR). This is because missing data do not show any systematic patterns or dependencies with other variables (Ibarrera, 2020). For example, we find that Ideal Capital Berhad has missing data on debt-to-equity ratio for the year 2014, while data on other variables such as return on assets are available. This suggests that the missing debt-to-equity ratio is not related to other variables such as profitability. Given the large amount of significant missing data, we followed the methodology of our previous researchers such as Nteyi and Quaye (2022) and performed a listwise deletion of the missing data for MCAR. This helps to ensure the robustness of our model, as the inclusion of non-random observations in the missing values may introduce bias into the model result. Therefore, it seems reasonable to remove this type of severely missing data.

However, among the remaining firms, we noted that some firms still had minor, but not significant, missing data. To address these minor missing data issues, we used an imputation approach to predict and fill in missing values. Therefore, we opted for the mean imputation method because of its simplicity and ease of use. This method takes into account individual differences by using the data available for each individual case to estimate its missing value, rather than relying on data from other cases (Fox-Wasylyshyn et al., 2005). In addition, Roth et al. (1999) found that mean replacement at the case level was effective in managing missing data even when the rate of missing data was as high as 20%, regardless of whether the missingness was random or systematic.

When dealing with missing data that are missing at random (MAR) or non-randomly missing (NMAR), mean imputation tends to produce biased means and underestimates the variance and covariance (Schlomer et al., 2009). However, given that our missing data are categorised as missing completely at random (MCAR) and represent a small fraction of the

observations, mean imputation becomes a viable option. This method calculates the average of the available observations and fills in the missing values accordingly (“How to Handle Missing Data | Master of Data Science”, 2023). In our study, the missing data represented only 10% of the sample size, which is below the 20% threshold, so we believe that mean imputation is appropriate. This approach is consistent with Faramarzi and Bhattacharya (2021), Ittner and Larcker (1997), Jensen and Rässler (2007), and Alikaj et al. (2016).

After the imputation process is done, we start to use a standardised method, the Z-value method, to identify all outliers in the data. The z-value allows us to identify the distance between the standard deviation and the mean of a particular value relative to the dataset. Typically, z-values greater than 3 or less than -3 are labelled as outliers (Selva, n.d.). This is because outliers can have a significant impact on the regression model, potentially altering the model equation and leading to incorrect predictions or estimates (“Effects of Outliers on Regression Models?”, 2015). The outliers have the potential to distort the relationship between the independent and dependent variables, reducing the significance of the independent variables and making them appear less relevant or statistically insignificant.

According to Appendix 3.2, the first step is that we calculate the overall mean and standard deviation of each variable for all 76 property firms. We then use the z-score formula to calculate different z-score values for different firms in different years. After calculating the values, we exclude and remove values that exceed the range of 3 to -3, as they are considered outliers. For example, the capital structure from 2005 to 2014 for Encorp Berhad were outlier; WMG Holdings Berhad also had outliers in its profitability and corporate growth in 2012, 2016 and 2017; There are also outliers in the capital structure of Lagenda Property Berhad from 2007 to 2010; UOA Group's profitability from 2009 to 2011 has outliers; IOI Corporation Berhad's firm size has outliers from 2017 to 2019; and so on.

Ultimately, we identified 110 observations as outliers and eliminated them, thus improving the results of the study.

### **3.2.1.3 Unbalanced Data**

Our research dataset consists of panel data, also known as longitudinal or cross-sectional time-series data, which ideally involves repeated measurements of specific variables over time on observed units such as individuals, firms, cities, and states (Krishnan, 2022). Our datasets contain missing values for certain group observations over time. For example, some firms only provide data for limited years, such as Radium Development Berhad, which solely offers data for 2019. Common reason for missing values maybe is private firms may not disclose financial information publicly, as they do not distribute shares to the public (Quora, n.d.).

Additionally, our research dataset also contains outliers. These outliers may stem from various factors such as changes in system behavior, fraudulent activities, human or instrument errors, or natural variations within the population being examined. It is possible that a sample could have been contaminated by external elements not representative of the population under scrutiny (Griffith & Friesen, 2021). After removing those missing value and outliers, our panel dataset can be characterized as unbalanced panel data, indicating that entities within the dataset are observed varying numbers of times (Eric, 2021).

#### **3.2.1.4 Short Panel Data**

Following selecting a sample comprising 76 property firms possessing characteristics pertinent to our research, we employed panel data collection methodology. This entailed the iterative acquisition of data from these specific property firms over an extended period. Our analytical time frame spans a decade in our investigation, specifically from 2005 to 2019. Then, we pulled 15 years of data from the firms' annual reports, including indicators such as 15-year return on assets (indicating profitability), alterations in total assets over 15-year period, and the debt-to-equity ratio spanning the same duration. As such, the data compilation can be appropriately classified as panel data, given that it comprises observations collected from distinct property firms at multiple time points. Ultimately, using panel data enables us to attain robust correlations in our findings, enhancing our ability to predict future trends and conduct thorough analyses (Indeed Editorial Team, 2023). Additionally, according to Nguyen (2020), our data is short panel data since the data taken comprises more individuals and fewer time periods.

### **3.3 Sampling Design**

#### **3.3.1 Target Population**

In our research, we have chosen to investigate the property sector in Malaysia. Initially, we identified a total of 100 publicly property firms listed on Bursa Malaysia, each engaged in various aspects of the property business, such as property development, property investment, construction, hospitality and leisure, property management, recreation, and resort.

Yet, in our research, we specifically looked at property firms whose main focus is property development. Referring to Table 3.3.1.1, our initial selection involved excluding those property firms that are primarily involved in construction, property investment, or property management. This resulted in the exclusion of 13 firms from our analysis.

After excluding those firms, we realized the importance of managing our data effectively. Several firms had significant missing and incomplete data, with many years having null values. This could potentially disrupt our research process because it's challenging to make accurate predictions based on incomplete data, leading to biased results. Based on Kumar (2020), this type of missing values are better to be deleted or removed. Consequently, we refined our dataset by excluding 11 firms, which helped create a more robust model. Ultimately, we narrowed down our sample to only 76 property firms in Malaysia based on these criteria. We collected annual panel data for these 76 property firms over a period of 15 years from 2005 to 2019.

Table 3.3.1.1

<i>Sample Selection Criteria</i>		
No.	Criteria	Total
	All property firms listed on Bursa Malaysia in 2022	100
1	Main business of a property firm is not property development	(13)
2	Property firms with severe missing data, such as a consecutive 10 years missing.	(11)
	Selected sample	76

### 3.3.2 Sample Size

In research, a larger sample size leads to more accurate results because estimates are consistent and there is less variability around the true value (Charlesworth Author Services, 2022). There are 100 property firms listed in the Bursa Malaysia Main Market in 2023. However, due to significant data gaps and mismatches with key business criteria, only 76 firms were selected for this study, which stated in Table 3.3.2.1. The study covered a 15-year period from 2005 to 2019. In addition, outliers are removed from the data to prevent them from significantly affecting the regression model. Therefore, a total of 1030 observations were included to analyze the effects of dependent and independent variables, as shown in Table 3.3.2.1.

Table 3.3.2.1

<i>Final Observations</i>		
	Total Firms	Total Observations
Original Data	100	$100 \times 15 = 1500$
Severe Missing Data & Mismatch of main business	24	$24 \times 15 = 360$
Final Data after removing 110 outliers	76	$1140 - 110 = 1030$

### 3.4 Variable Specification

We are utilising some measurement to compute the independent variables in order to determine the relationship between the selected independent variables and the dependent variable—firm value, which is measured by Tobin’s Q. All independent variables are measured in percentages in order to simplify analysis process due to standardized data is analysed with consistent measurement. The data information is collected from the financial statements of publicly traded Malaysian property firms in the Refinitiv database, which also contains financial information on a huge number of international businesses.

#### 3.4.1 Dependent Variable – Firm Value

It is an idea in economics that depicts a firm's market worth and the value that a firm is deserving of at a specific time. It is, in theory, the sum of money required to acquire or assume control of a commercial firm. In our research, we use Tobin’s Q as measurement of firm value by dividing the total market value of firm by total asset value. There are some past studies employed Tobin’s Q to measure firm value, such as Syamsudin et al. (2020), Suteja et al. (2023), Luu (2021), Jonnius and Marsudi (2021), Al-Slehat (2019), and Septyanto and Nugraha (2021).

Calculation Formula:

$$\text{Tobin's Q} = \frac{\text{Total Market Value of Firm}}{\text{Total Asset Value}} \times 100\%$$

### 3.4.2 Firm Characteristics – Capital Structure

The Debt-to-Equity Ratio (DER), used to evaluate capital structure, estimates the percentage of a firm's funding that comes from debt, highlighting the significance of debt within the firm's composition (Hirdinis, 2019). A larger Debt to Equity Ratio (DER) denotes greater external dependency, which results in higher corporate burdens and could have an influence on profitability and value (Susanti & Restiana, 2018). As a result, employing excessive debt to support a firm can lower firm value. This measure has been used in a number of research, such as those by Hirdinis (2019), Suzulia and Saluy (2020), Rachim and Setiany (2021), Ahmad and Muslim (2022), and Sonjaya and Muslim (2023).

Calculation Formula:

$$\text{Debt to Equity (DER)} = \frac{\text{Total Liabilities}}{\text{Total Equity}} \times 100\%$$

### 3.4.3 Firm Characteristics – Profitability

Profitability is the firm's ability to earn profit and an overview of the firm's performance in managing the firm. The return on asset ratio (ROA) can measure the total return on assets after interest and tax expense. Thus, a firm's ROA is influenced by its profitability, as reflected in its net income and the size and composition of its asset base. The higher the net income ratio to total assets, the better the share's appreciation. Previous empirical research, such as Endri & Fathony (2020), Dewi et al. (2021), Dang et al. (2020), Leman et al. (2020) and Akhmadi and Januarsi (2021) have employed this measure.



Calculation Formula:

$$\text{Return On Assets (ROA)} = \frac{\text{Net Income After Tax}}{\text{Total Asset}} \times 100\%$$

#### **3.4.4 Firm Characteristics – Firm Size**

Firm size is an indicator of a firm's economic capacity, reflecting its financial strength, which is usually measured by total assets (Nursetya & Hidayati, 2020). As such, larger firms usually have easier access to internal and external funding, which enhances the overall value of the firm (Hirdinis, 2019). Firm size is usually quantified with respect to the natural logarithm of total assets. Numerous studies, including Ilyas et al. (2023), Lumapow and Tumiwa (2017), Susanti and Restiana (2018), Ayuba et al. (2019), Siahaan (2014), Ratnawati et al. (2018), Goh et al. (2022), Aprilyani et al. (2021) and Akmalia and Aliyah (2022), have employed this measure.

Calculation Formula:

$$\text{Firm Size} = \text{Log of Total Assets (In \%)}$$

#### **3.4.5 Firm Characteristics – Investment Decision**

Investment decisions pertaining to choosing how much money to put into different types of investments (Sartono, 2012, as cited in Nurlela et al., 2019). In this study, we use fixed assets to total assets as measurement of investment decision by referring to Santoso (2019), Faisal et al. (2021), Maimunah and Hilal (2014), Nurlela et al. (2019), Hasanuddin (2021) and

Aqimissolati et al. (2020), who have employed this measurement as proxy of investment decision.

Calculation Formula:

$$\text{Investment Decision} = \frac{\text{Total Fixed Assets}}{\text{Total Assets}} \times 100\%$$

### 3.4.6 Firm Characteristics – Firm Growth

The expansion of a firm's size, earnings, market share, assets, and profitability through time is referred to as firm growth. This may be accomplished in a number of ways, for as through diversifying into new markets, creating new goods or services, and raising sales (*Business Growth*, n.d.). Assets are one metric used by Zhou and De Wit (2009), Fajaria (2018), Suzulia (2020), Endri (2020) and Antoro (2020) to measure firm growth. As a result, in our study we utilise asset growth as a proxy for firm growth.

Calculation Formula:

Asset Growth

$$= \frac{\text{Latest Total Assets} - \text{Total Assets 12 months ago}}{\text{Total Assets 12 months ago}} \times 100\%$$

### 3.5 Data Processing

Figure 3.5.1 illustrate the flows of data processing. Firstly, the data is sourced from the Refinitiv database. Subsequently, the secondary data undergoes restructuring to facilitate empirical analysis and hypothesis testing. Next, use the EViews software for the data processed. Lastly, the information output generated from EViews is analyzed, assessed, and presented.

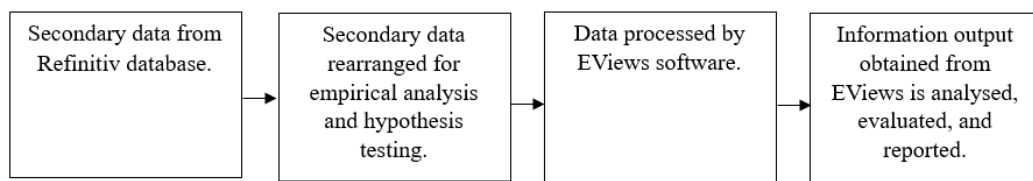


Figure 3.5.1 The flows of data processing

### 3.6 Proposed Data Analysis Tool

#### 3.6.1 Preliminary Test

##### 3.6.1.1 Panel Unit Root Test

Based on Baltagi test book, preliminary test included panel unit root test (Ayman, 2007). Panel unit root tests are a statistical technique used in econometrics that determine if time series data from different entities have a unit root, which suggests non-stationary and random patterns (Pesaran,

2011). By taking into account both the cross-sectional and time-series aspects in panel data—which is made up of observations on several entities across time—they expand on the classic unit root tests. These tests support model selection and methodological decisions by assisting researchers in understanding the properties of their data. Furthermore, compared to pure time-series or cross-sectional data, panel data offers richer information, more variability, and increased efficiency when integrated with models such as fixed or random effects. Panel data analysis has advantages such as higher test power, but it also has drawbacks such cross-section dependency, particularly with small samples. Nonetheless, it continues to be essential in econometrics for taking into consideration distinct group behaviours and exposing statistical effects that other data kinds can miss (EViews assistance, n.d.; Barreira & Rodrigues, 2005; Eric, 2019).

In the context of panel unit root tests, two generations of tests have been developed. The first generation includes the Levin, Lin, and Chu test (2002), the Im, Pesaran, and Shin test (2003), and the Fisher-type test employing ADF and PP tests (Madalla & Wu, 1999; Choi, 2001). These tests are based on the key assumption of cross-sectional independence among units. In contrast, the second generation of tests challenges the assumption of cross-sectional independence, acknowledging cross-sectional dependence (Tugcu, 2018). This second generation of tests is suitable for balanced panel data only. Given that our data involves the unbalanced panels, we opt for the first generation of tests.

In a panel unit root test, the alternative hypothesis put forth stationary, while the null hypothesis contends that the series under investigation has a unit root, suggesting non-stationary. Additionally, the tests by Levin et al. (2002) presume a common unit root process across cross-sectional units, while those tests by Im et al. (2003), Choi (2001), and Maddala et al. (1999) assume individual unit root processes across cross-sectional units. In addition, tests such as Im et al. (2003) take group heterogeneity and residual

serial correlation into account. On the other hand, the Fisher test is flexible and can be used with or without a balanced panel, supporting different lag durations and unit root testing. These tests assist researchers in identifying whether variables show a unit root indicating non-stationary or are stationary throughout the panel (Barbieri, 2006). The decision criterion for a panel unit root test involves rejecting the null hypothesis if the p-value is less than the specified level of significance ( $\alpha = 0.05$ ); otherwise, the null hypothesis is not rejected. The following is an outline of the hypothesis to the panel unit root test:

$H_0$ : Panel data has unit root (Non – stationary).

$H_1$ : Panel data has not unit root (Stationary).

### **3.6.2 Selection Method of Panel Data Regression Model**

Based on Zulfikar and STp (2018), several tests can be conducted in order to select the most suitable model, such as the Poolability test, the Hausman test, and the Breusch and Pagan Lagrange Multiplier test.

#### **3.6.2.1 Poolability Test**

As per Team (2021), the Chow test for poolability serves as a tool for deciding whether a Pooled Effect or Fixed Effect (FE) model is the more suitable choice when estimating panel data. Essentially, it assesses how effectively the data can be combined across the panel. As a general guideline, it's advisable to have a minimum of three observations per panel group.

The F-value is calculated as follows:

$$F = \frac{\left[ \frac{(R^2_{FEM} - R^2_{POOL OLS})}{(K_{FEM} - K_{POOL OLS})} \right]}{\left\{ \frac{1 - R^2_{FEM}}{[n - (K_{FEM} + 1)]} \right\}}$$

Where

$R^2_{FEM}$  = R-squared of fixed effects model

$R^2_{POOL OLS}$  = R-squared of pooled OLS model

$K_{FEM}$  = Number of independent variables of fixed effects model

$K_{POOL OLS}$  = Number of independent variables of pooled OLS model

$N$  = Number of observations

In our study, we test two hypotheses: one suggesting a pooled OLS model and the other a fixed effects model. We will make our decision based on the F-statistic or its p-value. If the F-statistic exceeds the critical value or the p-value is below the significance level, we will reject the null hypothesis.

### 3.6.2.2 Hausman Test

The Hausman test is a statistical tool employed to choose between the Fixed Effect and Random Effect models (Team, 2021). It is often framed as a test for potential model misfit (Stephanie, 2023).

Test Statistics value is calculated as follows:

$$H = (\hat{\beta}^{FE} - \hat{\beta}^{RE})[\text{Var}(\hat{\beta}^{FE}) - \text{Var}(\hat{\beta}^{RE})]^{-1}(\hat{\beta}^{FE} - \hat{\beta}^{RE})$$

In our study, we start with the null hypothesis favoring the random effects model, while the alternate hypothesis suggests the fixed effects model. Our decision relies on the test statistic or p-value. We reject the null hypothesis if the test statistic surpasses the critical value or if the p-value is less than the significance level.

### 3.6.2.3 Breusch and Pagan Lagrange Multiplier Test

The Breusch-Pagan LM Test is used to determine whether a Pooled Effect or Random Effect model is the more suitable choice when estimating panel data. It assesses the significance of random effects in panel data models. It is especially useful when using dummy variables in the fixed effect model faces challenges. Consequently, the random effect model offers an alternative way to address cross-sectional and time-specific effects in panel data (Viren, 2022).

Test statistic can be estimated as:

$$LM = \frac{IT}{2(T-1)} \cdot \left\{ \frac{[\sum_{i=1}^I (\sum_{t=1}^T \hat{\mu}_{it})^2]}{\sum_{i=1}^I \sum_{t=1}^T \hat{\mu}_{it}^2} \right\} - 1$$

Where, T = number of time periods; I = number of cross-sectional units

In our study, we test two hypotheses: one suggesting a pooled OLS model and the other a random effects model. We will make our decision based on the test statistic or its p-value. If the test statistic exceeds the critical value or the p-value is less than the significance level, we will reject the null hypothesis.

### **3.6.3 Diagnostic Checking**

The diagnostic tests in this research aim to uncover any econometric issues in the model, such as problems related to cross-sectional dependence, heteroscedasticity and autocorrelation. Based on Baltagi test book, diagnostic tests included cross-sectional dependence, heteroscedasticity, autocorrelation (Oscar Torres-Reyna, 2007; Pramod, 2018; Aymen, 2007 and Oscar Torres-Reyna, 2010). Previous studies by Zulfikar and STp (2018) have conducted diagnostic tests to examine heteroscedasticity and autocorrelation. Similarly, Imad (2016) and Uddin et al. (2021) have demonstrated the diagnostic checking in panel data regression models, specifically in identifying issues like heteroscedasticity and autocorrelation. Thus, it highlights the diagnostic test has used to detect and address any econometric problems in the model.

#### **3.6.3.1 Cross Sectional Dependence**

In panel data analysis, cross-sectional independent disturbances are frequently assumed, particularly when the cross-section size (N) is large. On the other hand, empirical data suggests that panel regression settings frequently exhibit cross-sectional dependence. To ascertain whether there is any correlation or interdependence between observations made across several cross-sectional units in a dataset, a cross-sectional dependence test is utilised. This reliance may result from a number of things, including shared unobserved heterogeneity, interactions between entities, and common shocks. Furthermore, the influence of cross-sectional dependency on the estimation varies based on the dependence's type and the strength of cross-sectional correlations. Ignoring this reliance during the estimation process can have serious repercussions, such as the production of erroneous test statistics and a loss of estimator efficiency. Cross-sectional dependence



must therefore be acknowledged and addressed because failing to do so might result in biased estimations and incorrect conclusions, especially when working with panel data studies or datasets that have numerous cross-sectional units (De Hoyos & Sarafidis, 2006; EViews support, n.d.).

To identify and address cross-sectional dependence, a number of tests have been devised. For example, EViews provides a number of tests, such as the Pesaran (2004) scaled LM test, the Breusch-Pagan (1980) LM test, the Baltagi, Feng, and Kao (2012) bias-corrected scaled LM test, and the Pesaran (2004) CD test. By applying these tests to panel and pool equations calculated using techniques like least squares and instrumental variables, panel data analysis practitioners can get important insights into the existence and significance of cross-sectional dependency. The Lagrange multiplier (LM) test, created by Breusch and Pagan (1980), is frequently applied when the temporal dimension ( $T$ ) is greater than the cross-section dimension ( $N$ ). This test uses the average of the squared pairwise correlation of the residuals. Nevertheless, in situations when  $N$  is big, conventional methods could not work, requiring the use of different strategies (De Hoyos & Sarafidis, 2006; EViews assistance, n.d.; Pesaran, 2004).

The Pesaran (2004) cross-sectional dependence (CD) test, on the other hand, is a formal statistical process designed to assess cross-sectional dependence in panels with a small number of time periods ( $T$ ) and a large number of cross-sectional units ( $N$ ). In order to prevent bias in test findings, this test evaluates if the residuals are associated across entities. The absence of correlation between residuals is the CD test's null hypothesis. If errors are symmetrically distributed, it is favourable since it is accurately centred under the supposition of cross-section independence (Hsiao et al., 2007; Pesaran, 2004). However, Baltagi claims that while cross-sectional dependence is less of a concern in micro panels with fewer years and a large number of instances, it becomes troublesome in macro panels with extended time series (Oscar Torres-Reyna, 2010). Because our dataset only spans 15

years and contains 76 observations ( $N > T$ ), we choose to use the Pesaran (2004) CD test, and the following is an outline of the hypothesis to the Pesaran CD test:

$H_0$ : Residuals are not correlated.

$H_1$ : Residuals are correlated.

### **3.6.3.2 Heteroscedasticity Test**

In the context of regression, heteroscedasticity refers to different residual variances among measured values, which calls into question the underlying assumption of constant variance in ordinary least squares (OLS). Thus, coefficient estimates are inaccurate and biased, which undermines the reliability of OLS results (Team, 2023). It is more common in datasets with significant value changes and can be caused by a variety of variables, including a wide range of values, outliers, inappropriate regression models, and different measurement scales.

Certain models are more vulnerable to it because of the error variance changing proportionally with a factor. Because heteroscedasticity impairs the accuracy of coefficient estimates and raises the possibility of departures from actual population values, it must be addressed. Additionally, it produces abnormally low p-values, which may incorrectly indicate the statistical importance of model variables and call into question the reliability of tests like the t-test and the F-test.

In general, cross-section heteroscedasticity happens when the variability of errors differs among different groups at a specific point in time. On the other

hand, panel period heteroscedasticity occurs when the variability of errors changes across different time periods for a specific group. Both cases violate the assumption of constant variance in traditional linear regression, potentially causing biased standard errors and less efficient parameter estimates.

In fact, heteroscedasticity issues often occur in cross-sectional data, where observations are collected at a single point or over a period, but across different entities (White, 1980). While many panel data models assume that the variations in disturbances have uniform variances, this assumption may not hold in real-world scenarios. For example, the size of cross-sectional units may vary, leading to differences in conditional variance. When the error term is incorrectly assumed to have a mean square error, it can lead to inefficient least squares estimates and inconsistent covariance matrix estimates (Feng et al., 2020).

When it comes to identifying and addressing heteroscedasticity in regression analysis, there are several approaches can be used, including the likelihood ratio tests, Breusch-Pagan Test, Goldfeld-Quandt test, and the White Test. Based on Van Zyl (2011), the likelihood ratio test was found to be highly sensitive to deviations from normality when normality was considered, especially in dealing with data from distributions with heavy tails. The test can be used as a reliable method for assessing the constant residuals or homogeneity of time series data when grouped together. Also, this test maintains good accuracy and validity across all types of heteroskedasticity, both exponential and quadratic (Baltagi et al., 2010).

In order to address heteroskedasticity, model specifications may need to be adjusted. A useful statistical method for this purpose is generalised least squares (GLS), which adjusts the data to mitigate heteroskedasticity. The use of a GLS estimator ensures that regression slope estimates remain

consistent and also addresses the variation in standard errors associated with these slopes (Charles, 2005).

When doing a heteroscedasticity test, we have the option of employing the likelihood ratio test. Reject  $H_0$  if the p-value is less than the significance level (1%, 5%, or 10%). Otherwise, do not reject  $H_0$ . If null hypothesis ( $H_0$ ) was rejected, then indicates that there is sufficient evidence to draw the conclusion that there is a heteroscedasticity problem in the model and vice versa. The hypothesis for likelihood ratio test in the model is as follow:

$H_0$ : There is no heteroscedasticity problem in the model.

$H_1$ : There is heteroscedasticity problem in the model.

### **3.6.3.3 Autocorrelation Test**

Autocorrelation, also known as serial or lag correlation, is a measure of the relationship between the values of a variable over time. It aids in detecting patterns and non-randomness in data, particularly when choosing time series or nonlinear models with time as an independent variable. Hypothesis testing, statistical analysis, and regression equation predictions are all greatly impacted by autocorrelation (Smith, 2023; GeeksforGeeks, 2020). In addition, autocorrelation is important for the following reasons: First off, it can have a major impact on the validity of conventional hypothesis tests and confidence intervals, leading to excessively small confidence intervals and underestimated p-values, especially in situations where there is positive autocorrelation. Second, identifying it can direct researchers towards more appropriate statistical analyses, ensuring that their data interpretations are correct. Finally, considering autocorrelation improves the accuracy of predictions made using regression equations. When autocorrelation is

present in residuals, it typically denotes potential model misspecification, frequently because of the exclusion of crucial variables. This is particularly true when working with data that was gathered over time or in several places. The accuracy of statistical conclusions can be compromised by the presence of autocorrelation since it can skew standard errors and p-values (Huitema & Laraway, 2006; Bock, 2022).

Moreover, statistical instruments like correlograms (ACF plot), LM tests, and the Durbin-Watson test are used to find autocorrelation. The Durbin-Watson test can efficiently identify common types of autocorrelations that generally exhibit some first-order correlation despite explicitly evaluating first-order correlation. A score around 0 indicates a substantial positive correlation, a value close to 4 suggests a strong negative autocorrelation, and a value near the middle denotes lesser levels of autocorrelation, according to autocorrelation tests, particularly the Durbin-Watson test (Smith, 2023; InfluxData, 2021; Bock, 2022). According to Uyanto (2020), the Durbin-Watson test is the most widely used statistical tool for identifying autocorrelation. For instance, Yulianti et al. (2021), Rigopoulos (2015), and Gharaibeh (2017) have utilised the Durbin-Watson test to examine whether the residuals (prediction errors) exhibit autocorrelation. Hence, this study decides to employ the Durbin-Watson test for examining the autocorrelation in residuals. The following is the model of autocorrelation test hypothesis:

$H_0$ : There is no autocorrelation problem in the model.

$H_1$ : There is an autocorrelation problem in the model.

The outcome of hypothesis testing is established by comparing the significance level with the p-value. If the p-value is less than the chosen significance level (either 1%, 5%, or 10%), the researchers will reject the null hypothesis ( $H_0$ ); otherwise, it will not be rejected  $H_0$ . If null hypothesis ( $H_0$ ) was rejected, then indicates that there is sufficient evidence to draw the

conclusion that there is an autocorrelation problem in the model and vice versa. The Generalized Least Squares (GLS) is the one of the effective ways to address the autocorrelation problem when it arises in the regression model.

### **3.7 Panel Data Regression Analysis**

In our study, we work with both panel data (longitudinal data) and time series data. Thus, relying solely on multiple regression models may not be ideal for our research because it can produce results that lack internal validity in such a context. Instead, we opt for panel regression models, as they offer more robust results. They accommodate heterogeneity across groups and introduce individual-specific effects, which multivariate regression models cannot achieve (Schmelzer, 2023). This approach enhances the reliability of our analysis. Panel data regression models encompass three distinct types: Pooled Ordinary Least Squares, Fixed Effects Model, and Random Effects Model. Each of these models serves a specific purpose, and they come with their own set of underlying assumptions.

Pooled Ordinary Least Squares (Pooled OLS) is a method in panel data analysis. It extends classic Ordinary Least Squares (OLS) regression to analyze data with both cross-sectional and time-series dimensions. Pooled OLS is a basic linear regression without fixed or random effects. It assumes that the relationships between variables remain the same for all entities and time periods. However, it does not consider individual or time-specific effects, which could be limitations if these effects exist in the data (Team, 2021).

Fixed Effects is a technique that manages individual-specific influences, sometimes referred to as entity-specific or time-invariant effects. It examines how predictors and outcomes relate within individual entities, like firms. It recognizes that each entity has unique traits that can affect predictors differently. This model accounts

for entity-specific factors that might influence or bias predictors and outcomes. It assumes a correlation between an entity's error term and predictor variables. By doing so, it isolates the impact of unchanging characteristics, enabling an assessment of predictors' genuine influence on the outcome variable. The slope coefficient is constant for all entities, but the intercept varies, representing distinct starting points for each entity (Data and Statistical Services, n.d.).

Random Effects is an approach that considers individual-specific effects as random factors, assuming that they are associated with the independent variables but not correlated with the error term. REM offers advantages such as a stable number of parameters as the sample size increases, enabling the use of efficient estimators that leverage both within-group and between-group variation. It also facilitates the estimation of the impact of time-invariant variables (Team, 2021). Thus, it assumes that the intercepts vary across observations, while slopes remain the same and time-invariant.

Therefore, we will employ three tests to determine the most suitable panel data regression model for our research objectives: the Poolability Test, Hausman Test, and Breusch and Pagan Lagrange Multiplier Test. These tests will help identify the best-fitting model for our data and research goals.

The model specification of this research can be shown as follow:

$$\widehat{\text{Firm Value}}_{it} = \beta_0 + \beta_1 \text{CS}_{it} + \beta_2 \text{PROF}_{it} + \beta_3 \text{FS}_{it} + \beta_4 \text{ID}_{it} + \beta_5 \text{FG}_{it} + \varepsilon_{it}$$

Where,

$\beta_0$	Intercept	-
-----------	-----------	---

$CS_{it}$	Capital Structure	Debt-to-equity (%)
$PROF_{it}$	Profitability	Return On Asset (%)
$FS_{it}$	Firm Size	Ln Total Asset (%)
$ID_{it}$	Investment Decision	Total portion of fixed asset (%)
$FG_{it}$	Firm Growth	Asset growth ratio (%)
$\varepsilon_{it}$	Error Term	-
$i$	Subscript $i$	Panels
$t$	Subscript $t$	Periods

### 3.8 Conclusion

This chapter introduces the research methodology used in this study. First, the panel data sample of 76 publicly listed firms from property industries that have property development as a main business in Malaysia from year 2005 to 2019 had been used in this quantitative research. Thus, used the Tobin's Q to determine the relationship between the selected independent variables and the dependent variable. The secondary data from Refinitiv database will be rearranged for empirical analysis and hypothesis testing. The outcome of testing will be shown and presented in chapter 4.



## **CHAPTER 4: DATA ANALYSIS**

### **4.0 Introduction**

In Chapter 4, data analysis is conducted. Initially, the study presents descriptive analysis. Secondly, used the preliminary test, diagnostic testing and hypothesis testing in this research which included Panel Unit Root Test, Chow test, Hausman test, Breusch-Pagan Lagrange multiplier test, Cross Sectional Dependence test, Heteroscedasticity test, Autocorrelation test, and F-test. Then, conducted the inferential analysis for panel data regression model. Thus, analysed data from 76 domestic property firms listed on Bursa Malaysia spanning from 2005 to 2019 using EViews 12.

### **4.1 Preliminary Test**

#### **4.1.1 Panel Unit Root Test**

According to the Table 4.1.1, the rejection of the null hypothesis of a panel unit root is justified when the estimate is statistically significant, evident from all probabilities being below the level of significance. Consequently, variables such as firm value, capital structure, profitability, investment decision, and firm growth exhibit stationary at the level, while only the firm size demonstrate stationary at the 'first difference.' This outcome strongly suggests that all the variables has not a unit root, confirming their stationary. Additionally, the use of panel unit root tests is motivated by their increased power compared to standard time-series unit root tests, as the variation

across countries contributes valuable information to the variation across time, potentially leading to more precise parameter estimates (Admin, 2018).

Table 4.1.1

*Panel Unit Root Test obtained from EViews 12's output*

<b>At Level</b>							
<b>Methods</b>	<b>Variables Tests</b>	<b>Firm Value</b>	<b>Capital Structure</b>	<b>Profitability</b>	<b>Firm Size</b>	<b>Investment Decision</b>	<b>Firm Growth</b>
<b>Levin, Lin &amp; Chu t*</b>	Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Im, Pesaran and Shin W- stat</b>	Probability	0.0000	0.0000	0.0000	0.9548	0.0002	0.0000
<b>ADF – Fisher Chi- square</b>	Probability	0.0000	0.0000	0.0000	0.0787	0.0000	0.0000
<b>PP – Fisher Chi-square</b>	Probability	0.0000	0.0000	0.0000	0.0000	0.0002	0.0000
<b>At First Difference</b>							
<b>Methods</b>	<b>Variables Tests</b>	<b>Firm Value</b>	<b>Capital Structure</b>	<b>Profitability</b>	<b>Firm Size</b>	<b>Investment Decision</b>	<b>Firm Growth</b>
<b>Levin, Lin &amp; Chu t*</b>	Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

<b>Im, Pesaran and Shin W- stat</b>	Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>ADF – Fisher Chi- square</b>	Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>PP – Fisher Chi-square</b>	Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

## 4.2 Selection Method of Panel Data Regression Model

### 4.2.1 Model Comparison

In order to pick the most fitting model, there are a few tests that can be performed, such as Chow test, Hausman test and Lagrange multiplier test:

#### 4.2.1.1 Summary Results for the Pooled OLS, Random Effects and Fixed Effects Regression

According to Table 4.2.1.1, the t-tests for capital structure, profitability, firm size and investment decisions are statistically significant in the pooled ordinary least square (Pooled OLS), random effects and fixed effects models as the p-values are less than 0.05. However, firm growth is not statistically significant for these three models as the p-value is greater than

0.05. According to the F-test, all three models are significant in clarifying the relationship between firm characteristics and firm value as the p-value is less than 0.05. However, the fixed effects model had the highest R-squared and adjusted R-squared compared to the pooled OLS model and the random effects model. Several tests were conducted to select the best model in the study.

Table 4.2.1.1

*Pooled OLS, REM & FEM*

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
<b>Independent variables</b>	<b>Pooled OLS</b>	<b>Random Effects</b>	<b>Fixed Effects</b>
<b>Constant</b>	16.9754*** (0.0000)	13.8228*** (0.0000)	13.4425*** (0.0000)
<b>Capital structure</b>	-5.5326*** (0.0000)	-5.0000*** (0.0000)	-4.2928*** (0.0000)
<b>Profitability</b>	12.0309*** (0.0000)	10.0904*** (0.0000)	9.10367*** (0.0000)
<b>Firm Size</b>	-4.1615*** (0.0000)	-5.8682*** (0.0000)	-6.5630*** (0.0000)
<b>Investment Decision</b>	-5.1859*** (0.0000)	-3.5057*** (0.0005)	-3.1258*** (0.0018)
<b>Firm growth</b>	0.9400 (0.3474)	0.9167 (0.3595)	1.1809 (0.2379)
<b>R-squared</b>	0.2441	0.1860	0.6081
<b>Adjusted R-squared</b>	0.2404	0.1820	0.5751
<b>Standard Error</b>	21.02306	15.82237	15.72328

<b>F-statistics (P-value)</b>	66.1338*** (0.0000)	46.7919*** (0.0000)	18.4100*** (0.0000)
<b>Observation</b>	1030	1030	1030

*Note: The numbers in parentheses () are the p-values of the statistics, while the numbers without parentheses are the statistics. The asterisks \*, \*\*, \*\*\* denote statistical significance at the 10%, 5%, 1% level, respectively.*

#### 4.2.1.2 Chow Test (Poolability Test)

Based on Table 4.2.1.2, it shows a cross-section Chi-Square p-value of 0.0000, significantly lower than the selected level of significance, leading us to reject the null hypothesis. This outcome strongly indicates that the FEM is better suited for our panel regression model compared to the pooled ordinary least squares (POLS) approach. Hence, we opt for the FEM as the preferred model for our research.

However, the decision to opt for the Fixed Effects Model (FEM) is not final; further analysis involves conducting the Hausman test. This test plays a crucial role in evaluating the suitability of selecting between FEM and REM.

Table 4.2.1.2

*Chow Test obtained from EViews 12's output*

<b>Effect Test</b>	<b>Statistic</b>	<b>Degree of freedom</b>	<b>Probability</b>
<b>Cross-section</b>	676.728771	75	0.0000
<b>Chi-square</b>			

#### 4.2.1.3 Hausman Test

Based on Table 4.2.1.3, it shows a cross-section random p-value of 0.0050, significantly lower than the chosen significance level of  $\alpha = 0.05$ , we reject the null hypothesis. This outcome strongly suggests that the fixed effect model (FEM) is more appropriate than the random effect model (REM) for our panel regression model, since it accounts for unobserved heterogeneity that is correlated with the independent variables. Consequently, we opt for the FEM as the preferred model for our research.

Table 4.2.1.3

*Hausman Test obtained from EViews 12's output*

Test Summary	Chi-Square Statistic	Chi-Square Degree of freedom	Probability
<b>Cross-section random</b>	16.755606	5	0.0050

#### 4.2.1.4 Breusch-Pagan Lagrange Multiplier Test

From Poolability Test and Hausman Test, we are suggested to use FEM for our panel regression model. However, we strive to enhance our confidence in using FEM for our model by running Breusch-Pagan Lagrange Multiplier Test for testing whether we should reject POLS model.

Based on Table 4.2.1.4, it shows a Breush-Pagan p-value of 0.0000, which is lower than the significance level of 0.05, we reject the null hypothesis. This outcome suggests that the REM is more appropriate than POLS model for our panel regression model. Consequently, we choose REM compared to POLS model, which is showed in Breusch-Pagan Lagrange Multiplier Test. Yet, Poolability Test and Hausman test run above are being proved to

be meaningful. We can conclude that the FEM model is the most appropriate model for our panel data.

Table 4.2.1.4

*Breusch-Pagan Lagrange Multiplier Test obtained from EViews 12's output*

<b>Breusch-Pagan Lagrange Multiplier Test</b>			
	Cross-section	Time	Both
<b>Breusch-Pagan</b>	1083.716	83.43657	1167.152
	(0.0000)	(0.0000)	(0.0000)

## 4.3 Diagnostic Checking

### 4.3.1 Cross-sectional Dependence Test

Based on Table 4.3.1.1, since the p-value is 0.0000, which is below the significance level of 0.05, we reject the null hypothesis. This result suggests that the residuals of our panel regression model are correlated. However, according to Baltagi, cross-sectional dependence is a concern in the case of macro panels with a long time period, like greater than 20-30 years. In comparison to micro panels, macro panels with longer time series are more vulnerable to cross-sectional dependence problems (Oscar Torres-Reyna, 2007). In addition, Baltagi claims that in micro panels, such as with small number of years and high number of cases ( $N > T$ ), the problem is not significant (Pramod, 2018; Aymen, 2007; Oscar Torres-Reyna, 2010). In our case, we have only 15 years for 76 observations ( $N > T$ ), which is outside the 20-to-30-year range. Also, Duguleana and Duguleana (2021) said that the dependence cross-correlation is not a problem for the short panel. Finally,

we can conclude that despite rejecting the null hypothesis, there are no serious problems with our study.

Table 4.3.1.1

*Result of Pesaran CD test obtained from EViews 12's output*

Tests	Statistic	Prob.
Pesaran CD	27.60265	0.0000

### 4.3.2 Heteroscedasticity

According to Table 4.3.2.1, cross-section heteroscedasticity shows its p-values is 0.0000 while panel period heteroscedasticity shows its p-value is 1. Therefore, a null hypothesis is declined for cross-section heteroscedasticity since its p-value is less than the significance level. Simultaneously, for panel period heteroscedasticity as its p-value exceeds 0.05. As a result, there is adequate proof that the residuals exhibit cross-section heteroscedastic in the model at  $\alpha$  of 0.05, despite the absence of heteroscedastic in panel period.

Table 4.3.2.1

*Heteroscedasticity Tests: Likelihood Ratio Tests obtained from EViews 12's output*

	Value	D.F	Probability
<b>Likelihood Ratio (Cross-section Heteroscedasticity)</b>	499.2049	76	0.0000
<b>Likelihood Ratio (Panel Period Heteroscedasticity)</b>	35.91288	76	1.0000



Likelihood ratio test was utilized to examine panel-level heteroscedasticity across all variables (Kalsie and Shrivastav, 2016; Brătucu et al., 2020; Akter et al., 2020).

Heteroscedasticity may arise from substantial differences in the sizes of observations, meaning that the variance of errors is not uniform across all observations in the panel (Jim, n.d.). In the context of panel data studies, distinct groups can manifest varying levels of variability due to inherent dissimilarities among them. Numerous approaches exist to address the issue of heteroscedasticity, including the redefinition or transformation of variables, such as logarithm transformation, and the utilization of weighted regression (Zach, 2019). However, our dataset contains negative values; thus, this logarithm transformation became undefined. Even when applying logarithmic transformations, it does not rectify the large difference in the sizes of observations. Consequently, opting for the use of Generalized Least Squares (GLS) for the panel data regression model is a wise decision. In contrast to transforming variables, GLS accommodates the presence of heteroskedasticity across panels and addresses autocorrelation within panels (Baltagi, 1998, Kalsie & Shrivastav, 2016; Adeboye & Agunbiade, 2019; Olawale & Adeboye, 2022).

The GLS method is more effective as it can keep the unbiased and uniform nature of the estimates and overcomes the heteroscedasticity, cross-sectional and serial correlation problem (Setyawan et al., 2019; Bai et al., 2021). It allows for efficient transformation of heteroscedastic covariance matrices into homoscedastic ones (Baltagi, 1998). Hence, we follow previous researchers, such as Sarpong-Danquah et al. (2018), Nguyen and Nguyen (2020), Canarella and Gasparyan (2008), Ha and Tran (2021) for applying this GLS method in our model to deal heteroscedasticity.

### 4.3.3 Autocorrelation

The Durbin-Watson Test assesses autocorrelation, which refers to the serial correlation observed in the residuals of a regression analysis. The Durbin-Watson Test yields a value ranging from zero to four. A value below 1.5 indicates positive autocorrelation, whereas a value above 2.5 suggests negative autocorrelation (Zach, 2021). Therefore, if the value of  $d$  falls between 1.5 and 2.5, autocorrelation is typically not considered a significant issue.

According to 4.3.3.1, the autocorrelation test shows the Durbin-Watson Test is 1.45680 after using GLS. Thus, it does not reject the null hypothesis since the autocorrelation problem was solved using the GLS method. Hence, the Durbin-Watson statistic is near 1.5, indicating the absence of autocorrelation issues in the model.

Table 4.3.3.1

*Durbin-Watson Test obtained from EViews 12's output*

<b>Durbin-Watson Statistic</b>	1.456800
--------------------------------	----------

Since the GLS method can solve the heteroscedasticity problem, it can also solve the autocorrelation problem (Zhu, 2022; Hansen, 2007). GLS assigns different weights to observations based on the estimated variances and covariances of the error terms. By assigning higher weights to observations with less error variance and lower weights to those with higher error variance, GLS gives more importance to observations that are expected to be more reliable. This is beneficial in the presence of autocorrelation, as it helps mitigate the impact of correlated errors (Bauer.uh.edu, n.d.).

Several researchers have used such GLS method to address the autocorrelation in the panel regression model, such as Baltagi (1998), McGuirk and Spanos (2002), Sarpong-Danquah et al. (2018), Nguyen and Nguyen (2020), Canarella and Gasparyan (2008), Ha and Tran (2021) and Shrivastav and Kalsie (2016). For example, Sarpong-Danquah et al. (2018) implemented generalized least squares panel regression model to avoid the problem of heteroscedasticity and autocorrelation in their study. Hence, this GLS method is well-known and efficient method to deal autocorrelation in panel data regression model. In the end, we have applied this method into our model.

Further, according to Oscar Torres-Reyna (2007), this autocorrelation test is applicable to macro panels with long time series, such as 20 to 30 years. It claims that micro-panel data, such as data with little number of years, do not have autocorrelation problems. Whereas, we have 15 years of data which can be categorised as a micro panel. Therefore, we can also assume that there is no autocorrelation problem in our model.

#### 4.4 Fixed Effect Generalized Least Square Model

Since there is a GLS application in FEM model to handle the issues of heteroscedasticity and autocorrelation, a refined model is created known as fixed effect generalized least square model. The suggestions of Mamuti et al. (2023), Bai et al. (2021), Islam (2022), Fall (2008), and Jusoh and Che-Ahmad (2014) regarding the implementation of GLS were adopted in this study. Ultimately, the GLS process undertaken can fulfil its assumptions which are the error term's variance is fixed, and the error term's covariance is uncorrelated (Tanjung et al., 2021). After solving the problem using GLS method, the overall model is improved.

Based on Table 4.4.1, after applying GLS method in FEM, the significance of the firm growth variable (P-value = 0.0129) is enhanced for FEGLS. This is because GLS method provides more accurate estimates of coefficients, leading to changes in variable significance. On the contrary, the estimates of firm growth in the FEM are not statistically significant as it loses its significance with a p-value of 0.2379, surpassing the significance level. This could be attributed to the model making it seem less relevant or statistically insignificant, possibly due to the estimator not being unbiased and efficient because of the presence of heteroscedasticity and autocorrelation in the model, leading to inaccurate captures (Rehal, 2023). Hence, this suggests that variables initially considered significant predictors may become insignificant, indicating flawed modelling and unreliable predictions. However, employing the GLS method makes the firm growth variable significant.

Besides, our analysis also reveals that the overall R-squared and adjusted R-squared values have increased (76.3488% and 74.3550%) when applying GLS method. This suggests an enhancement in the model, indicating that the included variables more effectively account for variations in the dependent variable. The improved model is now more straightforward, reducing unnecessary complications and addressing issues like heteroscedasticity and autocorrelation. In addition, the standard error of the regression model using GLS method became smaller such as 15.58307. This is

because weighting the model can make the variables more clearly related to the results, leading to more accurate coefficient estimates. In sum, it indicates a better fit of the overall model, suggesting that FEGLS offers improved explanatory power.

Table 4.4.1

*Improvements from FEM to FEGLS Model*

	<b>Model 3</b>	<b>Model 4</b>
<b>Independent variables</b>	<b>FEM</b>	<b>FEGLS</b>
<b>Capital structure (CS)</b>	-4.2928*** (0.0000)	-5.878011*** (0.0000)
<b>Profitability (PROF)</b>	9.10367*** (0.0000)	11.53384*** (0.0000)
<b>Firm Size (FS)</b>	-6.5630*** (0.0000)	-6.026785*** (0.0000)
<b>Investment Decision (ID)</b>	-3.1258*** (0.0018)	-2.706910*** (0.0069)
<b>Firm growth (FG)</b>	1.1809 (0.2379)	2.492581** (0.0129)
<b>R-squared</b>	0.6081	0.763488
<b>Adjusted R-squared</b>	0.5751	0.743550
<b>Standard Error</b>	15.72328	15.58307
<b>F-statistics (P-value)</b>	18.4100*** (0.0000)	38.29353*** (0.0000)

*Note: The numbers in parentheses () are the p-values of the statistics, while the numbers without parentheses are the statistics. The asterisks \*, \*\*, \*\*\* denote statistical significance at the 10%, 5%, 1% level, respectively.*

## 4.5 Panel Data Analysis and Discussion

Table 4.5.1 shows the findings of the fixed effect generalized least square model (FEGLS). We examine the relationship between the impacts of the five factors of the firm characteristics toward the changes of the firm value in property publicly firms in Malaysia.

Our fixed effect generalized least square model (FEGLS) is shown below:

$$\hat{Y}_{it} = \hat{\beta}_0 + \hat{\beta}_1 X_{1it} + \hat{\beta}_2 X_{2it} + \hat{\beta}_3 X_{3it} + \hat{\beta}_4 X_{4it} + \hat{\beta}_5 X_{5it}$$

$$\widehat{\text{Firm value}}_{it} = 75.7677 - 0.0629 \text{CS}_{it} + 1.0077 \text{PROF}_{it} - 11.2420 \text{FS}_{it} \\ - 0.0789 \text{ID}_{it} + 0.04878 \text{FG}_{it}$$

Where:

FV = Firm value (measured in Tobin's Q ratio – in %)

CS = Capital Structure (measured in debt-to-equity ratio – in %)

PROF = Profitability (measured in return on asset ratio – in %)

FS = Firm Size (measured in Ln total assets – in %)

ID = Investment Decision (measured in total fixed assets portion– in %)

FG = Firm Growth (measured in total assets growth – in %)

The intercept of 75.7677 indicates that the estimated value of the firm as measured by the Tobin's Q ratio is 75.7677 % when all the independent variables are zero.

In this research, the model will be assessed for individual significance using t-test with a predetermined degree of significance at 0.01, 0.05 and 0.10. According to the findings presented in Table 4.5.1, it is evident that all independent variables exhibit meaningful association with the value of the firm.

The initial independent variable, capital structure, exhibits statistical significance with a p-value of 0.0000, falling below the predefined significance level.

Particularly, the unstandardized regression coefficient of -0.0629 suggests that a 1% increase in the capital structure (measured by debt-to-equity ratio) is associated with an average decrease of 6.29% in firm value for publicly property firms that listed on Bursa Malaysia, *ceteris paribus*.

Subsequently, the second independent variable in this study, profitability, exhibited statistical significance with a p-value of 0.0000, below the predetermined significance level. The unstandardized regression coefficient, positively recorded at 1.0077, implies that a 1% increase in profitability (measured by return on assets) is associated with an average increase of 100.77 % in firm value for publicly property firms that listed on Bursa Malaysia, *ceteris paribus*.

Then, firm size is found to be statistically significant with a p-value of 0.0000, falling below the significance level. The unstandardized regression coefficient was negative at 11.2420. Thus, it can be interpreted that if firm size increases by 1% (measured in Ln total assets), on average, the firm value for publicly listed property firms on Bursa Malaysia will decrease by 1124.20%, *ceteris paribus*.

In addition, the fourth independent variable, investment decision, was significant with a p-value of 0.0000, falling below the significance level. The unstandardized regression coefficient was negative at 0.0789. Thus, it can be interpreted that for every 1% increase in investment decision (measured in total fixed asset divided by total asset), the firm value decrease by 7.89% for publicly listed property firms on Bursa Malaysia, *ceteris paribus*.

Finally, the fifth independent variable in this study, firm growth, demonstrated statistical significance with a p-value of 0.0129, lowering the predetermined significance level. The positive unstandardized regression coefficient, recorded at 0.04878, implies that a 1% increase in firm growth (defined by the total asset growth change) is associated with an average increase of 4.878% in firm value for publicly listed property firms on Bursa Malaysia, *ceteris paribus*.

Moreover, the statistical significance of the regression model is established. This determination is substantiated by the F-test's p-value, which registers at 0.0000,

distinctly below the predetermined significance level. Consequently, the model exhibits significance in clarifying the relationships among the five independent variables representing firm characteristics and firm value. This statistical validation enhances the credibility of the model's capacity to illustrate the dynamics within the examined variables.

After constructing the model, our focus turns to assessing its goodness of fit and the statistical significance of estimated parameters. Table 4.5.1 reveals a robust goodness of fit at 76.3488%, indicating a significant amount of variance explained within the 0.75 to 1 range, as suggested by Stephen (2022). In the realm of business using panel data models grounded in financial information, R-squares typically fall between 40% and 60%, according to Don Morrison, a prominent marketing scientist. Also, Albright and Park (2009), as well as Amr Sadek (2011), support this notion, noting that R-squares in panel data estimation tend to be lower compared to time series analysis. In the end, this interprets that 76.3488% of the firm value among publicly listed property firms on Bursa Malaysia is influenced by key firm characteristics, including firm size, capital structure, investment decisions, profitability, and firm growth. The remaining 23.6512% of firm value is attributed to other relevant factors, such as liquidity, emphasizing the multifaceted nature of the influences on firm value in this context.

In addition to this, the adjusted R-squared serves as a refined measure of goodness-of-fit, specifically tailored for linear models, assessing the accuracy of the model (IMB, 2023). Unlike the standard R-squared, the adjusted R-squared is a modified indicator that considers several predictors incorporated into the model. An increase in the adjusted R-squared suggests that the new term enhances the model more than expected by random chance (The Investopedia Team, 2023). In this context, the table illustrates an adjusted R-squared of 0.743550 or 74.3550%, which can be considered a reasonably good fit. This means that 74.3550% of the variation in the firm value among publicly listed property firms on Bursa Malaysia is influenced by combined variation of key firm characteristics, including firm size, capital structure, investment decisions, profitability, and firm growth, after accounting for degrees of freedom.



Table 4.5.1

*Panel Data Regression Model Result – FEGLS Model*

<b>Model</b>	<b>Coefficients</b>	<b>Std. Error</b>	<b>T-Statistic</b>	<b>P-Value</b>
<b>Constant</b>	75.76769	5.416403	13.98856	0.0000***
<b>CS</b>	-0.062890	0.010699	-5.878011	0.0000***
<b>Pro</b>	1.007736	0.087372	11.53384	0.0000***
<b>FS</b>	-11.24202	1.865343	-6.026785	0.0000***
<b>ID</b>	-0.078932	0.029159	-2.706910	0.0069***
<b>FG</b>	0.048777	0.019569	2.492581	0.0129**
<b>R-Squared</b>	0.763488			
<b>Adjusted R-Squared</b>	0.743550			
<b>F-Test</b>	38.29353***			
<b>P-Value</b>	0.00000***			

*Note: The asterisks \*, \*\*, \*\*\* denote statistical significance at the 10%, 5%, 1% level, respectively.*

## 4.6 Conclusion

In conclusion, the finding obtained in chapter 4 are discussed more comprehensively. For data analysis, EViews 12 software is employed, which proves valuable in examining and summarizing the data collected from Bursa Malaysia. Thus, the FEM is better suited for our panel regression model compared to the pooled ordinary least squares (POLS) and random effect model (REM) and pooled OLS. Therefore, GLS method can enhanced the overall model performance by solve the heteroscedasticity problem, it can also solve the autocorrelation problem.

## **CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS**

### **5.0 Introduction**

In Chapter 5, conclusions will be drawn based on the findings presented in the preceding chapter (Chapter 4), summarizing the output results derived from EViews. Initially, it will present a discussion of the major findings concerning the five independent variables (capital structure, profitability, firm size, investment decision, and firm growth). Moreover, the chapter will explore the implications of the study, its limitations, and offer recommendations for future research.

### **5.1 Discussion of Major Findings**

#### **5.1.1 Firm Characteristics: Capital Structure**

According to the result stated in Chapter 4, capital structure measured in debt-to-equity ratio showed a negative correlation to firm value which measured in Tobin's Q for the publicly property firms listed in Bursa Malaysia. This is similar to the findings of Dang and Do (2021), Carino and Teano (2022), Khairunnisa (2017), Sutanto and Hariadi (2023), Fajaria and Isnalita (2018), Ahmad and Muslim (2022), and Sonjaya and Muslim (2023). This finding tally with our expectation of result.

The negative correlation is reasonable for publicly property firms in Malaysia. Normally, Malaysian property firms may rely heavily on debt financing to implement property projects due to high initial costs. Therefore, increasing reliance on debt financing can create a heavier financial burden and ultimately reduce the value of the firm. This may be due to the benefits the tax provides in debt financing, which attracts Malaysian property firms to borrow more debt instead of using equity financing. However, they may fail to fully utilize the tax benefits associated with taking on additional debt, potentially falling short of reaching the optimal level. When firms tend to increase interest-bearing debt, the average market price per share of firms decreases significantly, and vice versa. This is because large amounts of interest-bearing debt mean that firms have to pay large amounts of interest to creditors; at the same time, firms may face a higher risk of default if they do not perform well in the face of uncertainty. Finally, this high level of debt leads to high transaction costs and a greater risk of bankruptcy. In fact, it may reduce investor interest and confidence in investing as debt-equity ratios have a negative effect on stock prices. Hence, existing investors may opt to divest their shares, while potential new investors might be inclined to avoid stocks associated with a high debt-to-equity ratio (Atidhira & Yustina, 2017). As a result, the decrease in both the number of outstanding shares and the stock price will contribute to a decline in the firm value.

### **5.1.2 Firm Characteristics: Profitability**

According to the result stated in Chapter 4, profitability measured in return on assets ratio showed a positive correlation to firm value which measured in Tobin's Q for the publicly property firms listed in Bursa Malaysia. This is aligned the findings of Dang et al. (2020), Sutanto and Hariadi (2023), Akhmadi and Januarsi (2021), Septyanto and Nugraha (2021) and Osazuwa and Che (2016). This finding tally with our expectation of results.

It is logically acceptable for this positive correlation for the publicly property firm in Malaysia. A firm is more likely to draw in investors when it is profitable because of the growth potential and higher return on investment that they perceive. Conversely, if a firm is struggling, it is harder to attract investors, which can lead to a decline in stock prices (Markonah et al., 2020). First, the higher profitability of Malaysian property firms may prompt the firm to distribute more dividends, resulting in higher share prices and higher firm value. This is because investors expect that the firm's high profitability will boost shareholder returns, which in turn will benefit a larger stock portfolio. Furthermore, this finding reflects the effective and efficient use of Malaysian property firms' assets to generate profits. The stronger the position of the firm in terms of the use of its assets, the higher the level of realized profits of the firm, and the greater the value. In addition, their high profits usually have a long-term outlook, which can attract investors to buy shares. As such, it enhances investors' confidence, fostering a positive perception of the firm's accomplishments and bolstering their loyalty. Finally, the higher the ROA of a property firms, the higher the asset value, leading to a rise in the stock price (Murniati, 2016). In the end, investors hold onto their investments in shares and may even acquire more shares, boosting the number of outstanding shares and consequently raising the share price and overall value (Akhmadi & Januarsi, 2021).

### **5.1.3 Firm Characteristics: Firm Size**

According to the result stated in Chapter 4, firm size measured in logarithm of total assets showed a negative correlation to firm value which measured in Tobin's Q for the publicly property firms listed in Bursa Malaysia. This is similar to the findings of Ilyas et al. (2023), Hirdinis (2019), Susanti and Restiana (2018), Septyanto and Nugraha (2021), Niresh and

Thirunavukkarasu (2014), Duy and Phuoc (2016), and Cho (1998). However, this finding is not aligned with our expectation result.

In our study, it is justifiable that firm size is negatively related to firm value. Firstly, Malaysian property firms might rely heavily on debt financing to acquire or maintain their assets. This means that a large portion of the firm's assets is financed by borrowings rather than equity. Typically, assets are total assets of firm which include equity, retained earnings and liabilities from outside parties. When debt in total assets of the composition of the dominant, the asset is considered risky. This may be due to borrowing to finance expansion projects or acquisitions that require significant debt. Therefore, this may mean a higher degree of financial risk as the property firms have to meet their debt obligations. Hence, even if the total assets are large enough, the total assets, which are dominated by debt, will make shareholders less interested in holding shares, resulting in a reduction in the number of outstanding shares (Frieder & Martell, 2006). This can also create downward pressure on stock prices, as supply exceeds demand, thus reducing the firm value.

Previous research has pointed out that in property sector, property firms usually consist of many assets which incur significant maintenance costs if poorly managed. The Malaysian property firms may have many assets, which mainly include land, buildings, infrastructure, project equipment, office equipment and machinery. The value of assets depends not only on their size, but also on their quality, location and utilization. Property firms' assets may not be well-maintained, underutilized or is located in the region is not very ideal, their contribution to the value of the firm may be limited. Also, maintaining assets, such as land, buildings and infrastructure might incurs additional costs, such as maintenance costs which can erode profits. Plus, Malaysian property firms with large assets may not be able to pay dividends due to the accumulation of assets in receivables and inventories. For example, unsold residential units, such as overhang issues, and

uncollected customer debt due to uncertainties such as inflation, home prices, or declining income indices. This will also lead to liquidity constraints and efficiency issues as it is inefficient to manage working capital. Hence, investors usually avoid firms where asset growth cannot be converted into profit growth. In the end, property firms may struggle to generate earnings and distribute dividend as their large asset base incurs significant maintenance costs and accumulates account receivables and inventories. This may lead to a reduction in investor interest in purchasing such shares, which may result in a decrease in the share price. This will result in those investors or shareholders holding or issuing shares may choose to sell their shares, resulting in a decline in the number of shares outstanding and ultimately a reduction in the firm value.

#### **5.1.4 Firm Characteristics: Investment Decisions**

According to the result stated in Chapter 4, investment decision measured in total fixed assets portion showed a negative correlation to firm value which measured in Tobin's Q for the publicly property firms listed in Bursa Malaysia. This is in line with the findings of Salama et al. (2019), Maimunah and Hilal (2014), Nurlela et al. (2019), and Suteja et al. (2023). This finding is not aligned with our expectation.

This finding shows a negative relationship between investment decision and firm value for property firms in Malaysia. This investment decision is measured by the proportion of fixed assets invested. Firstly, Malaysian property firms may be inclined to increase investment in fixed assets, which may require significant capital expenditure. From the previous researchers, the acquisition of fixed assets tends to result in higher capital expenditures; in other words, firms spend a lot of money. This can reduce the amount of money the firms have left over (called free cash flow) and may make the

firms less valuable. This higher capital expenditure can strain their financial resources and increase their leverage. Hence, it leads to a higher likelihood of facing difficulties in repaying debt, resulting in financial distress that can lead to a decline in the value of the firm value. At the same time, this news tends to be negatively reacted by stock exchange participants, as funds financed by a lot of debt can increase risk when managing investments. This can undermine the confidence of stock exchange participants, particularly investors, in their investment decisions, leading to decreased interest in holding stocks with a higher risk of financial distress. With lower demand for stocks, it led to decrease in stock prices and outstanding share and thereby the firm's overall value may decline.

Secondly, this negative relationship between investment decision and firm value might be due to the technological obsolescence. Particularly in industries where technology or market conditions are changing rapidly, Malaysian property firms may need to frequently upgrade or replace fixed assets, such as machinery and equipment, in order to remain a competitive player. If a property firm has a lot of its money tied up in buildings and equipment, it could mean the firm is struggling to keep up with these changes, which could hurt its overall value. In addition, a considerable number of fixed assets are at risk of obsolescence, which may also lead to increased depreciation expenses and damage to asset values. These expenses recorded in the firm's financial statements can reduce profits and earnings per share. As a result, property firms may find themselves with reduced funds available for distributing dividends to investors, making their shares less attractive for investment and retention. This could result in decreased demand for shares and a reduction in the number of outstanding shares. Ultimately, this could impact stock prices, leading to diminished firm value.

### **5.1.5 Firm Characteristics: Firm Growth**

According to the result stated in Chapter 4, firm growth measured in total assets growth showed a positive correlation to firm value which measured in Tobin's Q for the publicly property firms listed in Bursa Malaysia. This is aligned to the findings of Gustian (2017), Fajaria and Isnalita (2018), and Puspitasari and Wiagustini (2019). This finding tally with our expectation.

Firstly, Malaysian property firms with a high growth rate may indicate that the management of the firm will expand its business in new market or have high productivity. In addition, they may engage in mass production and often reap huge gains. This mass production can reduce variable costs and improve operational efficiency, thereby increasing profitability. This can bring competitive position, reduce risk and attract investors looking to invest in the property market. Furthermore, this finding reveals that the high growth rate indicates that Malaysian property firms with effective and efficient asset growth can lead to significant gains in the future, including higher cash dividends for investors and shareholders. This means that the more efficiently an asset is used, the less likely it is to sit idle, such as unused assets that can be sold to obtain additional funds. From an investor's point of view, firms with strong growth potential can expect a favourable return on investment and may increase their own holdings of such stocks with higher growth. If an investor perceives that a stock lacks profit prospects, they may choose to sell or remove it from their portfolio (Gursida, 2017). Consequently, when firms show promising growth prospects, demand for their stocks rises, leading to higher stock prices and increased investor expectations for returns, ultimately boosting the firm value (Sinaga, 2016).



Table 5.1

*Result and Theoretical Summary*

<b>Independent variables</b>	<b>Significance level</b>	<b>Result</b>	<b>Expected Sign</b>
Capital Structure	5%	Significant negative	Align
Profitability	5%	Significant positive	Align
Firm Size	5%	Significant negative	Not Align
Investment Decision	5%	Significant negative	Not Align
Firm Growth	5%	Significant positive	Align

### 5.3 Implication of Study

The key firm characteristics that influence property firm value in Malaysia are highlighted in our study, providing insightful information for property firms, investors, and academics.

#### 5.3.1 Property Firms

To draw investors and obtain outside funding, it is critical to improve internal features like internal controls and management procedures. The research shows strong correlations between the firm characteristics selected

and firm value. For example, positive correlations between profitability and firm value highlight the strategic importance of preserving and enhancing firm characteristics for long-term success. By placing a strong emphasis on manageable firm characteristics, firms can increase their overall value and draw in more investors, which promotes flexibility and resilience in the face of shifting market conditions. By proactively ensuring the longevity and sustainability of firm value across marketplaces, macroeconomic concerns are lessened.

Aside that, one of the most important strategies for property firms to maximize their financial health and reduce the dangers of debt financing is to restructure their capital structure. Executives must carefully manage debt levels, taking into account variables like interest costs, liquidity hazards, and changes in interest rates. Enhancing financial position and promoting long-term value creation can be achieved by giving priority to internal capital utilization and progressively raising debt within reasonable bounds. Additionally, by getting rid of unproductive assets and giving priority to the allocation of productive assets, methods like property firms can maximize their Return on Assets (ROA) ratio in an effort to increase profitability and firm growth. In order to maximize firm value, effective cash management and robust growth rates are essential indicators of organizational productivity and management effectiveness. Moreover, a positive cycle of growth and value creation can also be fostered by strategic growth activities like expanding operations or acquiring other businesses, which can draw in investors to demand more shares and raise the market price of the firm's shares.

On the other hand, it is essential to maintain the ideal firm size to ensure profitability persists while mitigating risks linked to excessive expansion. In order to focus on key competencies, prevent unneeded expansion, and allocate resources effectively, businesses need to implement efficient management structures and processes. Without expending excessive

amounts of resources, strategic partnerships and alliances can also be used to gain access to new markets and technology. Furthermore, implementing robust risk management practices in place is essential for choosing wise investments and preserving firm value in the face of volatile markets. Firms may efficiently manage risks and optimize long-term value development by diversifying their portfolios and routinely reevaluating their investing strategies. All things considered, these insights provide Malaysian property firms with a thorough framework for navigating the complexity of the industry and fostering long-term growth.

### **5.3.2 Investors**

Based on the key takeaways from the study that investors in Malaysian property can apply to their investment strategies will help them make better decisions. Investors can evaluate the risk-return profile of in the property sector by understanding the impact of firm characteristics, which are capital structure, profitability, firm size, investment decision, and firm growth on firm value. This knowledge is crucial, which the information not only enables investors to make well-informed decisions, but it also directs their attention towards firms that exhibit traits that are strongly associated with increased firm value. Moreover, investors might improve their investing plans by comprehending the factors, which are the firm characteristics, that determine a firm value. By using a strategic strategy, investors can match their portfolios with firms that are displaying persistent and strategic growth, in addition to making better-informed and possibly profitable investment decisions. Furthermore, the analysis explores related risk variables, enabling investors to improve their risk-management plans and more skilfully negotiate market ambiguities. With this thorough insight, investors may more precisely optimise their portfolios by conducting a sophisticated assessment of the potential risks and rewards in the Malaysian property sector. Consequently, this enables investors to make well-informed choices

that are consistent with the study's emphasised aspects, promoting a more robust and strategically diversified approach to investing.

Moreover, this study has important ramifications for investors, providing insightful information that can greatly influence their choice to make an investment in the property market. For instance, given the significant reliance of Malaysian property firm on debt financing, it is imperative to investors comprehend the complex relationship between capital structure and firm value in order to make well-informed investment decisions and maximize returns. Investors who wish to successfully lead portfolio changes and minimize potential financial obligations and concerns with market confidence must assess the consequences of leverage while acknowledging the dangers associated with rising debt levels. On the other hand, firms with high profitability measures may be given preference by investors who anticipate higher returns on investment and long-term value growth. This acknowledgment emphasises how crucial it is to match investment choices to a firm's profitability profile. Additionally, investors can choose property firm with greater profitability by examining their financial performance and growth possibilities. This helps investors understand the firm's ability to create wealth and maintain value over time, which in turn helps them make better investment selections.

### **5.3.3 Academics**

This research makes a substantial contribution to the scholarly discourse regarding the determinants of firm value within the Malaysian property sector. It not only lays the foundation for future developments in firm valuation theories and models and corporate finance, but it also gives specific insights into the variables that influence firm value in this setting, providing important information to improve on already-developed theories

or create new ones. Therefore, our research findings enable academics to conduct in-depth and rigorous investigations in this domain by giving them invaluable insights into the factors that shape the valuation dynamics of property firms. These factors include capital structure, profitability, firm size, investment decisions, and firm growth. Moreover, academics can utilise the findings of our research as a basis for subsequent investigations, integrating extraneous elements beyond our purview, including macroeconomic variables. In order to identify inconsistent research findings, they might also investigate differences in the ratios that are examined, like replacing ROA with net profit margin or ROE or simultaneously integrating several profitability ratios. Academics can also use these results to guide future research endeavours by closely examining regions that require further variables or research to completely understand the dynamics of firm valuation in the Malaysian property market. Through its contribution to the corpus of knowledge in finance and related subjects, this communal enrichment of knowledge encourages ongoing theoretical advancement in academia. Additionally, the study approach presents useful empirical analysis methods for examining firm characteristics and how they affect firm value, providing academics with useful data. It also has the potential to greatly increase methodological understanding in the academic community and impact future research approaches. The study's findings essentially operate as a guide for developing strong frameworks and best practices that support and preserve a firm's attribute or value.

The findings of our research provide academics with significant understanding in a range of areas related to financial markets, specifically capital structure, profitability, firm size, investment decision, and firm growth in Malaysia's property sector. For example, the emphasis on firm size draws attention to how crucial efficient asset management is boosting investor confidence and profitability. This enhances scholarly conversations about market efficiency and directs future research projects on the dynamics of the property industry. Not only that, but our study also clarifies the dangers of growing fixed asset investments and technology obsolescence,

providing insightful information for academic discussions on investment behaviour and market efficiency. Further, our research on firm growth adds to the current academic discourse on investment behaviour and market efficiency while paving the way for future academic investigation. It highlights the importance of productivity and effective asset expansion in drawing in earnings and investor interest. Also, academics can contribute to the academic literature and encourage more research in this developing topic by advancing theoretical underpinnings linked to investment decisions and firm growth within the setting of property enterprises. Apart from that, we have illustrated how signalling theory works as a means of communicating with both insiders and outsiders through our study. This clarifies how a firm's attributes affect its value, informing stakeholders about the firm's overall success and financial stability. As a result, academics can learn more about how these signals based on firm attributes affect the responses of stakeholders, mould the market for the firm's shares, and eventually determine its perceived value, all of which have important ramifications for the field's academic understanding.

## **5.4 Limitation of Study**

In studying the firm value of property sector, there was various limitations appeared in our report. It is crucial to highlight specific aspects during the analysis process to ensure accurate interpretation and meaningful insights.

One limitation pertains of this study is missing data. Missing data refers to any information absent or unavailable in the dataset. In our study, data are missing in a specific year. For example, from 2005 to 2019, data for the years 2008 and 2009 for the return of assets in the firm of EcoFirst Consolidated Bhd is missing. When faced with this scenario, we opted to exclude firms with extensive missing data. This decision was made due to the potential bias introduced by severely missing data,

even when employing imputation methods, but it will lead to not reflecting the true market condition. Moreover, due to our limited expertise in addressing missing data issues, we rely on basic imputation methods such as filling missing values with the mean to deal those minor missing data. While we recognize that methods like regression imputation or multiple imputation offer more accurate imputation than mean imputation, our professional capacity to implement these advanced solutions effectively is limited.

Next, the pre-COVID and post-COVID also is one of the limitations in our study. Due to the impact of COVID conditions, data related to firms has been affected, including factors like profitability, capital structure, investment decision, and other internal metrics within the firms. We acknowledge that the influence of COVID-19 is beyond our control and represents an unexpected factor in our study. This external influence may impact firm data, particularly regarding macroeconomic factors. Thus, our research is focused solely on the period before the COVID-19 pandemic.

## **5.5 Recommendation**

### **5.5.1 Research Recommendations**

To address the limitations of missing data, it is recommended that future researchers work with an expert in advanced imputation techniques such as regression imputation or multiple imputation. These experts can help guide the use of these methods, which provide more accurate estimates than average estimates. Besides, working closely with experts can ensure that the attribution process is conducted correctly, reducing potential bias and improving the reliability of results. In addition, sensitivity analysis to assess the effect of various reduction methods on the results can enhance the

reliability of the study. This is because sensitivity analysis involves extrapolating missing data using various methods and comparing the results to determine the sensitivity of the results to the extrapolation method used. Transparent reporting of attribution methods and results is critical to maintaining the credibility and reproducibility of research.

To address the study's limitations in terms of pre - and post-COVID-19 data, it is critical to recognize this challenge. One approach is to compare before and after the outbreak. This requires collecting data from the post-pandemic period and analysing the impact of the pandemic on variables such as profitability, capital structure and investment decisions. In addition, conducting sensitivity analyses can improve research. Sensitivity analysis uses different assumptions and parameters, such as the duration and severity of the effects of the pandemic, to assess the robustness of the findings. By including these analyses, researchers can assess how changes in these factors affect the conclusions of the study, leading to a more nuanced understanding of the impact of the pandemic on firm performance. This comprehensive approach will enhance the credibility of research while also providing valuable insights into the impact of the COVID-19 pandemic on enterprise data.

## **5.6 Conclusion**

The goal of this study is to determine whether firm characteristics will have a direct significant impact on firm value in the Malaysian property sector. The firm value serves as the dependent variable, while various independent variables that have been applied to this research to determine the dependent variable, which are capital structure, profitability, firm size, investment decision, and firm growth. Then, the result indicates that there are significant negative results for capital structure, firm size, and investment decision, while profitability and firm growth show a significant



positive impact on firm value in this study. Moreover, some of the policy implication, limitation, and recommendations had also been provided.

Property firms, investors, and academics have provided insightful information for the implication of the study. Property firms can enhance internal features, optimize financial health, and sustain an ideal firm size. Then, an investor can apply their strategies and get insightful information after the end of this research. The academic not only lays the foundation for future development in firm valuation theories and models and corporate finance, but it also gets insight into the variables that influence the firm value. Lastly, our research findings provide academics with significant understanding in a range of areas related to the independent variable of our research. Therefore, our research has two limitations which are missing data and the impact of pre-COVID and post-COVID conditions. Missing data can introduce bias into our findings, and we lack the professional capacity to implement advanced solutions to address this issue. Additionally, the unexpected influence of COVID-19 has affected our data accuracy, particularly regarding pre-COVID and post-COVID data points. To address these problems, we recommended that future researchers work with an expert in advanced imputation techniques and compare before and after the outbreak of data in our research.

### References

- Adeboye, N. O., & Agunbiade, D. A. (2019). Panel Data Regression Modeling with Heteroscedasticity and Periodicity Effects.  
[http://eprints.federalpolyilaro.edu.ng/1010/1/P464-471\\_PSSN-CP-2019.pdf](http://eprints.federalpolyilaro.edu.ng/1010/1/P464-471_PSSN-CP-2019.pdf)
- Admin. (2018, October 4). *Why to use panel unit root tests? - Savedelicious.com*. SaveDelicious. <https://savedelicious.com/why-to-use-panel-unit-root-tests/>
- Adzhar, S. M., Rahim, N. A., Basrah, N., Majid, R. A., & Mustafar, S. (2021, November). Overview on built environment planning: Residential overhang factors in malaysia affordable housing. In *IOP Conference Series: Earth and Environmental Science* (Vol. 881, No. 1, p. 012018). IOP Publishing.  
<https://iopscience.iop.org/article/10.1088/1755-1315/881/1/012018/pdf>
- Afandi, A., Amendy, D., & Sugeng, A. (2022). The Effect of Macro and Microeconomic Factors on Company Value in Property and Real Estate Companies Listed on the IDX for the 2017-2021 Period. *The Accounting Journal of Binaniaga*, 7(2), 161-174.  
<http://tajb.unbin.ac.id/index.php/ajb/article/view/2/10>
- Afinindy, I., Salim, U., & Ratnawati, K. (2021). The effect of profitability, firm size, liquidity, sales growth on firm value mediated capital structure. *International Journal of Business, Economics and Law*, 24(4), 15-22.  
<https://www.ijbel.com/wp-content/uploads/2021/06/IJBEL24-704.pdf>
- Agung, G., Hasnawati, S., & Huzaimah, R. F. (2021). The effect of investment decision, financing decision, dividend policy on firm value. *Jurnal Bisnis*

*Dan Manajemen (Fakultas Ekonomi Universitas Lampung)*, 1–12.

<https://doi.org/10.23960/jbm.v17i1.189>

Ahmad, H., & Muslim, M. (2022). Several factors affecting firm value manufacturing in Indonesia. *Jurnal Akuntansi*, 26(1), 127-143.

<http://www.ecojoin.org/index.php/EJA/article/view/821/802>

Ahmad, S. M., Bakar, R., & Junoh, M. Z. B. M. (2020). The effects of macroeconomic factors on firm value: Empirical evidence from Nigeria. *SSRG International Journal of Economics and Management Studies*, 7(12),

160-169. <https://doi.org/10.14445/23939125/IJEMS-V7I12P123>

Aisha, P. (2016, December 12). Capital Structure and value of firm | Financial Management. Learn Accounting: Notes, Procedures, Problems and Solutions. <https://www.accountingnotes.net/financial-management/capital-structure/capital-structure-and-value-of-firm-financial-management/10899#>

Akhmadi, A., & Januarsi, Y. (2021). Profitability and firm value: Does dividend policy matter for Indonesian sustainable and responsible investment (SRI)-KEHATI listed firms?. *Economies*, 9(4), 163.

<https://www.mdpi.com/2227-7099/9/4/163>

Akmalia, A., & Aliyah, S. A. (2022). The Role of Financial Performance in Mediating The Effect of Institutional Ownership, Company Size and Sales Growth on Firm Value. *Jurnal Manajemen Bisnis*, 9(2), 274-279.

<https://jurnal.fe.umi.ac.id/index.php/JMB/article/download/184/229>

Akter, K., Tasnime, Z., & Uddin, S. N. (2020). Role of globalization and financial development on the population's health status in the South Asian countries: A panel quantile regression investigation. *International Journal of Science and Business*, 4(11), 82-92. [https://www.researchgate.net/profile/Khaleda-Akter-2/publication/344672579\\_RoleI\\_of\\_Globalization\\_and\\_Financial\\_Development\\_on\\_Population's\\_Health\\_Status\\_in\\_the\\_South\\_Asian\\_Countries\\_A\\_Panel\\_Quantile\\_Regression\\_Investigation/links/5f95b90b92851c14bce77c5a/RoleI-of-Globalization-and-Financial-Development-on-Populations-Health-Status-in-the-South-Asian-Countries-A-Panel-Quantile-Regression-Investigation.pdf](https://www.researchgate.net/profile/Khaleda-Akter-2/publication/344672579_RoleI_of_Globalization_and_Financial_Development_on_Population's_Health_Status_in_the_South_Asian_Countries_A_Panel_Quantile_Regression_Investigation/links/5f95b90b92851c14bce77c5a/RoleI-of-Globalization-and-Financial-Development-on-Populations-Health-Status-in-the-South-Asian-Countries-A-Panel-Quantile-Regression-Investigation.pdf)

Albright, J.J. & Park, H.M., 2009. Confirmatory Factor Analysis using Amos, LISREL, Mplus, SAS/STAT CALIS. pp.1-86

Alikaj, A., Nguyen, C. N., & Ning, W. (2016). The combined effect of firm external and internal factors on corporate social responsibility and firm performance. *International Management Review*, 12(2), 20. [https://www.researchgate.net/profile/Cau-Nguyen/publication/320310725\\_The\\_Combined\\_Effect\\_of\\_Firm\\_External\\_and\\_Internal\\_Factors\\_on\\_Corporate\\_Social\\_Responsibility\\_and\\_Firm\\_Performance/links/59dd11c4458515f6efef077a/The-Combined-Effect-of-Firm-External-and-Internal-Factors-on-Corporate-Social-Responsibility-and-Firm-Performance.pdf](https://www.researchgate.net/profile/Cau-Nguyen/publication/320310725_The_Combined_Effect_of_Firm_External_and_Internal_Factors_on_Corporate_Social_Responsibility_and_Firm_Performance/links/59dd11c4458515f6efef077a/The-Combined-Effect-of-Firm-External-and-Internal-Factors-on-Corporate-Social-Responsibility-and-Firm-Performance.pdf)

Al-Slehat, Z. a. F. (2019). *Impact of Financial Leverage, Size and Assets Structure on Firm Value: Evidence from Industrial Sector, Jordan*.

<https://www.semanticscholar.org/paper/Impact-of-Financial-Leverage%2C-Size-and-Assets-on-Al-Slehat/9085b5760d6b99e2223f8aa25c201da0a711b657?p2df>

AmrSadek, H., 2011. Does GAFTA Defy Gravity?. *Middle Eastern Finance and Economic*, 10, pp.147-57

Angrist, J. D., Aobdia, D., Armstrong, C. S., Badertscher, B., Baker, M., Barger, L. L., Basu, S., Beatty, A., Bernard, D., Beyer, A., Biddle, G. C., Bond, S., Brickley, J. A., Burgstahler, D. & Bushman, R. M. (2019, August 14). *The effects of financial reporting and disclosure on Corporate Investment: A Review*. *Journal of Accounting and Economics*.  
<https://www.sciencedirect.com/science/article/abs/pii/S0165410119300412>

Antoro, W., Sanusi, A., & Asih, P. (2020). The effect of profitability, company size, company growth on firm value through capital structure in food and beverage companies on the Indonesia stock exchange 2014-2018 period. *International Journal of Advances in Scientific Research and Engineering*, 6(09), 36-43. <https://doi.org/10.38035/dijefa.v1i1.226>

Aprilyani, I., Widyarti, M. T. H., & Hamida, N. (2021). The effect of erm, firm size, leverage, profitability and dividend policy on firm value (evidence from food & beverage sub sector companies listed in IDX 2015-2019). *Jurnal Aktual Akuntansi Keuangan Bisnis Terapan (AKUNBISNIS)*, 4(1), 65-75.

<https://jurnal.polines.ac.id/index.php/akunbisnis/article/download/2663/107387>

Aqimissolati, Sulastri, S., Isnuhardi, & Hanafi, A. (2020). The Influence of Investment Decisions and Funding Decisions on the Value of Companies with Ownership Structure as Moderated Variables in Manufacturing Companies Listed in Indonesia Stock Exchange (BEI). *Social Science Research Network*.

[https://papers.ssrn.com/sol3/Delivery.cfm/SSRN\\_ID3547077\\_code3070727.pdf?abstractid=3547077&mirid=1](https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID3547077_code3070727.pdf?abstractid=3547077&mirid=1)

Ascani, A., & Gagliardi, L. (2014). Inward FDI and local innovative performance. An empirical investigation on Italian provinces. *Review of Regional Research*, 35(1), 29–47. <https://doi.org/10.1007/s10037-014-0084-2>

Atidhira, A. T., & Yustina, A. I. (2017). The influence of return on asset, debt to equity ratio, earnings per share, and company size on share return in property and real estate companies. *JAAF (Journal of Applied Accounting and Finance)*, 1(2), 128-146. <http://e-journal.president.ac.id/presunivojs/index.php/JAAF/article/download/363/207>

Aymen, A. (2007). *Panel Data Analysis; Fixed and Random Effects using Stata (Oscar Torres-Reyna version)*. [https://www.researchgate.net/publication/303842303\\_Panel\\_Data\\_Analysis\\_Fixed\\_and\\_Random\\_Effects\\_using\\_Stata\\_Oscar\\_Torres-Reyna\\_version](https://www.researchgate.net/publication/303842303_Panel_Data_Analysis_Fixed_and_Random_Effects_using_Stata_Oscar_Torres-Reyna_version)

- Ayuba, H., Bambale, A. J. A., Ibrahim, M. A., & Sulaiman, S. A. (2019). Effects of Financial Performance, Capital Structure and Firm Size on Firms' Value of Insurance Companies in Nigeria. *Journal of Finance, Accounting & Management*, 10(1). [https://www.researchgate.net/profile/Sulaiman-Abdulwahab-Sulaiman/publication/339130941\\_Effects\\_of\\_Financial\\_Performance\\_Capital\\_Structure\\_and\\_Firm\\_Size\\_on\\_Firms%27\\_Value\\_of\\_Insurance\\_Companies\\_in\\_Nigeria/links/5e3f49ee92851c7f7f27e6eb/Effects-of-Financial-Performance-Capital-Structure-and-Firm-Size-on-Firms-Value-of-Insurance-Companies-in-Nigeria.pdf](https://www.researchgate.net/profile/Sulaiman-Abdulwahab-Sulaiman/publication/339130941_Effects_of_Financial_Performance_Capital_Structure_and_Firm_Size_on_Firms%27_Value_of_Insurance_Companies_in_Nigeria/links/5e3f49ee92851c7f7f27e6eb/Effects-of-Financial-Performance-Capital-Structure-and-Firm-Size-on-Firms-Value-of-Insurance-Companies-in-Nigeria.pdf)
- Bai, J., Choi, S. H., & Liao, Y. (2021). Feasible generalized least squares for panel data with cross-sectional and serial correlations. *Empirical Economics*, 60, 309-326. <https://arxiv.org/pdf/1910.09004.pdf>
- Baltagi, B. H. (1998). Panel data methods. In *Handbook of applied economic statistics* (pp. 311-323). CRC Press.  
<https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=b461115e3d8c01dc944c379adf574919a0d96baa>
- Baltagi, B. H., Jung, B. C., & Song, S. H. (2010). Testing for heteroskedasticity and serial correlation in a random effects panel data model. *Journal of Econometrics*, 154(2), 122-124.  
<https://surface.syr.edu/cgi/viewcontent.cgi?article=1055&context=cpr>
- Barbieri, L. (2006). *Panel Unit Root Tests: A Review*. ResearchGate.  
[https://www.researchgate.net/publication/252756953\\_Panel\\_Unit\\_Root\\_Tests\\_A\\_Review](https://www.researchgate.net/publication/252756953_Panel_Unit_Root_Tests_A_Review)

Barreira, A., & Rodrigues, P. (2005). *Unit root tests for panel data - a survey and an application*. Semantic Scholar.

[https://www.semanticscholar.org/paper/Unit-root-tests-for-panel-data-a-survey-and-an-Barreira-](https://www.semanticscholar.org/paper/Unit-root-tests-for-panel-data-a-survey-and-an-Barreira-Rodrigues/f7e7b99a3ab8a6e3d2e886ae792ea11b110e82c1#:~:text=The%20importance%20of%20a%20priori%20check%20of%20the,series%20may%20cause%20a%20misinterpretation%20of%20estimated%20results.)

[Rodrigues/f7e7b99a3ab8a6e3d2e886ae792ea11b110e82c1#:~:text=The%20importance%20of%20a%20priori%20check%20of%20the,series%20may%20cause%20a%20misinterpretation%20of%20estimated%20results.](https://www.semanticscholar.org/paper/Unit-root-tests-for-panel-data-a-survey-and-an-Barreira-Rodrigues/f7e7b99a3ab8a6e3d2e886ae792ea11b110e82c1#:~:text=The%20importance%20of%20a%20priori%20check%20of%20the,series%20may%20cause%20a%20misinterpretation%20of%20estimated%20results.)

Bauer.uh.edu. (n.d.). Lecture 11 GLS <https://www.bauer.uh.edu/rsusmel/phd/ec1-11.pdf>

Beattie, A. (2023, July 25). *The 4 basic elements of stock value*. Investopedia.

<https://www.investopedia.com/articles/fundamental-analysis/09/elements-stock-value.asp>

Bhandari, P. (2023, June 22). *What is quantitative research?: Definition, uses &*

*methods*. Scribbr. <https://www.scribbr.com/methodology/quantitative-research/>

Bhat, A. (2023, August 8). *Research design: What it is, Elements & Types*.

QuestionPro. <https://www.questionpro.com/blog/research-design/>

Bloomenthal, A. (2023, July 7). *Macroeconomic factor: Definition, types,*

*examples, and impact*. Investopedia.

<https://www.investopedia.com/terms/m/macroeconomic-factor.asp>

Bock, T. (2022, September 13). *What is Autocorrelation? - Serial Correlation -*

*Displayr*. Displayr. <https://www.displayr.com/autocorrelation/>



- Bon, S. F., & Hartoko, S. (2022). The effect of dividend policy, investment decision, leverage, profitability, and firm size on firm value. *European Journal of Business and Management Research*, 7(3), 7-13.  
<https://ejbmr.org/index.php/ejbmr/article/download/1405/766>
- Brătucu, G., Tudor, A. I. M., Dovleac, L., Sumedrea, S., Chițu, I. B., & Trifan, A. (2020). *The impact of new technologies on individuals' health perceptions in the European Union*. *Sustainability*, 12(24), 10349.  
<https://www.mdpi.com/2071-1050/12/24/10349/pdf>
- Bursa Malaysia. (n.d.). *Understanding Indices*.  
[https://www.bursamalaysia.com/trade/our\\_products\\_services/indices/bursa\\_malaysia\\_index\\_series](https://www.bursamalaysia.com/trade/our_products_services/indices/bursa_malaysia_index_series)
- Business growth*. (n.d.). StudySmarter UK.  
<https://www.studysmarter.co.uk/explanations/business-studies/business-development/business-growth/>
- Buteikis, A. (n.d.). *Practical Econometrics and data science*. 1.2 Statistical Data types. [http://web.vu.lt/mif/a.buteikis/wp-content/uploads/PE\\_Book/1-2-data-types.html](http://web.vu.lt/mif/a.buteikis/wp-content/uploads/PE_Book/1-2-data-types.html)
- Camino-Mogro, S., Bermúdez-Barrezueta, N., & Armijos, M. (2023). Is FDI a potential tool for boosting firm's performance? Firm level evidence from Ecuador. *Journal of Evolutionary Economics*, 33(2), 341–391.  
<https://doi.org/10.1007/s00191-022-00806-2>
- Canarella, G., & Gasparian, A. (2008). New insights into executive compensation and firm performance: Evidence from a panel of “new economy” firms,

1996-2002. *Managerial Finance*, 34(8), 537-554.

<https://www.emerald.com/insight/content/doi/10.1108/03074350810874064/full/html>

Carino, E. L. & Teano, J. A. (2022). VALUE RELEVANCE OF CAPITAL STRUCTURE: EVIDENCE FROM THE PROPERTY SECTOR COMPANIES LISTED IN THE PHILIPPINE STOCK EXCHANGE.

<https://www.abacademies.org/articles/Value-relevance-of-capital-structure-evidence-from-the-property-sector-companies-listed-in-the-philippine-stock-exchange-1528-2635-26-5-404.pdf>

Chabachib, M., HERSUGONDO, H., Septiviardi, D., & Pamungkas, I. D. (2020).

The effect of investment opportunity set and company growth on firm value: Capital structure as an intervening variable. *International Journal of Innovation, Creativity and Change*, 12(11), 139-156.

[https://eprints2.undip.ac.id/id/eprint/2168/1/121116\\_Chabachib\\_2020\\_ER.pdf](https://eprints2.undip.ac.id/id/eprint/2168/1/121116_Chabachib_2020_ER.pdf)

Charles, H. F. (2005, May 28). *Maximum Likelihood Estimation*. Encyclopedia of Social Measurement, 653-664.

<https://www.sciencedirect.com/science/article/abs/pii/B0123693985001729>

Charlesworth Author Services. (2022, May 26). *The importance of having Large Sample Sizes for your research*.

<https://www.cwauthors.com/article/importance-of-having-large-sample-sizes-for->



- Dang, T. D., & Do, T. V. T. (2021). Does capital structure affect firm value in Vietnam. *Investment Management and Financial Innovations*, 18(1), 33-41.  
<https://pdfs.semanticscholar.org/d9cb/1f25405470869a00d9894602a6d9870ce9c0.pdf>
- Data and Statistical Services. (n.d.). *Research guides: Panel Data Analysis using STATA: Fixed Effects and Random Effects*.  
<https://libguides.princeton.edu/stata-panel-fe-re>
- De Hoyos, R. E., & Sarafidis, V. (2006). *Testing for Cross-Sectional dependence in Panel-Data models*. *The Stata Journal*, 6(4), 482–496. <https://doi.org/10.1177/1536867x0600600403>
- Dewi, M., Foanto, G. N., & Christiawan, Y. J. (2021, November). Profitability, liquidity, and firm value: does financial distress have a mediating effect?. In *6th International Conference on Tourism, Economics, Accounting, Management, and Social Science (TEAMS 2021)* (pp. 437-445). Atlantis Press. <https://www.atlantis-press.com/proceedings/teams-21/125964252>
- Djashan, I. A. (2019). The effect of firm size and profitability on firm value with capital structure as intervening variables in Indonesia. *Journal of International Business, Economics and Entrepreneurship (JIBE)*, 4(2), 55-59. <https://jibe.uitm.edu.my/images/dec2019/Indrafull.pdf>
- Duguleana, C., & Duguleana, L. (2021). Financial Profitability of Demerged Companies. *Bulletin of the Transilvania University of Brasov. Series V: Economic Sciences*, 173-182.  
[https://webbut.unitbv.ro/index.php/Series\\_V/article/download/643/581](https://webbut.unitbv.ro/index.php/Series_V/article/download/643/581)

Duy, N. T., & Phuoc, N. P. H. (2016). The relationship between firm sizes and stock returns of service sector in ho chi minh city stock exchange. *Rev. Eur. Stud.*, 8, 210.  
<https://pdfs.semanticscholar.org/304f/b9e1fb75c2fce2a63585ada6a7519269d445.pdf>

Effects of outliers on regression model? (2015, July 22). *Data Science, Analytics and Big Data Discussions*. <https://discuss.analyticsvidhya.com/t/effects-of-outliers-on-regression-model/2403/2>

Endri, E., & Fathony, M. (2020). Determinants of firm's value: Evidence from financial industry. *Management Science Letters*, 10(1), 111-120.  
[http://www.m.growingscience.com/msl/Vol10/msl\\_2019\\_224.pdf](http://www.m.growingscience.com/msl/Vol10/msl_2019_224.pdf)

Eric. (2019, February 23). *Panel data, structural breaks and unit root testing | Aptech*. <https://www.aptech.com/blog/panel-data-structural-breaks-and-unit-root-testing/#:~:text=The%20panel%20LM%20test%20statistic%20averages%20the%20individual,one%20time%20series%20in%20the%20panel%20is%20stationary.>

Eric. (2021, March 3). Introduction to the Fundamentals of Panel Data. Aptech.  
<https://www.aptech.com/blog/introduction-to-the-fundamentals-of-panel-data/>

EViews help. (n.d.). *Cross-Sectionally Independent Panel Unit Root Testing*.  
[https://www.eviews.com/help/helpintro.html#page/content/advtimeser-Cross-sectionally\\_Independent\\_Panel\\_Unit\\_Root\\_Te.html](https://www.eviews.com/help/helpintro.html#page/content/advtimeser-Cross-sectionally_Independent_Panel_Unit_Root_Te.html)

EViews help. (n.d.). *Panel Equation Testing*.

[https://www.eviews.com/help/helpintro.html#page/content%2Fpanel-Panel\\_Equation\\_Testing.html%23ww191025](https://www.eviews.com/help/helpintro.html#page/content%2Fpanel-Panel_Equation_Testing.html%23ww191025)

Eyisi, D. (2016). The usefulness of qualitative and quantitative approaches and methods in researching problem-solving ability in science education curriculum. *Journal of education and practice*, 7(15), 91-100.

<https://files.eric.ed.gov/fulltext/EJ1103224.pdf>

Faisal, F., Abidin, Z., & Haryanto, H. (2021). Enterprise risk management (ERM) and firm value: The mediating role of investment decisions. *Cogent Economics & Finance*, 9(1).

<https://doi.org/10.1080/23322039.2021.2009090>

Fajaria, A. Z., & Isnalita, N. I. D. N. (2018). The effect of profitability, liquidity, leverage and firm growth of firm value with its dividend policy as a moderating variable. *International Journal of Managerial Studies and Research (IJMSR)*, 6(10), 55-69.

[https://repository.unair.ac.id/85254/1/Isnalita\\_Karya%20Ilmiah003-The%20Effect%20of%20Profitability%2C%20Liquidity%2C%20....pdf](https://repository.unair.ac.id/85254/1/Isnalita_Karya%20Ilmiah003-The%20Effect%20of%20Profitability%2C%20Liquidity%2C%20....pdf)

Fall. (2008). *Heteroskedasticity and autocorrelation*.

<https://www.homepages.ucl.ac.uk/~uctpsc0/Teaching/GR03/Heter&Autocorr.pdf>

Faramarzi, A., & Bhattacharya, A. (2021). The economic worth of loyalty programs: An event study analysis. *Journal of Business Research*, 123, 313-323.

[https://research.rug.nl/files/145070539/1\\_s2.0\\_S0148296320306275\\_main.pdf](https://research.rug.nl/files/145070539/1_s2.0_S0148296320306275_main.pdf)

Feng, S., Li, G., Tong, T., & Luo, S. (2020). Testing for heteroskedasticity in two-way fixed effects panel data models. *Journal of Applied Statistics*, 47(1), 91-116. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9038064/>

Fox-Wasylyshyn, S. M., & El-Masri, M. M. (2005). Handling missing data in self-report measures. *Research in nursing & health*, 28(6), 488-495. <https://www.researchgate.net/profile/Mansour-Abdullah-Elsehri/post/Are-there-any-suggested-criteria-for-dropping-questionnaires-in-quantitative-research-due-to-missing-responses/attachment/5a861c35b53d2f0bba52349e/AS%3A594446445993985%401518738485901/download/Handling+missing+data+in+self-report+measures.pdf>

Frieder, L., & Martell, R. (2006). On capital structure and the liquidity of a firm's stock. *Available at SSRN 880421*. <https://users.nber.org/~confer/2006/mms06/frieder.pdf>

Gamso, J., & Grosse, R. (2021). Trade agreement depth, foreign direct investment, and the moderating role of property rights. *Journal of International Business Policy*, 4, 308-325. <https://link.springer.com/article/10.1057/s42214-020-00061-x>

García, F. J. P., Jin, B., & Salomon, R. (2013). Does inward foreign direct investment improve the innovative performance of local firms? *Research Policy*, 42(1), 231–244. <https://doi.org/10.1016/j.respol.2012.06.005>

GeeksforGeeks, (2020). AutoCorrelation. GeeksforGeeks.

<https://www.geeksforgeeks.org/autocorrelation/>

Gharaibeh, A. M. (2017). Factors influencing firm value as measured by the Tobin's Q: Empirical evidence from the Saudi Stock Exchange (TADAWUL). *International Journal of Applied Business and Economic Research*, 15(6).

Goh, T. S., Henry, H., Erika, E., & Albert, A. (2022). Sales Growth and Firm Size Impact on Firm Value with ROA as a Moderating Variable. *MIX: Jurnal Ilmiah Manajemen*, 12(1), 99-116.

[https://www.bing.com/search?pglt=43&q=Goh%2C+T.+S.%2CHenry%2C+H.%2CErika%2CE.%2C+%26+Albert%2CA.+%282022%29.+Sales+Growth+and+Firm+Size+Impact+on+Firm+Value+with+ROA+as+a+Moderating+Variable.+MIX%3A+Jurnal+Ilmiah+Manajemen%2C+12%281%29+99-116.&cvid=e8be59c512434884b5aef667e1bb5cd9&gs\\_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQRRj8VdIBBzUxM2owajGoAgCwAgA&FORM=ANSAB1&PC=U531](https://www.bing.com/search?pglt=43&q=Goh%2C+T.+S.%2CHenry%2C+H.%2CErika%2CE.%2C+%26+Albert%2CA.+%282022%29.+Sales+Growth+and+Firm+Size+Impact+on+Firm+Value+with+ROA+as+a+Moderating+Variable.+MIX%3A+Jurnal+Ilmiah+Manajemen%2C+12%281%29+99-116.&cvid=e8be59c512434884b5aef667e1bb5cd9&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQRRj8VdIBBzUxM2owajGoAgCwAgA&FORM=ANSAB1&PC=U531)

Griffith, B., & Friesen, L. (2021, August 18). 4.1 frequency distributions for quantitative data. Boundless Statistics for Organizations.

<https://open.ocolearnok.org/reach-higher-data-analysis/chapter/frequency-distributions-for-quantitative-data/>

Gursida, H. (2017). The influence of fundamental and macroeconomic analysis on stock price. *Jurnal Terapan Manajemen dan Bisnis*, 3(2), 222-234.



<https://journal.stkipsingkawang.ac.id/index.php/JTMB/article/download/324/380>

Gustian, D. (2017). Pengaruh pertumbuhan perusahaan, keputusan investasi, dan keputusan pendanaan terhadap nilai perusahaan (Studi empiris pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia 2010-2014). *Jurnal Akuntansi*, 5(1).

<https://ejournal.unp.ac.id/students/index.php/akt/article/view/2635>

Ha, T. X., & Tran, T. T. (2021). The effect of foreign ownership and product market competition on firm performance: empirical evidence from Vietnam. *The Journal of Asian Finance, Economics and Business*, 8(11), 79-86. <https://koreascience.kr/article/JAKO202130254054000.pdf>

Hamrouni, A., Miloudi, A., & Benkraiem, R. (2015). Signaling firm performance through corporate voluntary disclosure. *Journal of Applied Business Research (JABR)*, 31(2), 609-620.

<https://clutejournals.com/index.php/JABR/article/download/9157/9147>

Hansen, C. B. (2007). Generalized least squares inference in panel and multilevel models with serial correlation and fixed effects. *Journal of econometrics*, 140(2), 670-694.

<https://www.sciencedirect.com/science/article/pii/S0304407606001515>

Hasanuddin, R. (2021). The Influence of Investment Decisions, Dividend Policy and Capital Structure on Firm Value. *Jurnal Economic Resources*, 4(1).

- Hayes, A. (n.d.). Profitability ratios: What they are, common types, and how businesses use them. Investopedia.  
<https://www.investopedia.com/terms/p/profitabilityratios.asp>
- Hirdinis, M. (2019). Capital structure and firm size on firm value moderated by profitability. <https://ideas.repec.org/a/ers/ijebaa/vviiy2019i1p174-191.html#:~:text=Profitability%20has%20no%20significant%20effect%20on%20firm%20value%2C,capital%20structure%20and%20firm%20size%20on%20firm%20value.>
- How to Deal with Missing Data | Master's in Data Science.* (2023, December 14). CORP-MIDS1 (MDS). <https://www.mastersindatascience.org/learning/how-to-deal-with-missing-data/#:~:text=When%20dealing%20with%20missing%20data,of%20missing%20data%20is%20low.>
- Hsiao, C., Pesaran, M. H., & Pick, A. (2007). *Diagnostic Tests of Cross Section Independence for Nonlinear Panel Data Models.*  
<https://www.econ.cam.ac.uk/research-files/repec/cam/pdf/cwpe0716.pdf>
- Huitema, B., & Laraway, S. (2006). *Autocorrelation.* ResearchGate.  
[https://www.researchgate.net/publication/280722480\\_Autocorrelation](https://www.researchgate.net/publication/280722480_Autocorrelation)
- Hunjra, A. I., Chani, D. M. I., Javed, S., Naeem, S., & Ijaz, M. S. (2014). Impact of micro economic variables on firms performance. *International Journal of Economics and Empirical Research*, 2(2), 65-73.

[https://www.researchgate.net/publication/263620526\\_-65\\_-  
\\_Impact\\_of\\_Micro\\_Economic\\_Variables\\_on\\_Firms\\_Performance](https://www.researchgate.net/publication/263620526_-65_-Impact_of_Micro_Economic_Variables_on_Firms_Performance)

Husna, A., & Satria, I. (2019). Effects of return on asset, debt to asset ratio, current ratio, firm size, and dividend payout ratio on firm value. *International Journal of Economics and Financial Issues*, 9(5), 50-54. <https://www.academia.edu/download/72349718/pdf.pdf>

Ibarrera. (2020, October 2). *How to Identify Missing Data, Ensure Data Completeness & Maintain the Accuracy of Your Data.*

<https://dataladder.com/missing-data-and-data-completeness/#:~:text=The%20causes%20of%20missing%20data%20are%20plenty%2C%20but,%28web%20forms%20that%20do%20not%20have%20mandatory%20fields%29>

IBM. (2023, January 3). *Adjusted R squared.*

<https://www.ibm.com/docs/en/cognos-analytics/11.1.0?topic=terms-adjusted-r-squared>

Ilyas, A., Harini, G., & Pratama, I. M. (2023). The Effect of Profitability, Company Size And Solvency on Firm Value Insurance Companies in IDX. *Journal Accounting Education and Finance*, 1(1), 01-15.

[https://ejournal.upgrisba.ac.id/index.php/JAEF/article/download/7112/297](https://ejournal.upgrisba.ac.id/index.php/JAEF/article/download/7112/2976)

6

Imad, Z, R. (2016, April 2). Panel Data Approach of the Firm's Value Determinants: Evidence from the Jordanian Industrial Firms. Canadian Center of Science and Education.

<https://pdfs.semanticscholar.org/f271/c961eff9f30bd42fb7ceea026a9c54d4bf5e.pdf>

Indeed Editorial Team. (2023, March 11). *What Is Panel Data? (With Uses, Advantages and an Example)*. Indeed. <https://indeed.com/career-advice/career-development/panel-data>

Indeed.com. (2023, March 11). *Macroeconomic factors: Definition and 11 types of indicators*. <https://www.indeed.com/career-advice/career-development/macroeconomics-factors>

InfluxData. (2021, December 10). *InfluxDB: Open Source Time Series Database | InfluxData*. <https://www.influxdata.com/blog/autocorrelation-in-time-series-data/>

Islam, M. S. (2022). Do personal remittances influence economic growth in South Asia? A panel analysis. *Review of Development Economics*, 26(1), 242-258. [https://www.researchgate.net/profile/Md-Saiful-Islam-62/publication/355110487\\_Do\\_personal\\_remittances\\_influence\\_economic\\_growth\\_in\\_South\\_Asia\\_A\\_panel\\_analysis/links/647f1ee2b3dfd73b77682bf9/Do-personal-remittances-influence-economic-growth-in-South-Asia-A-panel-analysis.pdf](https://www.researchgate.net/profile/Md-Saiful-Islam-62/publication/355110487_Do_personal_remittances_influence_economic_growth_in_South_Asia_A_panel_analysis/links/647f1ee2b3dfd73b77682bf9/Do-personal-remittances-influence-economic-growth-in-South-Asia-A-panel-analysis.pdf)

Isma, N. N., Sutrisno, T., & Rahman, A. F. (2023). The impact of inflation on firm value moderated by earnings quality in Indonesia. *International Journal of Research in Business and Social Science (2147-4478)*, 12(5), 217-222. <https://www.ssbfn.net.com/ojs/index.php/ijrbs/article/download/2751/1899>

Ittner, C. D., & Larcker, D. F. (1997). Product development cycle time and organizational performance. *Journal of Marketing Research*, 34(1), 13-23.  
<https://journals.sagepub.com/doi/abs/10.1177/002224379703400102>

Jagun, Z. T., Nyakuma, B. B., Daud, D. & Samsudin, S. (2022). *Property Development During The COVID-19 Pandemic: Challenges and Outlook in Malaysia*. PubMed Central.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8727072/>

Jensen, U., & Rässler, S. (2007). *The effects of collective bargaining on firm performance: New evidence based on stochastic production frontiers and multiply imputed German establishment data* (No. 2007, 3). IAB-Forschungsbericht.  
<https://www.econstor.eu/bitstream/10419/26705/1/524549931.PDF>

Jihadi, M., Vilantika, E., Sayed, M., Arifin, Z. & Fatimawati. (2021, February). *The effect of liquidity, leverage, and profitability on firm value: Empirical evidence from Indonesia*. The Journal of Asian Finance, Economics and Business.  
<https://koreascience.kr/article/JAKO202106438543370.page#ref-41>

Jim, F. (n.d.). *Heteroscedasticity in Regression Analysis*.  
<https://statisticsbyjim.com/regression/heteroscedasticity-regression/>

Jonnius, J., & Marsudi, A. S. (2021). PROFITABILITY AND THE FIRM'S VALUE. *Dinasti International Journal of Management Science (DIJMS)*, 3(1), 23–47. <https://doi.org/10.31933/dijms.v3i1.977>

- Jusoh, M. A., & Che-Ahmad, A. (2014). Equity ownership, audit quality and firm performance in Malaysia using generalized least square estimations technique. *Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB)*, 3(1), 976-991.  
<https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=d93f8c0476bce7a12fb989794c6f3c14aee6f0dc>
- Kalsie, A., & Shrivastav, S. M. (2016). Analysis of board size and firm performance: evidence from NSE companies using panel data approach. *Indian Journal of Corporate Governance*, 9(2), 148-172.  
[https://www.academia.edu/download/51116757/Analysis\\_of\\_Board\\_Size\\_and\\_Firm\\_Performance.pdf](https://www.academia.edu/download/51116757/Analysis_of_Board_Size_and_Firm_Performance.pdf)
- Kang, H. (2013). The prevention and handling of the missing data. *Korean journal of anesthesiology*, 64(5), 402-406.  
<https://synapse.koreamed.org/articles/1155616>
- Karakus, R., & Bozkurt, I. (2017). The Effect of Financial Ratios and Macroeconomic Factors on Firm Value: An Empirical Analysis in Borsa Istanbul. In *Article on RSEP International Conferences on Social Issues and Economic Studies, Prague, Czechia*.  
[https://rsepconferences.com/my\\_documents/my\\_files/E8F\\_5\\_RIFAT\\_KARAKU%C3%85%C2%9E\\_2.pdf](https://rsepconferences.com/my_documents/my_files/E8F_5_RIFAT_KARAKU%C3%85%C2%9E_2.pdf)
- Kathy, B. (2022, May 20). Lack of buying interest as a result of rising inflation, higher interest rates, and uncertainty. *New Straits Times*.  
<https://www.nst.com.my/property/2022/05/797963/lack-buying-interest-result-rising-inflation-higher-interest-rates-and>

- Kirmani, A., & Rao, A. R. (2000). No pain, no gain: A critical review of the literature on signaling unobservable product quality. *Journal of marketing*, 64(2), 66-79.  
[https://journals.sagepub.com/doi/full/10.1509/jmkg.64.2.66.18000?casa\\_token=XjKq\\_7EYMeAAAAA:fsTF71Ukqv\\_MtNyPVJtHtF7UtiulQDnvnfqeZEB9IaqAIhURDPvxiD4X6vljJniNh42I2XF\\_P1XiQ](https://journals.sagepub.com/doi/full/10.1509/jmkg.64.2.66.18000?casa_token=XjKq_7EYMeAAAAA:fsTF71Ukqv_MtNyPVJtHtF7UtiulQDnvnfqeZEB9IaqAIhURDPvxiD4X6vljJniNh42I2XF_P1XiQ)
- Kokemuller, N. (2019, March 5). *Six microenvironmental factors that affect businesses*. Small Business - Chron.com.  
<https://smallbusiness.chron.com/six-microenvironmental-factors-affect-businesses-78023.html>
- Komara, A., Ghozali, I., & Januarti, I. (2020, March). Examining the firm value based on signaling theory. In *1st International Conference on Accounting, Management and Entrepreneurship (ICAMER 2019)* (pp. 1-4). Atlantis Press. <https://www.atlantis-press.com/article/125936207.pdf>
- Krishnan, S. (2022, January 5). Detailed explanation of panel data-how to identify balanced and unbalanced panel data. Medium.  
<https://medium.com/geekculture/detailed-explanation-of-panel-data-how-to-identify-balanced-and-unbalanced-panel-data-fd973fa788ae>
- Kumar, S. (2020, July 24). *7 Ways to Handle Missing Values in Machine Learning*. <https://towardsdatascience.com/7-ways-to-handle-missing-values-in-machine-learning-1a6326adf79e>
- Lambey, R., Tewal, B., Sondakh, J. J., & Manganta, M. (2021). The effect of profitability, firm size, equity ownership and firm age on firm value

(leverage basis): Evidence from the Indonesian manufacturer companies. *Archives of Business Research*, 9(1).

[https://www.researchgate.net/profile/Robert-](https://www.researchgate.net/profile/Robert-Lambey/publication/349112033_The_EFFECT_OF_PROFITABILITY_FIRM_SIZE_EQUITY_OWNERSHIP_AND_FIRM_AGE_ON_FIRM_VALUE_LEVERAGE_BASIS_Evidence_from_the_Indonesian_Manufacturer_Companies/links/62ed11d7505511283e914fee/The-THE-EFFECT-OF-PROFITABILITY-FIRM-SIZE-EQUITY-OWNERSHIP-AND-FIRM-AGE-ON-FIRM-VALUE-LEVERAGE-BASIS-Evidence-from-the-Indonesian-Manufacturer-Companies.pdf)

[Lambey/publication/349112033\\_The\\_EFFECT\\_OF\\_PROFITABILITY\\_FIRM\\_SIZE\\_EQUITY\\_OWNERSHIP\\_AND\\_FIRM\\_AGE\\_ON\\_FIRM\\_VALUE\\_LEVERAGE\\_BASIS\\_Evidence\\_from\\_the\\_Indonesian\\_Manufacturer\\_Companies/links/62ed11d7505511283e914fee/The-THE-EFFECT-OF-PROFITABILITY-FIRM-SIZE-EQUITY-OWNERSHIP-AND-FIRM-AGE-ON-FIRM-VALUE-LEVERAGE-BASIS-Evidence-from-the-Indonesian-Manufacturer-Companies.pdf](https://www.researchgate.net/profile/Robert-Lambey/publication/349112033_The_EFFECT_OF_PROFITABILITY_FIRM_SIZE_EQUITY_OWNERSHIP_AND_FIRM_AGE_ON_FIRM_VALUE_LEVERAGE_BASIS_Evidence_from_the_Indonesian_Manufacturer_Companies/links/62ed11d7505511283e914fee/The-THE-EFFECT-OF-PROFITABILITY-FIRM-SIZE-EQUITY-OWNERSHIP-AND-FIRM-AGE-ON-FIRM-VALUE-LEVERAGE-BASIS-Evidence-from-the-Indonesian-Manufacturer-Companies.pdf)

Leman, W., Suriawinata, I. S., & Noormansyah, I. (2020). The Effect of Capital Structure, Profitability and Company Size on Value of Companies In The Automotive Industry Sector Listed on IDX 2014-2018. *Indonesian Journal of Business, Accounting and Management*, 3(2), 77-82.

<https://ejournal.stei.ac.id/index.php/ijbam/article/download/601/351/>

Lestari, S. A., & Armayah, M. (2016). Profitability and company value: empirical study of manufacture companies in Indonesia period 2009-2014.

*Information Management and Business Review*, 8(3), 6-10.

<https://ojs.amhinternational.com/index.php/imbr/article/download/1326/126>

4

Lithmee. (2018, June 8). *Difference between time series and panel data*. Compare the Difference Between Similar Terms.

<https://www.differencebetween.com/difference-between-time-series-and-panel-data/>



Lumapow, L. S., & Tumiwa, R. A. F. (2017). The effect of dividend policy, firm size, and productivity to the firm value. *Research Journal of Finance and Accounting*, 8(22), 20-24. <https://core.ac.uk/download/pdf/234632167.pdf>

Luu, D. H. (2021). The impact of capital structure on firm value: a case study in Vietnam. *Journal of Asian Finance, Economics and Business*, 8(5), 287–292. <https://doi.org/10.13106/jafeb.2021.vol8.no5.0287>

Machmuddah, Z., Sari, D. W., & Utomo, S. D. (2020). Corporate social responsibility, profitability and firm value: Evidence from Indonesia. *The Journal of Asian Finance, Economics and Business*, 7(9), 631-638. <https://koreascience.kr/article/JAKO202026061031419.pdf>

Magna Prima Berhad. (2018). Annual Report 2018. [https://disclosure.bursamalaysia.com/FileAccess/apbursaweb/download?id=193469&name=EA\\_DS\\_ATTACHMENTS](https://disclosure.bursamalaysia.com/FileAccess/apbursaweb/download?id=193469&name=EA_DS_ATTACHMENTS)

Mah Sing. (2018). Annual Report 2018. [https://disclosure.bursamalaysia.com/FileAccess/apbursaweb/download?id=193773&name=EA\\_DS\\_ATTACHMENTS](https://disclosure.bursamalaysia.com/FileAccess/apbursaweb/download?id=193773&name=EA_DS_ATTACHMENTS)

Maimunah, S., & Hilal, S. (2014). PENGARUH KEPUTUSAN INVESTASI, KEPUTUSAN PENDANAAN, KEBIJAKAN DIVIDEN DAN TINGKAT SUKU BUNGA TERHADAP NILAI PERUSAHAAN. *JIAFE (Jurnal Ilmiah Akuntansi Fakultas Ekonomi)*, 6(2), 42–49. <https://doi.org/10.34204/jiafe.v6i2.531>

Mamuti, A., Zubović, N., & Boztepe, E. (2023). Evaluating the influence of CEFTA membership on financial integration: An empirical panel data

analysis. *J. Corp. Gov. Insur. Risk Manag*, 10(1), 69-78.

[https://www.researchgate.net/profile/Agim-](https://www.researchgate.net/profile/Agim-Mamuti/publication/373032625_Evaluating_the_Influence_of_CEFTA_Membership_on_Financial_Integration_An_Empirical_Panel_Data_Analysis/links/64d4d8bac80b930269044f43/Evaluating-the-Influence-of-CEFTA-Membership-on-Financial-Integration-An-Empirical-Panel-Data-Analysis.pdf)

[Mamuti/publication/373032625\\_Evaluating\\_the\\_Influence\\_of\\_CEFTA\\_Membership\\_on\\_Financial\\_Integration\\_An\\_Empirical\\_Panel\\_Data\\_Analysis/links/64d4d8bac80b930269044f43/Evaluating-the-Influence-of-CEFTA-Membership-on-Financial-Integration-An-Empirical-Panel-Data-Analysis.pdf](https://www.researchgate.net/profile/Agim-Mamuti/publication/373032625_Evaluating_the_Influence_of_CEFTA_Membership_on_Financial_Integration_An_Empirical_Panel_Data_Analysis/links/64d4d8bac80b930269044f43/Evaluating-the-Influence-of-CEFTA-Membership-on-Financial-Integration-An-Empirical-Panel-Data-Analysis.pdf)

Mappadang, A. (2021). Managerial ownership, leverage, profitability, corporate

value: An interactive effect in Indonesia Stock Exchange. *Widyakala*

*Journal: Journal Of Pembangunan Jaya University*, 8(2), 54-60.

[https://scholar.archive.org/work/qdlaipixive4rbhceevtsnwcea/access/wayba](https://scholar.archive.org/work/qdlaipixive4rbhceevtsnwcea/access/wayback/https://ojs.upj.ac.id/index.php/journal_widya/article/download/443/pdf_1)  
[ck/https://ojs.upj.ac.id/index.php/journal\\_widya/article/download/443/pdf\\_](https://ojs.upj.ac.id/index.php/journal_widya/article/download/443/pdf_1)

1

Mariadas, P. A., & Murthy, U. (2023, July 13). *LETTER | Housing market in*

*Malaysia faces various*

*challenges*. Malaysiakini. <https://www.malaysiakini.com/letters/671778>

Markonah, M., Salim, A., & Franciska, J. (2020). Effect of profitability, leverage,

and liquidity to the firm value. *Dinasti International Journal of*

*Economics, Finance & Accounting*, 1(1), 83-94.

<https://dinastipub.org/DIJEFA/article/download/225/164>

McCulloch, J. H. (2016). Moment Ratio estimation of autoregressive/unit root

parameters and autocorrelation-consistent standard errors. *Computational*

*Statistics & Data Analysis*, 100, 712–

733. <https://doi.org/10.1016/j.csda.2015.07.003>

- McGuirk, A. M., & Spanos, A. (2002). *The linear regression model with autocorrelated errors: just say no to error autocorrelation* (No. 375-2016-20206). <https://ageconsearch.umn.edu/record/19905/files/sp02mc03.pdf>
- Moaz, A. (2023, April 10). *Revolutionizing Real Estate & its role in the economy*. LinkedIn. <https://www.linkedin.com/pulse/real-estate-role-economy-moaz-ali>
- Mohamad, N. E. A. B., & Murugesu, P. (2020). Linkages between capital structure, property overhang and financial sustainability: evidence from property sector in Malaysia. *Global Business and Management Research*, 12(4), 441-454.  
<http://www.gbmrjournal.com/pdf/v12n4/V12N4-42.pdf>
- Mukti, A. H., & Winarso, B. S. (2020). Profitabilitas dan Struktur Modal Terhadap Nilai Perusahaan dengan Variabel Corporate Social Responsibility sebagai Moderasi. *Jurnal REKSA: Rekayasa Keuangan, Syariah Dan Audit*, 7(2), 73-84.  
<http://journal2.uad.ac.id/index.php/reksa/article/view/2670/pdf>
- Mule, K. R., Mukras, M. S., & Nzioka, O. M. (2015). Corporate size, profitability and market value: An econometric panel analysis of listed firms in Kenya. <https://repository.maseno.ac.ke/bitstream/handle/123456789/75/CORPORATE%20SIZE%20PROFITABILITY-mule.pdf?sequence=1&isAllowed=y>
- Murniati, S. (2016). Effect of capital structure, company size and profitability on the stock price of food and beverage companies listed on the Indonesia Stock Exchange. *Information Management and Business Review*, 8(1), 23-

29.<https://ojs.amhinternational.com/index.php/imbr/article/download/1192/1186>

Nguyen, M. (2020). A Guide on Data Analysis. Bookdown.

Nguyen, T., & Nguyen, H. (2020). Capital structure and firm performance of non-financial listed companies: Cross-sector empirical evidences from Vietnam. *Accounting*, 6(2), 137-150.  
[http://m.growingscience.com/ac/Vol6/ac\\_2019\\_18.pdf](http://m.growingscience.com/ac/Vol6/ac_2019_18.pdf)

Niresh, A., & Thirunavukkarasu, V. (2014). Firm size and profitability: A study of listed manufacturing firms in Sri Lanka. *International journal of business and management*, 9(4).  
[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2422441](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2422441)

NIST. (n.d.). 7.1.6. *What are outliers in the data?*

<https://www.itl.nist.gov/div898/handbook/prc/section1/prc16.htm>

Nteyi, B., & Quaye, E. S. (2022). Customer Satisfaction and the Determinants of Firm Value-A Case for JSE Listed Firms.  
<https://wiredspace.wits.ac.za/bitstreams/0e335cfc-7e22-4cb7-b39e-c80a710afdbe/download>

Nurlela, N., Sulastri, S., Aj, U. H., & Hanafi, A. (2019). The influence of investment decisions and financing decisions on firm value with Profitability as Intervening Variables(Empirical Study on companies listed in Indonesian Sharia Stock Index). *International Journal of Multicultural and Multireligious Understanding*, 6(2), 447.  
<https://doi.org/10.18415/ijmmu.v6i2.758>

- Nursetya, R. P., & Hidayati, L. N. (2020). How Does Firm Size and Capital Structure Affect Firm Value?. *Journal of Management and Entrepreneurship Research*, 1(2), 67-76.  
<https://journal.unisnu.ac.id/jmer/article/download/2020.12.01.2-7/9>
- OECD. (n.d.). *The Role of Institutional Investors in Promoting Good Corporate Governance*. <https://www.oecd.org/daf/ca/49081553.pdf>
- Okeke, M. N. (2019). Capital Structure and Firm Value in Nigeria (Evidence from Selected Quoted Firms). *Journal on Banking Financial Services & Insurance Research*.  
[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3610575](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3610575)
- Olawale, A. N., & Adebayo, A. D. (2022). Heteroskedasticity in panel data: A big challenge to data filtering. *Noise Filtering for Big Data Analytics*, 12, 89.  
<https://books.google.com/books?hl=en&lr=&id=xIVzEAAAQBAJ&oi=fnd&pg=PA89&dq=GLS+solve+heteroscedasticity&ots=IWXD57mJ0h&sig=c3ZfpiCdJJZMbzbtD-j8VIPz3oQ>
- Olga, B., & Antonios, R. (2019). HOUSING CONSTRUCTION AS A LEADING ECONOMIC INDICATOR. *Studies in Business & Economics*, 14(3).  
[https://www.researchgate.net/publication/338767256\\_Housing\\_Construction\\_as\\_a\\_Leading\\_Economic\\_Indicator](https://www.researchgate.net/publication/338767256_Housing_Construction_as_a_Leading_Economic_Indicator)
- Osazuwa, N. P., & Che-Ahmad, A. (2016). The moderating effect of profitability and leverage on the relationship between eco-efficiency and firm value in publicly traded Malaysian firms. *Social Responsibility Journal*, 12(2), 295-

306. <https://www.emerald.com/insight/content/doi/10.1108/SRJ-03-2015-0034/full/html>

Oscar Torres-Reyna. (2007, December). *Panel Data Analysis Fixed and Random Effects using Stata*. <https://www.princeton.edu/~otorres/Panel101.pdf>

Oscar Torres-Reyna. (2010). *Getting Started in Fixed/Random Effects Models*. <https://www.princeton.edu/~otorres/Panel101R.pdf>

Osman, M. (2023, February 8). A Guide to Market Cap vs. Valuation. *HubSpot*. [https://blog.hubspot.com/the-hustle/market-cap-vs-valuation#:~:text=Market%20capitalization%20\(or%20market%20cap,comparing%20public%20companies%20across%20industries](https://blog.hubspot.com/the-hustle/market-cap-vs-valuation#:~:text=Market%20capitalization%20(or%20market%20cap,comparing%20public%20companies%20across%20industries).

Panda, A. K., Nanda, S., Hegde, A., & Paital, R. R. (2023). Revisiting the Drivers of Firm Value; An Empirical Investigation on Manufacturing Firms. *Business Perspectives and Research*, 22785337221148549. <https://journals.sagepub.com/doi/abs/10.1177/22785337221148549>

Pangestuti, D. C., & Tindangen, A. M. L. (2020). The Influence of Internal and External Factors on Firm Value. *European Journal of Business and Management Research*, 5(5). <https://ejbmr.org/index.php/ejbmr/article/view/492/287>

Pesaran, M. H. (2004). *General Diagnostic Tests for Cross Section Dependence in Panels*. <https://docs.iza.org/dp1240.pdf>

Pesaran, M. H. (2011). *On the Interpretation of Panel Unit Root Tests*.

<https://www.econ.cam.ac.uk/people-files/emeritus/mhp1/wp11/Interpretation-Panel-Unit-September-2011.pdf>

Pramod, K.N. (2018). *Panel Data Analysis Self Note*.

[https://www.researchgate.net/publication/328530476\\_Panel\\_Data\\_Analysiss\\_Self\\_Note](https://www.researchgate.net/publication/328530476_Panel_Data_Analysiss_Self_Note)

Priyambudi, H. A., & Thamrin, H. (2021). Analysis of The Effect of

Macroeconomics and Firm Value on Consumer Goods Stock Return. *International Journal of Innovative Science and Research Technology*, 10(8), 756-763.

<https://ijisrt.com/assets/upload/files/IJISRT21AUG631.pdf>

PropertyGuru. (2022, November 21). *Malaysia Property Market Outlook 2023*.

<https://www.propertyguru.com.my/property-guides/malaysia-property-market-outlook-2023-67079>

Puspitasari, L. P. N., & Wiagustini, L. P. (2019). The Effect of Capital Structure

And Firm Growth On Firm Value With Profitability as Mediation. *International Journal of Economics, Commerce and Management*, 7(12), 69-84. <https://ijecm.co.uk/wp-content/uploads/2019/12/7126.pdf>

Putri, I. A. J. (2023). Financial Performance and Firm Value: The Role of

Signaling Theory. *International Journal of Scientific Research and Management (IJSRM)*, 11(04), 4776-4783.

<http://ijsrm.net/index.php/ijsrm/article/download/4524/2883>

Putri, M. O. D., & Wiksuana, I. G. B. (2021). The effect of liquidity and profitability on firm value mediated by dividend policy. *American Journal of Humanities and Social Sciences Research (AJHSSR)*, 5(1), 204-212.

<https://www.ajhssr.com/wp-content/uploads/2021/01/ZB21501204212.pdf>

QuickBooks Australia. (2023, March 20). *Profitability ratios: What they are &*

*how to use them.* [https://quickbooks.intuit.com/au/blog/running-a-](https://quickbooks.intuit.com/au/blog/running-a-business/profitability-ratios/?cid=ppc_ROW_SMB_QBO_MY_G_Performance%2BMax_SMB%2BQBO%2BAssets&&gad=1&gclid=CjwKCAjwivemBhBhEiwAJxNWN8QCL1v6CVAlhcgVKeR7IJPiIBpY2Gz-eorLI3-awqil_y66UULU_RoCes4QAvD_BwE&gclsrc=aw.ds)

[business/profitability-](https://quickbooks.intuit.com/au/blog/running-a-business/profitability-ratios/?cid=ppc_ROW_SMB_QBO_MY_G_Performance%2BMax_SMB%2BQBO%2BAssets&&gad=1&gclid=CjwKCAjwivemBhBhEiwAJxNWN8QCL1v6CVAlhcgVKeR7IJPiIBpY2Gz-eorLI3-awqil_y66UULU_RoCes4QAvD_BwE&gclsrc=aw.ds)

[ratios/?cid=ppc\\_ROW\\_SMB\\_QBO\\_MY\\_G\\_Performance%2BMax\\_SMB%](https://quickbooks.intuit.com/au/blog/running-a-business/profitability-ratios/?cid=ppc_ROW_SMB_QBO_MY_G_Performance%2BMax_SMB%2BQBO%2BAssets&&gad=1&gclid=CjwKCAjwivemBhBhEiwAJxNWN8QCL1v6CVAlhcgVKeR7IJPiIBpY2Gz-eorLI3-awqil_y66UULU_RoCes4QAvD_BwE&gclsrc=aw.ds)

[2BQBO%2BAssets&&gad=1&gclid=CjwKCAjwivemBhBhEiwAJxNWN8](https://quickbooks.intuit.com/au/blog/running-a-business/profitability-ratios/?cid=ppc_ROW_SMB_QBO_MY_G_Performance%2BMax_SMB%2BQBO%2BAssets&&gad=1&gclid=CjwKCAjwivemBhBhEiwAJxNWN8QCL1v6CVAlhcgVKeR7IJPiIBpY2Gz-eorLI3-awqil_y66UULU_RoCes4QAvD_BwE&gclsrc=aw.ds)

[QCL1v6CVAlhcgVKeR7IJPiIBpY2Gz-eorLI3-](https://quickbooks.intuit.com/au/blog/running-a-business/profitability-ratios/?cid=ppc_ROW_SMB_QBO_MY_G_Performance%2BMax_SMB%2BQBO%2BAssets&&gad=1&gclid=CjwKCAjwivemBhBhEiwAJxNWN8QCL1v6CVAlhcgVKeR7IJPiIBpY2Gz-eorLI3-awqil_y66UULU_RoCes4QAvD_BwE&gclsrc=aw.ds)

[awqil\\_y66UULU\\_RoCes4QAvD\\_BwE&gclsrc=aw.ds](https://quickbooks.intuit.com/au/blog/running-a-business/profitability-ratios/?cid=ppc_ROW_SMB_QBO_MY_G_Performance%2BMax_SMB%2BQBO%2BAssets&&gad=1&gclid=CjwKCAjwivemBhBhEiwAJxNWN8QCL1v6CVAlhcgVKeR7IJPiIBpY2Gz-eorLI3-awqil_y66UULU_RoCes4QAvD_BwE&gclsrc=aw.ds)

Quora. (n.d.). What advantage DO companies get by not disclosing their revenue?.

[https://www.quora.com/What-advantage-do-companies-get-by-not-](https://www.quora.com/What-advantage-do-companies-get-by-not-disclosing-their-revenue)

[disclosing-their-revenue](https://www.quora.com/What-advantage-do-companies-get-by-not-disclosing-their-revenue)

Rachim, R. R., & Setiany, E. (2021). The Analysis of Investment Opportunity Set,

Bord Independence, Firm Characteristics on Firm Value. *International*

*Journal of Innovative Science and Research Technology*, 6(3), 892-898.

<https://ijisrt.com/assets/upload/files/IJISRT21MAR695.pdf>

Ramli, F., Zainal, R., & Kasim, R. (2022). Prediction Supply for High-Cost Multi-

Storey House toward the Development of Sustainable Cities. *International*

*Journal of Sustainable Construction Engineering and Technology*, 13(2),

100-109.



<https://publisher.uthm.edu.my/ojs/index.php/IJSCET/article/download/11301/4948>

Ratnawati, V., Freddy, D., & Wahyuni, N. (2018). The impact of institutional ownership and a firm's size on firm value: tax avoidance as a moderating variable. *J. Fin. Bank. Review*, 3(1), 1-8.

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3188527](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3188527)

Rehal, V. (2023, February 8). *Heteroscedasticity: Causes and Consequences*.

<https://spureconomics.com/heteroscedasticity-causes-and-consequences/>

Reschiwati, R., Syahdina, A., & Handayani, S. (2020). Effect of liquidity, profitability, and size of companies on firm value. *Utopia y Praxis Latinoamericana*, 25(6), 325-332.

<https://www.redalyc.org/journal/279/27964115031/27964115031.pdf>

Rigopoulos, G. (2015). Real Options valuation frameworks and adoption issues. *International Journal of Information, Business and Management*, 7(4).

Rizqia, D. A., Aisjah, S., & Sumiati, S. (2013). Effect of managerial ownership, financial leverage, profitability, firm size, and investment opportunity on dividend policy and firm value. *Research Journal of Finance and Accounting*, 4(11), 120–130.

<https://iiste.org/Journals/index.php/RJFA/article/download/7168/7599>

Ross, S. A. (1977). The determination of financial structure: the incentive-signalling approach. *The bell journal of economics*, 23-40.

[https://www.jstor.org/stable/pdf/3003485.pdf?casa\\_token=I6QkJHQ28QUAAAAA:mDH1VYIe4bSxTXcdhCMhY8MTmt9JnFnc2fnwxJpJUi9Vtnj](https://www.jstor.org/stable/pdf/3003485.pdf?casa_token=I6QkJHQ28QUAAAAA:mDH1VYIe4bSxTXcdhCMhY8MTmt9JnFnc2fnwxJpJUi9Vtnj)

QtJqTBU4ul4tcSr5H-G6sS5i9KeCTioUZZvJAU\_34uunZF-

akzYMIKbwyDFiRgVA2H4ue

Ross, S. A. (1979). Disclosure regulation in financial markets: Implications of modern finance theory and signaling theory. *Issues in financial regulation*, 5(1979), 177-202.

Roth, P. L., Switzer III, F. S., & Switzer, D. M. (1999). Missing data in multiple item scales: A Monte Carlo analysis of missing data techniques. *Organizational research methods*, 2(3), 211-232.  
<https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=71f07113ab6c702f3924ebee7e51765958bbd0aa>

Sadiq, M., Yousaf, S. U., Anser, M. K., Sriyanto, S., Zaman, K., Van Tu, D., & Anis, S. N. M. (2020). The role of debt financing in the relationship between capital structure, firm's value, and macroeconomic factors: To throw caution to the wind. *The Quarterly Review of Economics and Finance*.  
[https://www.sciencedirect.com/science/article/pii/S1062976920301563?casa\\_token=q3ZUuvwJeosAAAAA:yfK8EjfkRZwFm2pgElipxh2\\_iVFkXgaUq0YjIGCYi3e1RDR0HLGNP51Pyn\\_Xb8DnmVmB7ndpAtc](https://www.sciencedirect.com/science/article/pii/S1062976920301563?casa_token=q3ZUuvwJeosAAAAA:yfK8EjfkRZwFm2pgElipxh2_iVFkXgaUq0YjIGCYi3e1RDR0HLGNP51Pyn_Xb8DnmVmB7ndpAtc)

Salama, M., Van Rate, P., & N. Untu, V. (2019). The Effect of Investment Decision, Funding Decision and Dividend Policy on Corporate Values in the Banking Listed in Bei Period 2014-2017. *Jurnal EMBA*, 7(3).  
<https://ejournal.unsrat.ac.id/index.php/emba/article/viewFile/23715/23371>

Samantha, Ho. (2019, April 30). *Residential property overhang increased 30.6% in 2018 - NAPIC*. The Edge Malaysia.

<https://theedgemaalaysia.com/article/residential-property-overhang-increased-306-2018-%E2%80%94-napic>

Santoso, H. (2019). The impact of investment decision and funding on financial performance and firm value. *Jurnal Ekonomi, Bisnis Dan Kewirausahaan: JEBIK*, 8(2), 103. <https://doi.org/10.26418/jebik.v8i2.31153>

Sari, I. A. G. D. M., & Sedana, I. B. P. (2020). Profitability and liquidity on firm value and capital structure as intervening variable. *International research journal of management, IT and Social Sciences*, 7(1), 116-127. <https://pdfs.semanticscholar.org/bf85/59e8e712953aad19ce6b08d3415602005989.pdf>

Sarpong-Danquah, B., Gyimah, P., Afriyie, R. O., & Asiamah, A. (2018). Corporate governance and firm performance: An empirical analysis of manufacturing listed firms in Ghana. *Accounting and Finance Research*, 7(3), 111-118. <https://www.academia.edu/download/56754020/13517-48122-1-PB.pdf>

Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling psychology*, 57(1), 1. [https://www.academia.edu/download/53194716/Best\\_Practices\\_for\\_Missing\\_Data\\_Manageme20170519-7313-1tifpam.pdf](https://www.academia.edu/download/53194716/Best_Practices_for_Missing_Data_Manageme20170519-7313-1tifpam.pdf)

Schmelzer. (2023, July 31). *10 Regression with Panel Data | Introduction to*

*Econometrics with R*. <https://www.econometrics-with-r.org/10-rwpd.html>

Selva, P. (n.d.). *How to detect outliers with z-score*.

[https://www.machinelearningplus.com/machine-learning/how-to-detect-](https://www.machinelearningplus.com/machine-learning/how-to-detect-outliers-with-z-)  
[outliers-with-z-](https://www.machinelearningplus.com/machine-learning/how-to-detect-outliers-with-z-)

[score/#:~:text=If%20the%20z%20score%20of%20a%20data%20point,of%20a%20given%20data%20point%20being%20an%20outlier.](https://www.machinelearningplus.com/machine-learning/how-to-detect-outliers-with-z-score/#:~:text=If%20the%20z%20score%20of%20a%20data%20point,of%20a%20given%20data%20point%20being%20an%20outlier.)

Septyanto, D., & Nugraha, I. M. (2021). The influence of enterprise risk management, leverage, firm size and profitability on firm value in property and real estate companies listed on the Indonesian Stock Exchange in 2016-2018. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v5i5.8850>

Services, F. (2023, June 18). Malaysia: A developing nation with promising growth potential. LinkedIn. <https://www.linkedin.com/pulse/malaysia-developing-nation-promising-growth-potential-myfoodpro>

Setiadharna, S., & Machali, M. (2017). The effect of asset structure and firm size on firm value with capital structure as intervening variable. *Journal of Business & Financial Affairs*, 6(4), 1-5.

[https://www.researchgate.net/profile/Muslichah-](https://www.researchgate.net/profile/Muslichah-Machali/publication/322585488_The_Effect_of_Asset_Structure_and_Firm_Size_on_Firm_Value_with_Capital_Structure_as_Intervening_Variable/links/5f52c5f4a6fdcc9879cda36d/The-Effect-of-Asset-Structure-and-Firm-Size-on-Firm-Value-with-Capital-Structure-as-Intervening-Variable.pdf)

[Machali/publication/322585488\\_The\\_Effect\\_of\\_Asset\\_Structure\\_and\\_Firm\\_Size\\_on\\_Firm\\_Value\\_with\\_Capital\\_Structure\\_as\\_Intervening\\_Variable/links/5f52c5f4a6fdcc9879cda36d/The-Effect-of-Asset-Structure-and-Firm-Size-on-Firm-Value-with-Capital-Structure-as-Intervening-Variable.pdf](https://www.researchgate.net/profile/Muslichah-Machali/publication/322585488_The_Effect_of_Asset_Structure_and_Firm_Size_on_Firm_Value_with_Capital_Structure_as_Intervening_Variable/links/5f52c5f4a6fdcc9879cda36d/The-Effect-of-Asset-Structure-and-Firm-Size-on-Firm-Value-with-Capital-Structure-as-Intervening-Variable.pdf)

- Setyawan, A., Hadijati, M., & Switrayni, N. W. (2019). Analisis masalah heteroskedastisitas menggunakan generalized least square dalam analisis regresi. *Eigen Mathematics Journal*, 61-72.  
<http://www.eigen.unram.ac.id/index.php/eigen/article/download/43/36>
- Setyowati, R., Masitoh, E., & Siddi, P. (2020). Factors Affecting The Value Of Companies In The Food And Beverage Companies Listed On BEI. *Journal of Business, Management, & Accounting*, 2(1). <https://e-journal.stie-kusumanegara.ac.id/index.php/jobma/article/view/87>
- Shakirah, S. (2023, May 2). *Why Affordable Housing is Still Out of Reach for Many*. CIDB HQ. <https://www.cidb.gov.my/why-affordable-housing-is-still-out-of-reach-for-many/>
- Shrivastav, S. M., & Kalsie, A. (2016). The relationship between CEO duality and firm performance: An analysis using panel data approach. *IUP Journal of Corporate Governance*, 15(2). [https://www.researchgate.net/profile/Shikha-Shrivastav/publication/309160065\\_The\\_Relationship\\_Between\\_CEO\\_Duality\\_and\\_Firm\\_Performance\\_An\\_Analysis\\_Using\\_Panel\\_Data\\_Approach/links/5801f5cc08ae6c2449f7c2fc/The-Relationship-Between-CEO-Duality-and-Firm-Performance-An-Analysis-Using-Panel-Data-Approach.pdf](https://www.researchgate.net/profile/Shikha-Shrivastav/publication/309160065_The_Relationship_Between_CEO_Duality_and_Firm_Performance_An_Analysis_Using_Panel_Data_Approach/links/5801f5cc08ae6c2449f7c2fc/The-Relationship-Between-CEO-Duality-and-Firm-Performance-An-Analysis-Using-Panel-Data-Approach.pdf)
- Siahaan, F. O. (2014). The effect of good corporate governance mechanism, leverage, and firm size on firm value. *GSTF Journal on Business Review (GBR)*, 2(4).  
<http://dl6.globalstf.org/index.php/gbr/article/viewFile/191/192>

Sihombing, R. S., & Indriaty, L. (2022). Pengaruh Profitabilitas, Struktur Modal Dan Kebijakan Dividen Terhadap Nilai Perusahaan Pada Perusahaan Manufaktur Yang Terdaftar di BEI Periode 2013-2019. *Jurnal Ekonomi Manajemen dan Akuntansi*, 1(1). <http://ejurnal.mercubuana-yogya.ac.id/index.php/JEMA/article/view/2842>

Simatupang, H., & Janrosl, V. S. E. (2019). PENGARUH KEPUTUSAN INVESTASI, KEPUTUSAN PENDANAAN DAN TINGKAT SUKU BUNGA TERHADAP NILAI PERUSAHAAN PADA PERUSAHAAN MANUFAKTUR YANG TERDAFTAR DI BURSA EFEK INDONESIA. *SCIENTIA JOURNAL : Jurnal Ilmiah Mahasiswa*, 1(2). [http://ejournal.upbatam.ac.id/index.php/scientia\\_journal/article/download/2626/1416](http://ejournal.upbatam.ac.id/index.php/scientia_journal/article/download/2626/1416)

Simply Wall St. (n.d.). Malaysian (KLSE) real estate industry analysis. <https://simplywall.st/markets/my/real-estate/real-estate>

Sinaga, A. P. D. S. J. (2016). The effect of capital structure, firm growth and dividend policy on profitability and firm value of the oil palm plantation companies in Indonesia. *European Journal of Business and Management* [www. iiste. org](http://www.iiste.org) ISSN, 2222. [https://www.researchgate.net/publication/342306308\\_THE\\_EFFECT\\_OF\\_CAPITAL\\_STRUCTURE\\_COMPANY\\_GROWTH\\_AND\\_INFLATION\\_ON\\_FIRM\\_VALUE\\_WITH\\_PROFITABILITY\\_AS\\_INTERVENING\\_VARIABLE\\_STUDY\\_ON\\_MANUFACTURING\\_COMPANIES\\_LISTED\\_ON\\_BEI\\_PERIOD\\_2014\\_-\\_2018](https://www.researchgate.net/publication/342306308_THE_EFFECT_OF_CAPITAL_STRUCTURE_COMPANY_GROWTH_AND_INFLATION_ON_FIRM_VALUE_WITH_PROFITABILITY_AS_INTERVENING_VARIABLE_STUDY_ON_MANUFACTURING_COMPANIES_LISTED_ON_BEI_PERIOD_2014_-_2018)

- Smith, T. (2023). Autocorrelation: what it is, how it works, tests. Investopedia. <https://www.investopedia.com/terms/a/autocorrelation.asp>
- Sonjaya, Y., & Muslim, M. (2023). The Effect of Capital Structure on Firm Value in Banking Companies Listed on the Indonesia Stock Exchange. *Golden Ratio of Finance Management*, 3(1), 44-55.  
<https://goldenratio.id/index.php/grfm/article/view/312>
- Sormin, P., Soetardjo, M. N., & Salfira, T. (2023, June). FINANCIAL PERFORMANCE, MACRO ECONOMICS, AND FIRM VALUE WITH CAPITAL STRUCTURE AS MODERATING VARIABLE. In *Proceeding National Conference Business, Management, and Accounting (NCBMA)* (Vol. 6, pp. 283-296).  
<https://ojs.uph.edu/index.php/NCBMA/article/viewFile/7129/3274>
- Spence, M. (1978). Job market signaling. In *Uncertainty in economics* (pp. 281-306). Academic Press. <http://www.sfu.ca/~allen/Spence.pdf>
- Statista Research Department. (2023, March 14). *Number of people employed in the real estate and business services industry in Malaysia from 2015 to 2022*. <https://www.statista.com/statistics/809742/annual-employment-in-the-real-estate-and-business-services-industry-malaysia/#:~:text=Approximately%201.16%20million%20people%20were%20employed%20in%20the,the%20number%20of%20employees%20from%20the%20previous%20year.>

- Stephanie. (2023, April 29). *Hausman Test for Endogeneity (Hausman Specification Test) - Statistics How to. Statistics How To.*  
<https://www.statisticshowto.com/hausman-test/#:~:text=The%20Hausman%20test%20is%20sometimes%20described%20as%20a,fixed%20effects%20model%20or%20a%20random%20effects%20model.>
- Stephen, A. (2022, August 12). *What is a good R-Squared value? (simply explained).* <https://stephenallwright.com/good-r-squared-value/>
- Strike, M., Okurut, F. N., & Sinha, N. (2021). Firm investment behavior under hyperinflation and dollarization: a case of Zimbabwe listed firms. *Iranian Economic Review*. [https://www.researchgate.net/profile/Iranian-Review/publication/369720374\\_Firm\\_Investment\\_Behavior\\_under\\_Hyperinflation\\_and\\_Dollarization\\_A\\_Case\\_of\\_Zimbabwe-Listed\\_Firms/links/6429256da1b72772e444ba33/Firm-Investment-Behavior-under-Hyperinflation-and-Dollarization-A-Case-of-Zimbabwe-Listed-Firms.pdf](https://www.researchgate.net/profile/Iranian-Review/publication/369720374_Firm_Investment_Behavior_under_Hyperinflation_and_Dollarization_A_Case_of_Zimbabwe-Listed_Firms/links/6429256da1b72772e444ba33/Firm-Investment-Behavior-under-Hyperinflation-and-Dollarization-A-Case-of-Zimbabwe-Listed-Firms.pdf)
- Sukesti, F., Ghozali, I., Fuad, F. U. A. D., KHARIS ALMASYHARI, A., & Nurcahyono, N. (2021). Factors affecting the stock price: The role of firm performance. *The Journal of Asian Finance, Economics and Business*, 8(2), 165-173.  
<https://koreascience.kr/article/JAKO202104142178581.pdf>
- Sulistiyani, S., & Noor, S. M. (2022). Analysis Determinant of Profitability and Their Effect on The Value of Automotive Companies Listed on



IDX. *International Journal of Finance Research*, 3(3), 201-218.

<https://journal.jis-institute.org/index.php/ijfr/article/view/806>

Sulistyo, I., Sutrisno, T., & Nurkholis, N. (2017). The Effect of Ownership Structure on Firm Value with Investment Decision as Intervening Variable (Empirical Study of the Listed Companies in Indonesia Stock Exchange Period 2008-2014). *International Journal of Social and Local Economic Governance(IJLEG)*, 3(2), 99–110.

<https://ijleg.ub.ac.id/index.php/ijleg/article/download/92/97>

Surendran, A. (2023, August 18). *Quantitative data: What it is, types & examples*.

QuestionPro. <https://www.questionpro.com/blog/quantitative-data/>

Susanti, N., & Restiana, N. G. (2018). What's the best factor to determining firm value. *Jurnal Keuangan dan Perbankan*, 22(2), 301-309.

<https://smartlib.umri.ac.id/assets/uploads/files/2729c-260851-whats-the-best-factor-to-determining-fir-5a13f005.pdf>

Sutanto, C. B., & Hariadi, S. (2023). CSR Moderation Effects on the Influence of Capital Structure, Dividend Policy, Profitability on Firm Value: Studies on Food and Beverage Companies in Indonesia, Malaysia and Singapore in 2019-2021. *Jurnal Penelitian Ekonomi dan Akuntansi (JPENSI)*, 8(1).

<https://www.jurnalekonomi.unisla.ac.id/index.php/jpensi/article/view/1470>

Suteja, J., Gunardi, A., Alghifari, E. S., Susiadi, A. A., Yulianti, A. S., & Lestari, A. (2023). Investment Decision and Firm Value: Moderating Effects of Corporate social responsibility and profitability of Non-Financial Sector

Companies on the Indonesia Stock Exchange. *Journal of Risk and Financial Management*, 16(1), 40. <https://doi.org/10.3390/jrfm16010040>

Sutihat, S., & Pramuka, B. A. (2023, June 30). The Influence of Profitability, Liquidity, Capital Structure, and Performance of Maqashid Sharia on Firm Value. In *Proceeding of International Students Conference on Accounting and Business* (Vol. 2, No. 1).

<http://jp.feb.unsoed.ac.id/index.php/scoab/article/view/3608>

Suzulia, M. T., & Saluy, A. B. (2020). The effect of capital structure, company growth, and inflation on firm value with profitability as intervening variable (study on manufacturing companies listed on bej period 2014-2018). *Dinasti International Journal of Economics, Finance & Accounting*, 1(1), 95-109.

<https://www.dinastipub.org/DIJEFA/article/download/226/165>

Syamsudin, S., Setiadi, I., Santoso, D., & Setiany, E. (2021). Capitals structure and investment decisions on firm value with profitibility as a moderator. *Riset Akuntansi Dan Keuangan Indonesia*, 5(3), 287-295.

<https://journals.ums.ac.id/index.php/reaksi/article/download/13217/6446>

Tanjung, A. H., Salam, S., Rusdi, J. F., Ermawati, Y., Novianty, I., Hendaris, R. B., & Apriliawati, Y. (2021). Flypaper effect assessment methods in the expansion of regional autonomy. *MethodsX*, 8, 101387.

<https://www.sciencedirect.com/science/article/pii/S2215016121001801>

- Team, P. (2021, September 9). *Regression Model with Panel Data - Algoritma Data Science School*. Algoritma Data Science School.  
<https://algoritmaonline.com/regression-with-panel-data/>
- Team, P. E. (2021a). *Property Growth In 5 Major Malaysian States Despite COVID- 19*. PropertyGuru. <https://www.propertyguru.com.my/property-guides/property-growth-major-malaysian-states-despite-covid-19-54846>
- Team, P. E. (2021b). *What Analysing 20 Years of Malaysian Property Market Data Reveals*. PropertyGuru. <https://www.propertyguru.com.my/property-guides/analysing-20-years-of-malaysian-property-market-data-45918>
- Team, T. I. (2023, May 22). *Microeconomics definition, uses, and concepts*. Investopedia. <https://www.investopedia.com/terms/m/microeconomics.asp>
- Tee, K. (2021). *Rehda: Six to 24 months for Malaysia's property market to fully recover post-pandemic*. Malay Mail.  
<https://www.malaymail.com/news/malaysia/2021/10/21/rehda-six-to-24-months-for-malaysias-property-market-to-fully-recover-post/2014972>
- The Investopedia Team. (2023, September 28). *R-Squared vs. Adjusted R-Squared: What's the Difference?*  
<https://www.investopedia.com/ask/answers/012615/whats-difference-between-rsquared-and-adjusted-rsquared.asp#:~:text=Adjusted%20R%2Dsquared%20is%20a,model%20by%20less%20than%20expected.>

The Malaysian Reserve. (2023, Oct 6). Property not as hot as investors think, says Kenanga Research. <https://themalaysianreserve.com/2023/10/06/property-not-as-hot-as-investors-think-says-kenanga-research>

The Star. (2024, January 4). Rerating of property stocks building up on Resilient Property Sales. <https://www.thestar.com.my/business/business-news/2024/01/05/rerating-of-property-stocks-building-up-on-resilient-property-sales>

Triani, N., & Tarmidi, D. (2019). Firm value: impact of investment decisions, funding decisions and dividend policies. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 9(2), 158-163. [https://www.researchgate.net/profile/Deden-Tarmidi/publication/338594563\\_Firm\\_Value\\_Impact\\_of\\_Investment\\_Decisions\\_Funding\\_Decisions\\_and\\_Dividend\\_Policies/links/5e1e977892851c3cbe653f48/Firm-Value-Impact-of-Investment-Decisions-Funding-Decisions-and-Dividend-Policies.pdf](https://www.researchgate.net/profile/Deden-Tarmidi/publication/338594563_Firm_Value_Impact_of_Investment_Decisions_Funding_Decisions_and_Dividend_Policies/links/5e1e977892851c3cbe653f48/Firm-Value-Impact-of-Investment-Decisions-Funding-Decisions-and-Dividend-Policies.pdf)

Tugcu, C. T. (2018). Panel data analysis in the energy-growth nexus (EGN). In *The economics and econometrics of the energy-growth nexus* (pp. 255-271). Academic Press.

Tuovila, A. (2023). Capital Structure Definition, Types, Importance, and Examples. Investopedia. <https://www.investopedia.com/terms/c/capitalstructure.asp>

- Tyochir, F., Shittu, R., & Agube, S. (2022, June 20). *Value of a firm*. eFinanceManagement. <https://efinancemanagement.com/investment-decisions/value-of-a-firm>
- Uddin, M. N., Hosen, M., Chowdhury, M. M., Tabassum, T., & Mazumder, M. A. (2021). Does Corporate Governance Influence Firm Value in Bangladesh? A Panel Data Analysis. *E&M Economics and Management*, 24(2), 84–100. [https://otik.uk.zcu.cz/bitstream/11025/43623/1/EM\\_2\\_2021\\_06.pdf](https://otik.uk.zcu.cz/bitstream/11025/43623/1/EM_2_2021_06.pdf)
- Ulum, A. S. (2022). Determinants of Firm Value on Real Estate and Property Sector. *Himalayan Journal of Economics and Business Management*, 3(2), 166-174. <https://www.himjournals.com/article/articleID=633>
- Utami, E. T., Al Ghazy, M. D., & Pasi, A. L. H. (2023). Impacts of Capital Structure, Liquidity, and Earnings Quality on Firm Value of Indonesia Non-Cyclicals Industry. *International Journal of Economics, Business and Innovation Research*, 2(03), 306-320. <https://www.e-journal.citakonsultindo.or.id/index.php/IJEBIR/article/view/308>
- Utami, W. B. (2021). Influence of Investment Decisions (PER), Policy of Dividend (DPR) and Interest Rate against Firm Value (PBV) at a Registered Manufacturing Company on Indonesia Stock Exchange in 2015-2018. *Annals of the Romanian Society for Cell Biology*, 1972–1984. <http://annalsofrscb.ro/index.php/journal/article/view/315>
- Uyanto, S. S. (2020). Power comparisons of five most commonly used autocorrelation tests. *Pakistan Journal of Statistics and Operation Research*, 119–130. <https://doi.org/10.18187/pjsor.v16i1.2691>

- Valaskova, K., Lazaroiu, G., Olah, J., Siekelova, A. & Lancove, B. (2019). How capital structure affects business valuation: A case study of Slovakia. *ideas.repec.org*.  
<https://ideas.repec.org/a/prg/jnlcbr/v2019y2019i3id218p1-17.html>
- Van Khanh, V. T., Hung, D. N., Van, V. T. T., & Huyen, H. T. (2020). A study on the effect of corporate governance and capital structure on firm value in Vietnam. *Accounting*, 221–230. <https://doi.org/10.5267/j.ac.2020.3.004>
- van Zyl, J. M. (2011). The laplace likelihood ratio test for heteroscedasticity. *International Journal of Mathematics and Mathematical Sciences*, 2011.  
<https://www.hindawi.com/journals/ijmms/2011/249564/abs/>
- Viren, R. (2022, March 24). *Lagrange Multiplier Test: testing for random effects*.  
<https://spureconomics.com/lagrange-multiplier-test-testing-for-random-effects/>
- White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica: journal of the Econometric Society*, 817-838.  
<https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=3cd5d727ae52a7a12952cb2dbde8e0f134204aaa>
- Yeo, B. (2022, May 06). *Inflation: The impending tsunami and its impact on property*. Focus Malaysia. <https://focusmalaysia.my/inflation-the-impending-tsunami-and-its-impact-on-property/>

- Yulianti, S. D., Widyanihsih, Y., & Nurrohmah, S. (2021). Spatial panel data model on human development index at Central Java. *Journal of Physics: Conference Series*, 1722(1), 012090. <https://doi.org/10.1088/1742-6596/1722/1/012090>
- Zach. (2019, February 23). *Understanding Heteroscedasticity in Regression Analysis*. <https://www.statology.org/heteroscedasticity-regression/#:~:text=Another%20way%20to%20fix%20heteroscedasticity%20is%20to%20use,have%20higher%20variances%2C%20which%20shrinks%20their%20squared%20residuals.>
- Zach. (2019, January 21). *The Durbin-Watson Test: Definition & Example*. <https://www.statology.org/durbin-watson-test/>
- Zhao, Y. (2018). R&D, Foreign Direct Investment and Firm Performance: Evidence from Chinese Listed Companies. *Proceedings Editors*, 231. [https://www.researchgate.net/profile/Rudresh-Pandey-2/publication/349368995\\_Consumers'\\_purchase\\_decision\\_towards\\_Private\\_Label\\_Brands\\_An\\_Empirical\\_Investigation\\_for\\_Select\\_Indian\\_Retailers/links/602d103f299bf1cc26cfa009/Consumers-purchase-decision-towards-Private-Label-Brands-An-Empirical-Investigation-for-Select-Indian-Retailers.pdf#page=231](https://www.researchgate.net/profile/Rudresh-Pandey-2/publication/349368995_Consumers'_purchase_decision_towards_Private_Label_Brands_An_Empirical_Investigation_for_Select_Indian_Retailers/links/602d103f299bf1cc26cfa009/Consumers-purchase-decision-towards-Private-Label-Brands-An-Empirical-Investigation-for-Select-Indian-Retailers.pdf#page=231)
- Zhu, A. (2022, December 23). *Linear regression with OLS: Heteroskedasticity and autocorrelation*. Medium. <https://towardsdatascience.com/linear-regression-with-ols-heteroskedasticity-and-autocorrelation-c12f1f65c13>

Zulfikar, R., & STp, M. M. (2018). Estimation model and selection method of panel data regression: an overview of common effect, fixed effect, and random effect model. *JEMA: Jurnal Ilmiah Bidang Akuntansi*, 1-10.  
<https://osf.io/download/5b24301a8b4bed0011b5b80f>



## Appendices

### Appendix 1.1.4.1 Number of people employed in the property and business service industry in Malaysia from 2015 to 2022.

Number of people employed in the real estate and business services industry in Malaysia from 2015 to 2022

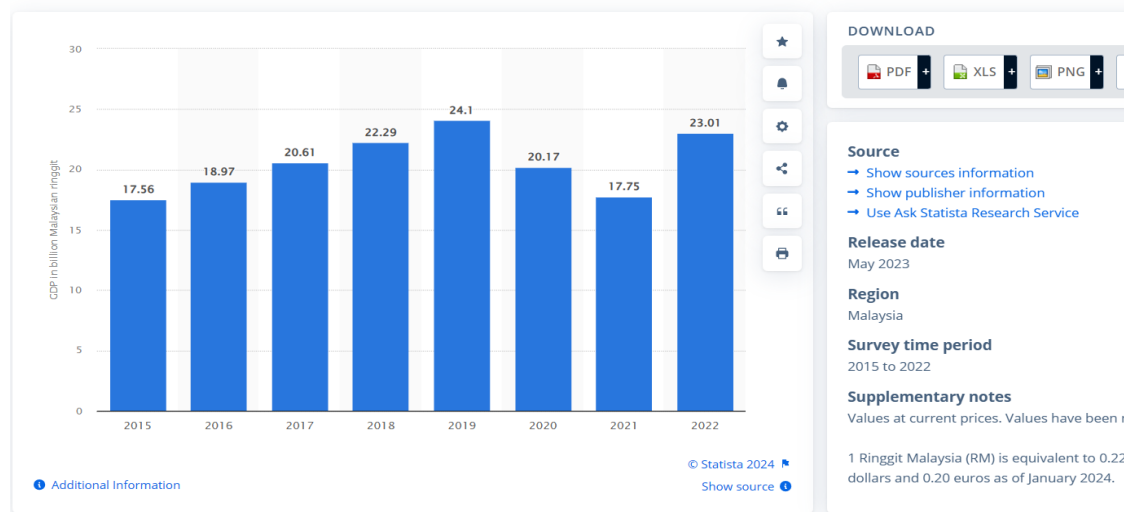
(in 1,000s)



### Appendix 1.1.4.2 GDP from property sector in Malaysia from 2015 to 2022

Gross domestic product (GDP) from real estate in Malaysia from 2015 to 2022

(in billion Malaysian ringgit)



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Appendix 1.1.4.3 Summary of Property Transaction Changes Table Q3 2023

Jadual/Table : 9.2  
% Perubahan Bilangan Pindah Milik Mengikut Lingkungan Harga bagi Subsektor Harta Utama  
% Change Number of Transactions by Price Range for the Property Sub-Sectors

Price Range	Quarter	Residential	Commercial	Industrial	Agricultural	Development	Others	Total
0 - 100,000	Q3 2023 <sup>P</sup> /Q3 2022	-5.8	67.6	-50.0	-35.9	14.5	ND	-5.6
	Q3 2023 <sup>P</sup> /Q2 2023	30.2	244.4	25.0	50.3	50.8	ND	48.3
100,001 - 200,000		-16.7	45.2	50.0	-29.6	17.1	ND	-12.3
		31.8	36.4	80.0	8.6	30.2	ND	30.1
200,001 - 300,000		38.2	-26.4	40.0	-33.3	26.9	ND	28.3
		38.9	-30.4	ND	20.0	73.7	ND	36.0
300,001 - 400,000		-25.7	-36.8	54.5	17.4	-12.9	ND	-23.9
		23.9	57.1	240.0	28.6	-10.0	ND	26.9
400,001 - 500,000		24.6	-36.0	-78.6	-9.1	38.9	ND	8.4
		34.8	-15.8	20.0	25.0	92.3	ND	30.1
500,001 - 600,000		-43.3	19.1	-58.3	20.0	175.0	ND	-26.8
		15.5	27.3	ND	500.0	37.5	ND	19.9
600,001 - 700,000		-25.9	12.0	66.7	-71.4	16.7	ND	-14.1
		-2.3	-20.0	25.0	0.0	ND	ND	-7.6
700,001 - 800,000		-5.1	-27.8	-40.0	-33.3	14.3	ND	-12.5
		184.6	30.0	-70.0	ND	100.0	ND	70.3
800,001 - 900,000		41.7	-50.0	0.0	#DIV/0!	100.0	ND	2.4
		112.5	-40.0	ND	-100.0	33.3	ND	16.7
900,001 - 1,000,000		-41.2	ND	-25.0	ND	ND	ND	6.7
		0.0	-45.0	0.0	ND	ND	ND	-8.6
1,000,001 & Above		-45.9	11.1	-13.3	100.0	-8.8	ND	-9.8
		11.1	-9.1	129.4	63.6	93.8	ND	53.6
<b>Total</b>		<b>-4.4</b>	<b>-3.9</b>	<b>-18.2</b>	<b>-29.0</b>	<b>15.3</b>	<b>ND</b>	<b>-4.8</b>
		<b>32.3</b>	<b>14.3</b>	<b>57.0</b>	<b>35.9</b>	<b>46.8</b>	<b>ND</b>	<b>33.9</b>

Appendix 3.2. Procedures of detecting outliers and removing outliers

Step 1: Calculate the mean and standard deviation for each variable from all 76 property firms.

	Firm value	Capital structure	Profitability	Firm size	Investment decision	Firm growth
<b>Mean</b>	42.18397712	47.88395501	2.922920045	2.835169029	49.781978	13.39828181
<b>Standard deviation</b>	28.74276042	70.3101082	6.657858286	0.544098222	21.35640212	65.21027657

Step 2: Apply the formula and compute different z-score for different company in different years

Data Preparation - Outliers :

**Identification of Outliers and Erroneous Data**

- Standardized values (**z-scores**) can be used to identify outliers. Recall that the empirical rule allows us to conclude that for data with a bell-shaped distribution, almost all the data values will be within three standard deviations of the mean.

$$z_i = \frac{x_i - \bar{x}}{s}$$

- Hence, in using **z-scores** to identify outliers, we recommend treating **any data value with a z-score less than -3 or greater than +3 as an outlier (ie. 3 standard deviations greater or lesser than the sample mean)**. Such data values can then be reviewed to determine their accuracy and whether they belong in the data set.

Calculation:

$$Z \text{ value} = \frac{X - \text{Mean}}{\text{Standard deviation}}$$

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Step 3: Deleting those beyond the range of -3 to 3 (those do not highlight with red colour considered as outliers).

Cross-sectional	Time	Firm value	Capital structure	Profitability	Firm size	Investment decision	Firm growth	Z-score (Beyond the range of -3 to 3, categorized as outliers)
1	2005	20.7782882	45.56	1.99	2.116009679	28.79344664	-4.996727035	-0.7447 -0.0331 -0.1401 -1.3217 -0.9828 -0.282087576
1	2006	17.72477064	43.31	1.59	2.134336511	23.72844037	4.310212831	-0.851 -0.0651 -0.2002 -1.2881 -1.2199 -0.139365595
1	2007	27.85936176	38.46	0.66	2.151185918	26.03784242	3.955963303	-0.4984 -0.134 -0.3399 -1.2571 -1.1118 -0.144798013
1	2008	20.05521049	35.13	0.68	2.161068385	28.1573499	2.301609715	-0.7699 -0.1814 -0.3369 -1.2389 -1.0126 -0.170167536
1	2009	16.79944311	22.83	0.78	2.111564935	31.0542192	-10.77294686	-0.8832 -0.3563 -0.3219 -1.3299 -0.8749 -0.370665943
1	2010	14.81210509	40.19	0.45	2.177103432	38.1443299	16.2889628	-0.9523 -0.1094 -0.3714 -1.2095 -0.5449 -0.044328611
1	2011	19.0022991	58.82	1.14	2.271911274	34.11752125	24.39640838	-0.8065 0.15554 -0.2678 -1.0352 -0.7335 -0.16865634
1	2012	11.83487052	88.24	1.21	2.353185063	18.58371763	20.57958616	-1.0559 0.57397 -0.2573 -0.8858 -1.4608 0.110125347
1	2013	19.10044373	94.68	2.15	2.394276527	23.87252925	9.92373182	-0.8031 0.66557 -0.1161 -0.8103 -1.2132 -0.053282246
1	2014	23.08853119	85.1	3.88	2.444544416	19.54943949	12.27107705	-0.6644 0.52931 0.14375 -0.7179 -1.4156 -0.017285692
1	2015	19.45646107	89.23	3.47	2.457336795	15.93636617	2.98936476	-0.7907 0.58805 0.08217 -0.6944 -1.5848 -0.159620808
1	2016	16.38497488	105.01	2.19	2.454219636	23.44425314	-0.715182808	-0.8976 0.81249 -0.1101 -0.7001 -1.2332 -0.216430068
1	2017	15.88047429	103.16	0.95	2.435223046	20.86560699	-4.279841175	-0.9151 0.78617 -0.2963 -0.7351 -1.354 -0.271094127
1	2018	12.64899132	106.53	0.69	2.481256258	30.89774491	11.18167468	-1.0276 0.83411 -0.3354 -0.6505 -0.8842 -0.033991684
1	2019	7.610493207	88.53	4.56	2.489100287	35.17623788	1.822564136	-1.2029 0.5781 0.24589 -0.636 -0.6839 -0.177513703
2	2005	66.86687347	24.43	1.46	2.657562553	44.90572679	-5.434307708	0.85875 -0.3336 -0.2197 -0.3264 -0.2283 -0.288797878
2	2006	32.93225216	86.58	-5.9	2.786524281	66.37457494	34.57417552	-0.3219 0.55036 -1.3252 -0.0894 0.76994 0.324732463
2	2007	19.96436114	73.15	1.93	2.782529953	64.61523231	-0.91551378	-0.7731 0.35935 -0.1491 -0.0967 0.69456 -0.219502108
2	2008	23.65465459	76.78	-4.01	2.679545994	72.05571706	-21.11107445	-0.6447 0.41098 -1.0413 -0.286 1.04295 -0.529201195
2	2009	23.98522543	73.87	-1.48	2.70900693	72.51460845	7.019011566	-0.6332 0.36959 -0.6613 -0.2319 1.06444 -0.097826149
2	2010	16.59736857	82.85	-3.25	2.721571564	34.77815116	2.935371025	-0.8902 0.49731 -0.9272 -0.2088 -0.7025 -0.160448802
2	2011	20.22627798	89.4	2.79	2.782078284	28.17408539	14.9494029	-0.7639 0.59047 -0.02 -0.0976 -1.0118 0.023786452
2	2012	30.41609524	68.77	11.76	2.849597518	24.64618473	16.8205467	-0.4094 0.29706 1.32732 0.02652 -1.177 0.052480454
2	2013	69.86622692	35.73	21.69	2.847220886	23.06412863	-0.545745027	0.9631 -0.1729 2.81879 0.02215 -1.251 -0.213831739
2	2014	75.75234153	11.76	18.99	2.827091287	25.35104308	-4.529235318	1.16789 -0.5138 2.41325 -0.0148 -1.144 -0.274918588
2	2015	40.14030781	21.56	5.49	2.780288502	25.78446331	-10.21635868	-0.0711 -0.3744 0.38557 -0.1009 -1.1237 -0.36213066
2	2016	34.52955232	22.17	6.22	2.823102377	25.12961544	10.3605546	-0.2663 -0.3657 0.49522 -0.0222 -1.1543 -0.046583566
2	2017	33.23696356	24.59	6.34	2.877394385	30.12439658	13.31620155	-0.3113 -0.3313 0.51324 0.07761 -0.9205 -0.001258701
2	2018	17.50933958	80	12.54	3.101554622	57.94022668	67.55609782	-0.8585 0.45678 1.44447 0.48959 0.382 0.830510448
2	2019	18.05472167	52.67	3.43	3.066661302	66.02624582	-7.72019249	-0.8395 0.06807 0.07616 0.42546 0.76063 -0.063851936
3	2005	8.328645833	110.61	0.15	3.283301229	79.2953125	-20.13311448	-1.1779 0.89213 -0.4165 0.82362 1.38194 -0.514204126
3	2006	9.649690311	136.66	-2.28	3.275486419	79.69359834	-1.783333333	-1.1319 1.26264 -0.7815 0.80926 1.40059 -0.232810163
3	2007	20.59289403	56.68	-1.46	3.191188234	72.62565516	-17.64275412	-0.7512 0.1251 -0.6583 0.65433 1.06964 -0.47601448
3	2008	14.25206279	48.51	0.56	3.184200088	78.09860227	-1.596203624	-0.9718 0.0089 -0.3549 0.64149 1.32582 -0.229945028
3	2009	10.35491053	48.92	0.04	3.173500945	74.2978244	-2.433470525	-1.1074 0.01474 -0.433 0.62182 1.14794 -0.190698687
3	2010	14.23398866	47.9	1.22	3.162181916	75.60094168	-2.572631918	-0.9724 0.00023 -0.2558 0.60102 1.20896 -0.244914062
3	2011	19.51464375	43.17	1.66	3.141308644	77.59488643	-4.692576684	-0.7887 -0.067 -0.1897 0.56266 1.30322 -0.277423428
3	2012	19.72343835	40.49	1.85	3.145469891	77.11391536	0.962767686	-0.7814 -0.1052 -0.1612 0.5703 1.2798 -0.190698687
3	2013	26.51368335	28.7	2.54	3.134253628	77.37696735	-2.549575071	-0.5452 -0.2728 -0.0575 0.54969 1.29212 -0.244560485
3	2014	24.07123778	24.32	2.75	3.13082569	72.29510259	-0.786205074	-0.6302 -0.3351 -0.026 0.54339 1.05416 -0.217519195
3	2015	21.54023587	22.86	-0.68	3.128383112	73.24528442	-0.560845856	-0.7182 -0.3559 -0.5412 0.5389 1.09865 -0.21406331
3	2016	25.07762758	26.83	-4.06	3.10561917	77.45114952	-5.106588787	-0.5952 -0.2994 -1.0488 0.49706 1.29559 -0.283772307
3	2017	28.1310091	28.89	-0.18	3.105206924	78.67217116	-0.094878148	-0.4889 -0.2701 -0.4661 0.4963 1.35276 -0.206917693
3	2018	28.91240016	25.7	6.33	3.143714107	80.27782566	9.271569959	-0.4617 -0.3155 0.51174 0.56708 1.42795 -0.063283152
3	2019	22.28549159	26.97	-2.83	3.141641009	80.3732652	-0.476210998	-0.6923 -0.2975 -0.8641 0.56327 1.43242 -0.212765344
4	2005	42.61839178	14.65	4.63	2.576985977	74.43320267	10.49135232	0.01511 -0.4727 0.2564 -0.4745 1.15428 -0.044577782
4	2006	31.27914206	15.77	5.05	2.586632307	75.03108486	2.246000636	-0.3794 -0.4567 0.31948 -0.4568 1.18227 -0.171020302
4	2007	32.56623873	21.82	4.64	2.642780975	73.99845215	13.80167858	-0.3346 -0.3707 0.2579 -0.3536 1.13392 0.006186092
4	2008	36.84364288	30.55	6.2	2.7104897	69.66734185	16.87152873	-0.1858 -0.2465 0.49221 -0.2291 0.93112 0.053262263
4	2009	19.25815532	28.77	6.08	2.78096503	62.82497102	17.61841695	-0.7976 -0.2719 0.47419 -0.0996 0.61073 0.064715799
4	2010	25.44358937	34.49	3	2.838030083	71.99796718	14.04205994	-0.5824 -0.1905 0.01158 0.00526 1.04025 0.009872342
4	2011	35.1607364	29.25	5.65	2.851551857	69.71484067	3.162480035	-0.2443 -0.265 0.4096 0.03011 0.93334 -0.156966084
4	2012	38.73330022	25.54	8.83	2.89497476	63.35663979	10.51542619	-0.1201 -0.3178 0.88723 0.10992 0.63562 -0.044208609
4	2013	43.00866049	17.45	7.59	3.065604845	69.25972556	0.145187789	0.02869 -0.4329 0.70099 0.11108 0.91203 -0.20323628
4	2014	64.56520868	21.18	14.2	2.999008678	66.9696909	26.88311523	0.77867 -0.3798 1.6938 0.30112 0.8048 0.206790005
4	2015	44.93876125	28.41	11.18	3.090056911	73.73438554	23.32417913	0.09584 -0.277 1.2402 0.46846 1.12156 0.152213698
4	2016	38.07824263	27.8	1.95	3.089912173	81.07835645	-0.03321684	-0.1428 -0.2856 -0.1461 0.46819 1.46543 -0.205973724
4	2017	29.65291733	34.55	5.59	3.154785988	76.6697008	16.11112014	-0.436 -0.1896 0.40059 0.58743 1.25887 0.041601393
4	2018	28.61998832	37.66	2.4	3.152572684	76.35421872	-0.508335726	-0.4719 -0.1454 -0.0785 0.58336 1.24423 -0.213258067
4	2019	24.24699316	37.19	2.61	3.160129247	75.8536736	1.755188503	-0.6241 -0.1521 -0.047 0.59725 1.22087 -0.178546909
5	2005	29.96041609	11.26	2.54	2.734919784	95.0879131	-6.501755836	-0.4253 -0.5209 -0.0575 -0.1842 2.12142 -0.305167202
5	2006	10.55430647	190.26	2.43	3.183805888	55.0607249	283.2311516	-1.1004 2.02497 -0.074 0.8881 0.26803 4.13788875
5	2007	31.34419782	90.58	3.02	3.394710779	51.42213518	19.21480457	-0.3771 0.60725 0.01458 1.02838 0.0768 0.089196413
5	2008	34.49188813	79.29	6.85	3.339832896	53.3448942	-11.87033544	-0.2676 0.44668 0.58984 0.92752 0.16728 -0.387494404
5	2009	13.7873771	109.55	-1.29	3.295597884	55.42037526	-9.68399056	-0.988 0.8706 -0.6328 0.84622 0.26401 -0.353966002
5	2010	34.05297333	88.48	3.59	3.338599907	52.8062251	10.40837612	-0.2829 0.57739 0.10019 0.92526 0.14177 -0.045850223
5	2011	46.96817959	76.27	1.65	3.32569624	62.12869884	-2.927473495	0.16645 0.40373 -0.1912 0.90154 0.57813 -0.25035556
5	2012	78.05051599	45.88	5.95	3.338121679	60.95247714	2.902384642	1.24785 -0.0285 0.45466 0.92438 0.52305 -0.160954649
5	2013	72.41219273	54.14	5.87	3.394078518	61.37206552	13.75142312	1.05168 0.08898 0.44265 1.02722 0.5427 0.005415424
5	2014	97.31285368	47.99	4.84	3.393399695	63.88641876	-0.156182528	1.91801 0.00151 0.28794 1.02597 0.66043 -0.207857796
5	2015	81.55642404	70.68	5.65	3.487209102	43.98990392	24.11075182	1.36982 0.32422 0.4096 1.19839 -0.2712 0.164275795
5	2016	55.30165774	89.99	1.14	3.57504113	55.15267125	22.41426478	0.45638 0.59886 -0.2678 1.35981 0.25148 0.138260155
5	2017	62.51687204	87.47	2.38	3.590728177	55.58971306	3.67810404	0.70741 0.56302 -0.0815 1.38864 0.27194 -0.149058987

# DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS

5	2018	45.96541224	88.21	2.75	3.612631297	54.79461079	5.172723494	0.13156	0.57355	-0.026	1.4289	0.23471	-0.126138988
5	2019	31.43091435	68.98	1.84	3.622733	55.00225268	2.353265537	-0.3741	0.30004	-0.1627	1.44747	0.24444	-0.169375394
6	2005	23.48755273	15.31	1.02	2.634900274	66.13972463	-2.065740489	-0.6505	-0.4633	-0.2858	-0.3681	0.65994	-0.237140879
6	2006	15.18809829	35.01	0.44	2.691991583	67.6660569	14.04895461	-0.9392	-0.1831	-0.3729	-0.2631	0.83744	0.009978072
6	2007	20.00789811	38.63	2	2.704536575	67.5105578	2.930715607	-0.7715	-0.1316	-0.1386	-0.2401	0.83034	-0.160520193
6	2008	12.87954282	31.9	0.07	2.691709041	65.22137032	-2.91045129	-1.0195	-0.2273	-0.4285	-0.2637	0.72294	-0.250094583
6	2009	11.22481274	31.2	-1.73	2.675732528	71.38938707	-3.611885054	-1.0771	-0.2373	-0.6989	-0.293	1.01175	-0.260851015
6	2010	10.49063842	27.82	-0.85	2.661613943	73.97284161	-3.198649647	-1.1027	-0.2854	-0.5667	-0.319	1.13272	-0.254514048
6	2011	13.59175553	22.1	-0.46	2.650628025	71.61156193	-2.497874845	-0.9948	-0.3667	-0.5081	-0.3392	1.02216	-0.243767662
6	2012	13.92309728	21.43	1.53	2.691320244	61.87636127	9.822725952	-0.9832	-0.3762	-0.2092	-0.2644	0.56631	-0.054831171
6	2013	100.4496862	16.23	4.95	2.68951308	61.87273879	-0.41525027	2.02714	-0.4502	0.30446	-0.2677	0.56614	-0.211830601
6	2014	165.962496	73.86	1.22	2.836868226	44.75293364	40.3961327	4.30642	0.36945	-0.2558	0.00312	-0.2355	0.414012213
6	2015	46.69357629	53.86	1.15	3.841159173	56.95205282	909.9292432	0.1569	0.085	-0.2663	1.84891	0.33573	13.74830791
6	2016	42.29346821	75.58	1.64	3.946549528	55.90704797	27.46482528	0.00381	0.39391	-0.1927	2.04261	0.2868	0.215710532
6	2017	46.33146739	81.6	2.24	3.993447694	59.74349916	11.40332821	0.1443	0.47953	-0.1026	2.1288	0.46644	-0.030592626
6	2018	27.59251797	88.54	0.91	4.02820105	57.10155657	8.33115065	-0.5077	0.57824	-0.3023	2.19268	0.34273	-0.07704488
6	2019	17.98595024	84.23	1.91	4.02697224	60.64206001	-0.282544115	-0.8419	0.51694	-0.1521	2.19042	0.50852	-0.209795551
7	2005	3.037028649	354.78	0.2	3.24703988	86.51341864	5.305835286	-1.362	4.36489	-0.409	0.75698	1.71993	-0.124097718
7	2006	7.980706384	537.74	-7.2	3.218104673	83.93691447	-6.445476164	-1.19	6.96708	-1.5204	0.7038	1.59928	-0.304304153
7	2007	20.41211222	414.42	4.55	3.243521707	71.02828277	6.027136944	-0.7575	5.21313	0.24438	0.75051	0.99484	-0.113036553
7	2008	7.972726422	375.09	3.05	3.233016428	71.50484188	-2.389908388	-1.1903	4.65376	0.01909	0.73121	1.01716	-0.242111996
7	2009	12.27886644	341.78	1.57	3.233267777	74.98407429	0.057892028	-1.0404	4.18	-0.2032	0.73167	1.18007	-0.204574961
7	2010	12.08012835	339.59	0.64	3.244939811	71.10111055	2.724026486	-1.0474	4.14885	-0.3429	0.75312	0.99825	-0.163689772
7	2011	7.080111544	321.78	1.7	3.247460152	69.01425978	0.582017204	-1.2213	3.89554	-0.1837	0.75775	0.90054	-0.196537498
6	2012	13.92309728	21.43	1.53	2.691320244	61.87636127	9.822725952	-0.9832	-0.3762	-0.2092	-0.2644	0.56631	-0.054831171
6	2013	100.4496862	16.23	4.95	2.68951308	61.87273879	-0.41525027	2.02714	-0.4502	0.30446	-0.2677	0.56614	-0.211830601
6	2014	165.962496	73.86	1.22	2.836868226	44.75293364	40.3961327	4.30642	0.36945	-0.2558	0.00312	-0.2355	0.414012213
6	2015	46.69357629	53.86	1.15	3.841159173	56.95205282	909.9292432	0.1569	0.085	-0.2663	1.84891	0.33573	13.74830791
6	2016	42.29346821	75.58	1.64	3.946549528	55.90704797	27.46482528	0.00381	0.39391	-0.1927	2.04261	0.2868	0.215710532
6	2017	46.33146739	81.6	2.24	3.993447694	59.74349916	11.40332821	0.1443	0.47953	-0.1026	2.1288	0.46644	-0.030592626
6	2018	27.59251797	88.54	0.91	4.02820105	57.10155657	8.33115065	-0.5077	0.57824	-0.3023	2.19268	0.34273	-0.07704488
6	2019	17.98595024	84.23	1.91	4.02697224	60.64206001	-0.282544115	-0.8419	0.51694	-0.1521	2.19042	0.50852	-0.209795551
7	2005	3.037028649	354.78	0.2	3.24703988	86.51341864	5.305835286	-1.362	4.36489	-0.409	0.75698	1.71993	-0.124097718
7	2006	7.980706384	537.74	-7.2	3.218104673	83.93691447	-6.445476164	-1.19	6.96708	-1.5204	0.7038	1.59928	-0.304304153
7	2007	20.41211222	414.42	4.55	3.243521707	71.02828277	6.027136944	-0.7575	5.21313	0.24438	0.75051	0.99484	-0.113036553
7	2008	7.972726422	375.09	3.05	3.233016428	71.50484188	-2.389908388	-1.1903	4.65376	0.01909	0.73121	1.01716	-0.242111996
7	2009	12.27886644	341.78	1.57	3.233267777	74.98407429	0.057892028	-1.0404	4.18	-0.2032	0.73167	1.18007	-0.204574961
7	2010	12.08012835	339.59	0.64	3.244939811	71.10111055	2.724026486	-1.0474	4.14885	-0.3429	0.75312	0.99825	-0.163689772
7	2011	7.080111544	321.78	1.7	3.247460152	69.01425978	0.582017204	-1.2213	3.89554	-0.1837	0.75775	0.90054	-0.196537498
7	2012	6.843599338	438.89	1.61	3.284861431	58.88079879	8.993670492	-1.2295	5.56116	-0.1972	0.82649	0.42605	-0.030592626
7	2013	10.88823673	338.64	4.83	3.310587115	67.88456835	6.102516464	-1.0888	4.13534	0.28644	0.87377	0.84764	-0.111806607
7	2014	14.91301844	270.82	2.47	3.292679081	72.79385905	-4.039618489	-0.9488	3.17075	-0.068	0.84086	1.07752	-0.26741031
7	2015	11.72715	253.53	0.63	3.276220462	72.92252309	-3.718825023	-1.0596	2.92484	-0.3444	0.81061	1.08354	-0.262490941
7	2016	7.425947065	225.92	1.36	3.352458449	68.05496951	19.18949681	-1.2093	2.53215	-0.2347	0.95073	0.85562	0.088808318
7	2017	8.87142055	212.7	-1.78	3.329845166	72.84624743	-5.073664293	-1.159	2.34413	-0.7064	0.90917	1.07997	-0.283267409
7	2018	5.924194214	207.81	-0.54	3.324037452	76.62852509	-1.328373573	-1.2615	2.27458	-0.5201	0.89849	1.25707	-0.225833353
7	2019	4.775091722	207.76	-2.04	3.2987876	77.90420666	-5.64820918	-1.3015	2.27387	-0.7454	0.85209	1.31681	-0.292078059
8	2005	50.38014219	13.32	-0.97	2.386195656	27.21818107	4.469345698	0.28516	-0.4916	-0.5847	-0.8252	-1.0565	-0.136925291
8	2006	62.11028632	2.2	-2.16	2.275541688	9.74019088	-22.49208893	0.69326	-0.6497	-0.7634	-1.0285	-1.8749	-0.55037906
8	2007	64.56232352	9.58	-0.91	2.297366514	81.14663171	5.153764581	0.77857	-0.5448	-0.5757	-0.9884	1.46863	-0.126429723
8	2008	20.96961699	56.47	8.67	2.502795704	93.88883652	60.48305768	-0.7381	0.12212	0.8632	-0.6109	2.06528	0.722045333
8	2009	18.89751504	55.43	0.97	2.506139584	96.38325071	0.772928645	-0.8102	0.10733	-0.2933	-0.6047	2.18208	-0.19360987
8	2010	66.32999669	56.05	1.39	2.522013638	97.06315568	3.72275746	0.84007	0.11614	-0.2302	-0.5755	2.21391	-0.148374227
8	2011	34.79210907	52.39	0.16	2.511789811	98.04881051	-2.32629994	-0.2572	0.06409	-0.415	-0.5943	2.26006	-0.241141621
8	2012	30.25935799	67.88	-0.54	2.556447241	96.55114962	10.83002493	-0.4149	0.2844	-0.5201	-0.5123	2.18994	-0.039384235
8	2013	28.91671203	68.1	0.65	2.565139152	94.96189439	2.021548373	-0.4616	0.28753	-0.3414	-0.4963	2.11552	-0.174462279
8	2014	30.63445144	67.91	1.65	2.669186666	74.16356081	27.07131192	-0.4018	0.28482	-0.1912	-0.3051	1.14165	-0.209676002
8	2015	55.8521438	69.44	1.79	2.701032342	69.54695649	7.608276571	0.47553	0.30659	-0.1702	-0.2465	0.92548	-0.088789767
8	2016	70.29428794	22.87	3.3	2.59904204	43.97200614	-20.93037143	0.978	-0.3558	0.05664	-0.434	-0.272	-0.526430113
8	2017	119.1708403	37.34	5.42	2.509820582	30.70240524	-18.5711049	2.67848	-0.15	0.37506	-0.598	-0.8934	-0.490250746
8	2018	125.0681763	47.7	-1.15	2.461933504	34.65083365	-10.44023991	2.88365	-0.0026	-0.6117	-0.686	-0.7085	-0.36556388
8	2019	59.02701888	90.04	-9.48	2.423851824	44.0517014	-8.395181056	0.58599	0.59957	-1.8629	-0.756	-0.2683	-0.33420289
9	2005	29.46126735	12.67	1.11	2.444138518	75.31108394	3.998204735	-0.4426	-0.5008	-0.2723	-0.7187	1.19538	-0.144150241
9	2006	22.40582551	10.9	1.8	2.455819024	73.41758857	2.726030353	-0.6881	-0.526	-0.1687	-0.6972	1.10672	-0.163659043
9	2007	21.80471024	13.27	3.93	2.480466879	74.19621593	5.839518275	-0.709	-0.4923	0.15126	-0.6519	1.14318	-0.115913686
9	2008	25.2449923	10.12	4.25	2.511214701	76.55161787	7.336596983	-0.5893	-0.5371	0.19933	-0.5954	1.25347	-0.209259575
9	2009	12.56557352	12.82	1.54	2.513177632	67.61051631	0.453004622	-1.0305	-0.4987	-0.2077	-0.5918	0.83481	-0.198515907
9	2010	19.86972667	9.84	1.57	2.516588253	59.9683448	0.788416112	-0.7763	-0.5411	-0.2032	-0.5855	0.47697	-0.19337237
9	2011	18.26275539	10.15	1.99	2.544613672	64.90126698	6.665854995	-0.8323	-0.5367	-0.1401	-0.534	0.70795	-0.103241807
9	2012	18.46273335	12.14	2.59	2.556917316	59.97337106	2.873530419	-0.8253	-0.5084	-0.05	-0.5114	0.47721	-0.161397129
9	2013												

## DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS

9	2015	22.48629294	15.76	3.08	2.650161762	61.6918429	6.789503872	-0.6853	-0.4569	0.02359	-0.34	0.55767	-0.101345651
9	2016	18.85680613	32.37	0.65	2.721043536	44.28498109	17.72854425	-0.8116	-0.2207	-0.3414	-0.2098	-0.2574	0.066404602
9	2017	17.41703944	50.09	-0.74	2.769325621	50.70671679	11.7588914	-0.8617	0.03138	-0.5502	-0.121	0.0433	-0.025140062
9	2018	20.32269138	51.31	4.16	2.76537048	46.21180913	-0.90657051	-0.7606	0.04873	0.18581	-0.1283	-0.1672	-0.219365
9	2019	11.87638985	45.83	9.96	2.814280899	41.31278276	11.92070031	-1.0544	-0.0292	1.05696	-0.0384	-0.3966	-0.022658722
10	2005	14.37329349	154.34	-0.78	2.589077905	53.30740302	-16.6086695	-0.9676	1.51409	-0.5562	-0.4523	0.16508	-0.460156786
10	2006	21.75242422	127.96	6.37	2.359721678	68.22311523	-41.02828293	-0.7108	1.1389	0.51775	-0.8738	0.86349	-0.834631712
10	2007	26.34660422	91.27	2.66	2.311669112	63.1098751	-10.47436009	-0.551	0.61707	-0.0395	-0.9621	0.62407	-0.366087113
10	2008	15.24969805	26.01	2	2.279735367	59.80150186	-7.089188134	-0.9371	-0.3111	-0.1386	-1.0208	0.46916	-0.31417548
10	2009	25.06199079	19.98	3.16	2.228862129	56.37029165	-11.05393058	-0.5957	-0.3969	0.03561	-1.1143	0.30849	-0.37497483
10	2010	33.25123153	4.36	2.88	2.176727758	25.28957529	-11.31184319	-0.3108	-0.619	-0.0064	-1.2102	-1.1468	-0.378929922
10	2011	27.85078713	0.55	3.08	2.164650216	18.74743326	-2.742644122	-0.4987	-0.6732	0.02359	-1.2323	-1.4532	-0.2475212
10	2012	24.39822707	0.35	-3.16	2.166282067	56.60415956	0.376454483	-0.6188	-0.6761	-0.9136	-1.2293	0.31944	-0.199689804
10	2013	58.11700318	0.21	-8.17	2.131008813	53.10997707	-7.800886464	0.55433	-0.6781	-1.6661	-1.2942	0.15583	-0.325089378
10	2014	39.83315954	0.35	30.64	2.237091112	23.8732476	27.66807189	-0.0818	-0.6761	4.16306	-1.0992	-1.2132	0.21882732
10	2015	41.10059705	0.24	7.4	2.249296216	38.33502309	2.850191171	-0.0377	-0.6776	0.67245	-1.0768	-0.536	-0.161755036
10	2016	38.99847428	0.32	7.66	2.263683401	30.12205754	3.368255041	-0.1108	-0.6765	0.7115	-1.0503	-0.9206	-0.153810523
10	2017	37.64958412	0.22	4.14	2.270329397	39.45800912	1.54206626	-0.1578	-0.6779	0.1828	-1.0381	-0.4834	-0.18181514
10	2018	34.21095401	0.05	-0.4	2.26620817	36.83839861	-0.944459351	-0.2774	-0.6803	-0.4991	-1.0457	-0.6061	-0.219946026
10	2019	32.61259178	0	-3.7	2.237970785	35.03497716	-6.295032324	-0.333	-0.681	-0.9948	-1.0976	-0.6905	-0.301997094
11	2005	114.3896976	40.48	10	2.251881455	25.11758119	8.637469586	2.51214	-0.1053	1.06297	-1.072	-1.1549	-0.073007085
11	2006	83.81090487	40.48	0.9	2.236537261	40.09280742	-3.471444569	1.44826	-0.1053	-0.3038	-1.1002	-0.4537	-0.25869736
11	2007	76.70402445	40.48	12.5	2.2929203	34.11105451	13.86310905	1.201	-0.1053	1.43846	-0.9966	-0.7338	-0.007128129
11	2008	60.32311062	40.48	0.6	2.261500773	36.77437021	-6.979113602	0.63109	-0.1053	-0.3489	-1.0543	-0.6091	-0.312487486
11	2009	27.95243619	0	3.9	2.537567257	71.4037123	88.82803943	-0.4951	-0.681	0.14676	-0.547	1.01242	1.156715806
11	2010	35.80258026	37.5	3.1	2.522835314	74.37743774	-3.335266821	-0.222	-0.1477	0.0266	-0.574	1.15167	-0.256609073
11	2011	54.27385892	33.3	-16.3	2.382017043	74.77178423	-27.69276928	0.42062	-0.2074	-2.8873	-0.8328	1.17013	-0.630131526
11	2012	41.60657812	47.2	-29.4	2.19893187	72.99177736	-34.39834025	-0.0201	-0.0097	-4.8549	-1.1693	1.08678	-0.732961499
11	2013	25.74250183	47.2	-9.1	2.135768515	76.88368691	-13.53573688	-0.572	-0.0097	-1.8058	-1.2854	1.26902	-0.413033345
11	2014	52.41310824	4	3.1	2.003029471	23.37636544	-26.33504023	0.35589	-0.6241	0.0266	-1.5294	-1.2364	-0.609310743
11	2015	61.33728103	0	-14.2	1.908086599	26.69627436	-19.50347567	0.66637	-0.681	-2.5718	-1.7026	-1.081	-0.504548657
11	2016	82.39634056	40.48	-21.8	1.831037486	29.79194334	-16.39526277	1.39904	-0.1053	-3.7133	-1.8455	-0.936	-0.456884193
11	2017	13.96151949	47.2	-28.2	2.607883744	58.36211449	498.1997934	-0.9819	-0.0097	-4.6746	-0.4177	0.40176	7.43443422
11	2018	13.35248042	71.3	-5.5	2.583198774	67.33681462	-5.525407005	-1.0031	0.33304	-1.2651	-0.4631	0.82199	-0.290194887
11	2019	11.66248575	117.1	-4	2.641969598	64.92588369	14.49086162	-1.0619	0.98444	-1.0398	-0.3551	0.7091	0.016754718
12	2005	49.88948532	13.346	0.21	1.801678059	35.98042311	4.07492606	0.26809	-0.4912	-0.4075	-1.8995	-0.6462	-0.142973719
12	2006	48.47779717	13.346	-17.89	1.712397131	27.92321117	-18.5822545	0.21897	-0.4912	-3.1261	-2.0635	-1.0235	-0.4990241725
12	2007	84.56659619	13.346	0.7	1.716253826	26.96521238	0.891991468	1.47455	-0.4912	-0.3339	-2.0565	-1.0684	-0.191784041
12	2008	92.0026732	3.29	19.69	1.652149605	43.77366897	-13.7228522	1.73326	-0.6342	2.51839	-2.1743	-0.2813	-0.41590276
12	2009	138.8974662	33.29	17.02	2.041826763	64.20851875	145.288483	3.36479	-0.2076	2.11736	-1.4581	0.67551	2.022537061
12	2010	225.368684	26.99	3.63	2.093736785	75.38077202	12.69639451	6.37325	-0.2972	0.1062	-1.3627	1.19865	-0.010763446
12	2011	185.8276088	48.22	0.03	2.08735543	78.01766438	-1.458618744	4.99756	0.00478	-0.4345	-1.3744	1.32212	-0.227830663
12	2012	81.36792453	7.21	-6.1	1.906119458	110.8490566	-34.11841675	1.36326	-0.5785	-1.3552	-1.7075	2.85943	-0.72866887
12	2013	72.66566265	0.32	1.02	1.901349325	54.20431727	-1.092353525	1.0605	-0.6765	-0.2858	-1.7163	0.20707	-0.222213984
12	2014	92.98391625	12.1	2.628461538	1.981999714	42.29726913	20.40662651	1.7674	-0.5089	-0.0442	-1.568	-0.3505	0.10747301
12	2015	48.85946865	0	2.628461538	2.048402956	30.78092853	16.52074213	0.23225	-0.681	-0.0442	-1.446	-0.8897	0.047882949
12	2016	72.51908397	13.346	3.02	1.956120386	39.38488771	-19.14303605	1.0554	-0.4912	0.01458	-1.6156	-0.4868	-0.499021313
12	2017	60.22050717	13.346	-1.19	1.957607287	42.59095921	0.342958292	0.62752	-0.4912	-0.6178	-1.6129	-0.3367	-0.200203468
12	2018	79.4295302	1.27	3.7	1.951337519	42.15883669	-1.433296582	1.29582	-0.663	0.11672	-1.6244	-0.3569	-0.227442348
12	2019	61.68233957	0.77	10.33	1.985740741	46.46067996	8.243847875	0.67837	-0.6701	1.11253	-1.5612	-0.1555	-0.079043277
13	2005	18.28231956	61.35	-1.44	3.338091772	82.83880505	900.3076923	-0.8316	0.19152	-0.6553	0.92432	1.54786	13.60076137
13	2006	25.98577018	61.5	-0.82	3.330815411	83.42981727	-1.661486477	-0.5636	0.19366	-0.5622	0.91095	1.57554	-0.230941641
13	2007	25.31983749	54.14	-2.51	3.297502264	86.94034741	-7.383822445	-0.5867	0.08898	-0.816	0.84972	1.73992	-0.318693699
13	2008	25.74300238	43.13	0.49	3.298610764	87.68307951	0.255567541	-0.572	-0.0676	-0.3654	0.85176	1.7747	-0.201543606
13	2009	22.27770536	40.94	-0.55	3.289709326	89.59169429	-2.028769816	-0.6926	-0.0988	-0.5216	0.8354	1.86406	-0.236573933
13	2010	29.10297551	37.28285714	-0.210769231	3.4483549	88.9587867	44.09389301	-0.4551	-0.1508	-0.4707	1.12698	1.83443	0.47071739
13	2011	46.26844399	19.96	-0.210769231	3.402414434	91.66947096	-10.03791068	0.1421	-0.3972	-0.4707	1.04254	1.96136	-0.359394159
13	2012	35.02024519	20.2	6.45	3.426473849	88.0135742	5.696210049	-0.2492	-0.3937	0.52976	1.08676	1.79017	-0.118111319
13	2013	33.46956406	23.63	1.86	3.478508778	90.27711324	12.72881185	-0.3032	-0.345	-0.1596	1.1824	1.89616	-0.010266326
13	2014	28.42444363	18.91	1.62	3.511895387	88.6462215	7.990762892	-0.4787	-0.4121	-0.1957	1.24376	1.81972	-0.082924336
13	2015	25.43099289	27.88	2.48	3.546944693	90.93793816	8.404998015	-0.5829	-0.2845	-0.0665	1.30817	1.9271	-0.076572038
13	2016	25.09589786	38.71	-1.34	3.539002036	90.99528532	-1.812242071	-0.5945	-0.1305	-0.6403	1.29358	1.92979	-0.233253479
13	2017	42.20643603	37.23	-0.35	3.546450119	90.69574483	1.72977473	0.00078	-0.1515	-0.4916	1.30727	1.91576	-0.178936629
13	2018	27.03664869	37.41	-0.83	3.555758085	89.21343127	2.166370676	-0.527	-0.149	-0.5637	1.32437	1.84635	-0.172241428
13	2019	22.20363003	36.97	-2.32	3.545804229	89.57490282	-2.265894217	-0.6951	-0.1552	-0.7875	1.30608	1.86328	-0.240210238
14	2005	12.33095851	43.54	-25.55	2.782730544	69.70941355	-25.3701584	-1.0386	-0.0618	-4.2766	-0.0964	0.93309	-0.594514274
14	2006	14.03776844	48.39	-4.81	2.779661414	69.72877809	-0.704201214	-0.9792	0.0072	-1.1615	-1.02	0.934	-0.21626168
14	2007	18.97347867	44.7	-6.23	2.765333207	72.45386662	-3.245361989	-0.8075	-0.0453	-1.3748	-0.1284	1.0616	-0.255230382
14	2008	19.55939441	53.53	-1.035384615	2.711975854	70.79580745	-11.56123938	-0.7871	0.0803	-0.5945	-0.2264	0.98396	-0.382754414
14	2009	18.74394575	84.06	-1.035384615	2.637069241	75.56309077	-15.8423913	-0.8155	0.51452	-0.5945	-0.3641	1.20722	-0.448405906
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**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS**

14	2012	25.11132316	87.08	2.32	2.643610573	83.31970193	6.226469736	-0.594	0.55747	-0.0906	-0.3521	1.57038	-0.109979783
14	2013	26.61390364	62.3	5.64	2.605369701	96.32064705	-8.428753181	-0.5417	0.20504	0.4081	-0.4223	2.17914	-0.334717718
14	2014	42.79650437	61.89	7.15	2.643995206	88.28509817	9.301344713	0.02131	0.1992	0.6349	-0.3514	1.80288	-0.062826556
14	2015	41.82502591	64.92	1.22	2.740291617	70.84068302	24.82351606	-0.0125	0.2423	-0.2558	-0.1744	0.98606	0.175206039
14	2016	35.8060318	43.11	2.97	2.724431532	51.98890964	-3.586041352	-0.2219	-0.0679	0.00707	-0.2035	1.0334	-0.260454702
14	2017	31.22759384	88.66	2.59	2.880081532	37.60016871	43.10341576	-0.3812	0.57995	-0.05	0.08254	-0.5704	0.45528415
14	2018	33.62499651	70.01	6.27	2.855264683	69.4130453	-5.554091101	-0.2978	0.31469	0.50273	0.03693	0.91921	-0.290634757
14	2019	34.66447797	50.32	3.24	2.849210509	72.06577421	-1.384353457	-0.2616	0.03465	0.04762	0.02581	1.04342	-0.226691804
15	2005	37.52185133	3.12	4.444285714	2.380681473	77.11229501	777.8224333	-0.1622	-0.6367	0.22851	-0.8353	1.27972	11.72244916
15	2006	36.18302228	12.44	2.21	2.396460892	80.88300221	3.700158162	-0.2088	-0.5041	-0.1071	-0.8063	1.45629	-0.148720787
15	2007	36.00481167	12.68	2.44	2.424914289	78.47906172	6.771021473	-0.215	-0.5007	-0.0725	-0.754	1.34372	-0.101629079
15	2008	23.81724029	15.43	2.86	2.453119498	74.48127664	6.710021803	-0.639	-0.4616	-0.0095	-0.7022	1.15653	-0.102564509
15	2009	26.50741947	10.52	3.97	2.441380885	74.07528049	-2.666713637	-0.5454	-0.5314	0.15727	-0.7237	1.13752	-0.246356806
15	2010	27.95702404	21.23	5.52	2.489972534	78.06867092	11.83858125	-0.495	-0.3791	0.39008	-0.6344	1.32451	-0.023918018
15	2011	24.81428194	24.38	6.59	2.532026039	76.55107614	10.21326171	-0.6043	-0.3343	0.55079	-0.5568	1.25345	-0.048842303
15	2012	27.22837148	18.95	6.37	2.554695053	67.26517412	5.314619608	-0.5203	-0.4115	0.51775	-0.5155	0.81864	-0.123963011
15	2013	46.61792084	17.56	7.36	2.56894057	66.65947171	3.334541501	0.15426	-0.4313	0.66644	-0.4893	0.79028	-0.154327521
15	2014	38.16984384	14.59	6.84	2.589625713	65.22857657	4.878180396	-0.1397	-0.4735	0.58834	-0.4513	0.72328	-0.13065809
15	2015	36.51990205	18.34	3.99	2.619656713	64.47640083	7.159579121	-0.1971	-0.4202	0.16027	-0.3961	0.68806	-0.095670545
15	2016	34.3516165	16.62	5.55	2.624251147	61.67660403	1.063523311	-0.2725	-0.4447	0.39458	-0.3876	0.55696	-0.189153599
15	2017	33.77574371	18.74	4.69	2.640481437	66.89016018	3.807872295	-0.2925	-0.4145	0.26541	-0.3578	0.80108	-0.14706889
15	2018	22.54841998	19.93	1.26	2.644881521	65.0402084	1.018306636	-0.6831	-0.3976	-0.2498	-0.3497	0.71446	-0.189846997
15	2019	22.55008783	18.76	2.57	2.6529232545	65.3154255	1.871106581	-0.6831	-0.4142	-0.053	-0.3349	0.72734	-0.176769304
16	2005	76.5619425	0.61	18.87	2.726327768	84.6857336	36.66016527	1.19606	-0.6724	2.39523	-0.2	1.63435	0.356721129
16	2006	72.2874589	0.38	10.03	2.805296916	-24.38703617	19.94140955	1.04734	-0.6756	1.06747	-0.0549	-3.4729	0.100338905
16	2007	56.2571532	7.21	2.72	3.009566516	-19.44300429	60.05479881	0.48963	-0.5785	-0.0305	0.32052	-1.2424	0.1715477981
16	2008	23.29436008	11.67	-1.3	2.950812551	50.58571877	-12.65321295	-0.6572	-0.5151	-0.6343	0.21254	0.03763	-0.399499835
16	2009	19.65281348	10.27	-11.8	2.880052911	80.86388021	-15.03494154	-0.7839	-0.535	-2.2114	0.08249	1.45599	-0.436023658
16	2010	21.77771382	4.19	-7.83	2.796164821	57.0841528	-17.56494919	-0.71	-0.6214	-1.6151	-0.0717	0.34722	-0.474821341
16	2011	34.95184498	73.19	-1.3	3.113585747	66.54554133	107.6925537	-0.2516	0.35992	-0.6343	0.5117	0.78494	1.44600325
16	2012	17.78091128	88.17	-4.8	3.110828675	65.03397355	-0.632828559	-0.849	0.57298	-1.16	0.50664	0.71417	-0.21561765
16	2013	24.11677397	109.81	-7.79	3.024391246	63.68114051	-18.04743126	-0.6286	0.88076	-1.6091	0.34777	0.65082	-0.482220207
16	2014	26.0332691	96.99	-2.61	3.007389273	63.92406308	-3.839208902	-0.5619	0.69842	-0.831	0.31652	0.66219	-0.264337028
16	2015	36.39248519	1.07	13.95	2.772637043	78.20164408	-41.75645916	-0.2015	-0.6658	1.65625	-0.1149	1.33073	-0.845798299
16	2016	39.67164544	15.45	-3.24	2.866573881	69.32548689	24.1986395	-0.0874	-0.4613	-0.9257	0.05805	0.91511	0.165623553
16	2017	27.44903453	20.83	-6.37	2.976446274	70.06893931	28.73374196	-0.5126	-0.3848	-1.3958	0.25965	0.94992	0.235169378
16	2018	24.32115101	21.88	0.84	3.030656383	64.11372235	13.2948343	-0.6215	-0.3698	-0.3129	0.35929	0.67107	-0.001586368
16	2019	37.66359625	5.51	4.16	3.024643805	64.22099489	-0.960732057	-0.1573	-0.6027	0.18581	0.31558	0.6761	-0.220195568
17	2005	40.22121669	18.83	8.34	2.696574792	56.92911011	1.937269373	-0.0683	-0.4132	0.81364	-0.2547	0.33466	-0.175754698
17	2006	39.30690111	8.41	8.15	2.67082082	61.05586616	-5.757667169	-0.1001	-0.5614	0.7851	-0.3021	0.52789	-0.293756598
17	2007	43.80574404	6.22	4.08	2.670857888	64.1829898	0.008535701	0.05642	-0.5926	0.17379	-0.302	0.67432	-0.205331841
17	2008	33.46954251	7.17	3.09	2.676474121	59.26994692	1.301583237	-0.3032	-0.5791	0.0251	-0.2917	0.44427	-0.18502948
17	2009	25.05511277	21.73	3.72	2.673721115	62.68653553	-0.631898222	-0.5959	-0.372	0.11972	-0.2967	0.60425	-0.215152899
17	2010	25.03030954	28.75	4.11	2.813987741	59.31615537	38.12319824	-0.5968	-0.2721	0.1783	-0.0389	0.44643	0.379156748
17	2011	48.70159276	33.05	7.51	2.88810645	52.73461255	18.60929083	0.22676	-0.211	0.68897	0.09729	1.13826	-0.07910856
17	2012	46.69412954	36.26	13.29	2.963801989	54.33953241	19.04071836	0.15691	-0.1653	1.55712	0.23641	0.2134	0.0865268
17	2013	56.53249558	34.43	13.04	3.104913685	64.86942863	38.39222634	0.4992	-0.1914	1.51957	0.49576	0.70646	0.383282296
17	2014	56.43168696	64.42	11.2	3.200445551	48.50049164	24.60396623	0.4957	0.23519	1.2432	0.67134	-0.0646	0.171839241
17	2015	58.58136229	58.1	12.56	3.19161587	46.24949344	-2.012580995	0.57049	0.1453	1.44747	0.65511	-0.1654	-0.236325678
17	2016	52.08901979	42.23	11.7	3.197385328	46.54876919	1.3373301	0.34461	-0.0804	1.3183	0.66572	-0.1514	-0.18495477
17	2017	36.86184762	46.76	6.08	3.213307864	54.18520264	3.734337112	-0.1852	-0.016	0.47419	0.69498	0.20618	-0.148196653
17	2018	14.43376788	74.76	0.19	3.292406719	59.16008732	19.97723671	-0.9655	0.38225	-0.4105	0.84036	0.43912	0.100888315
17	2019	11.33926302	68.89	-1.87	3.293914741	58.48030496	0.347838505	-1.0731	0.29876	-0.7199	0.84313	0.40729	-0.20012863
18	2005	56.91991786	48.74	5.94	2.386498966	29.26078029	16.36798088	0.51268	0.01218	0.45316	-0.8246	-0.9609	0.045540354
18	2006	36.03634971	68.73	2.02	2.458199557	28.14665228	17.95071869	-0.2139	0.29649	-0.1356	-0.6928	-1.0131	0.069811648
18	2007	28.4990305	43.07	-4.24	2.355872775	35.41336154	-20.99160893	-0.4761	-0.0685	-1.0759	-0.8809	-0.6728	-0.52736919
18	2008	20.55732672	13.1	-1.77	2.228862129	47.20155863	-25.35695399	-0.7524	-0.4947	-0.7049	-1.1143	-0.1208	-0.594311784
18	2009	62.44524354	6.51	-4.66	2.184549481	53.33769206	-9.700082654	0.70492	-0.5884	-1.1389	-1.1958	0.16649	-0.354213564
18	2010	50.36520743	11.3	4.28	2.321121833	21.78354896	36.9532527	0.28464	-0.5203	0.20383	-0.9448	-1.311	0.361215626
18	2011	57.92759952	36.81	5.17	2.442589505	39.12007796	32.27192438	0.54774	-0.1575	0.33751	-0.7215	-0.4992	0.289427427
18	2012	60.06107906	47.52	4.69	2.510772821	34.6392325	16.99931425	0.62197	-0.0052	0.26541	-0.5962	-0.709	0.055221855
18	2013	60.73032104	46.1	9.31	2.58581028	30.68697932	18.86047444	0.64525	-0.0254	0.95933	-0.4583	-0.8941	0.083762758
18	2014	52.05017342	42.33	9.62	2.624220197	46.45317622	9.247099738	0.34326	-0.079	1.00589	-0.3877	-0.1559	-0.063658403
18	2015	95.22603062	48.3	10.78	2.742395162	46.87647038	31.27286549	1.84541	0.00592	1.18012	-0.1705	-0.136	0.274106853
18	2016	91.05750711	42.3	5.29	2.736516016	21.33541227	-1.344601687	1.70038	-0.0794	0.35553	-0.1813	-1.332	-0.226082211
18	2017	66.43896351	54.62	2.5	2.78460303	23.49174029	11.70870403	0.84386	0.0958	-0.0635	-0.0929	-1.231	-0.025909686
18	2018	40.93170198	69.58	4.07	2.858350688	23.1318156	18.50799698	-0.0436	0.30858	0.17229	0.04261	-1.2479	0.078357514
18	2019	43.36295421	70.48	4.66	2.900700233	28.53910836	10.24262495	0.04102	0.32138	0.26091	0.12044	-0.9947	-0.048392018
19	2005	44.55262749	14.59	4.94	3.012466018	86.81494869	11.27185442	0.08241	-0.4735	0.30296	0.32585	1.73405	-0.032608777
19	2006	34.69017141	21.94	3.19	3.052636237	82.09948177	9.697794189	-0.2607	-0.36				

**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS**

19	2009	29.77801074	18.4	3.18	3.149767025	88.27508535	10.38311181	-0.4316	-0.4193	0.03861	0.5782	1.80242	-0.046237651
19	2010	37.94598986	21.65	2.79	3.183662667	88.7046476	8.117297068	-0.1474	-0.3731	-0.02	0.6405	1.82253	-0.080983934
19	2011	51.48590408	26.79	0.67	3.203764258	88.37298038	4.73663522	0.32363	-0.3	-0.3384	0.67744	1.807	-0.132826405
19	2012	67.28693625	15.87	3.32	3.238693297	82.72229854	8.375555139	0.87337	-0.4553	0.05964	0.74164	1.54241	-0.077023545
19	2013	70.08903201	13.38	4.05	3.241065602	86.29159563	0.5483089	0.97086	-0.4907	0.16929	0.746	1.70954	-0.197054415
19	2014	18.09463767	122.8	4.59	3.901053809	75.3208131	357.0690546	-0.8381	1.06551	0.25039	1.95899	1.19584	5.270193455
19	2015	16.8335224	97.93	3.54	3.917433034	76.56525515	3.842965865	-0.882	0.71179	0.09268	1.9891	1.25411	-0.14653083
19	2016	18.57774195	84.49	4.83	3.918358556	68.71012978	0.21406284	-0.8213	0.52064	0.28644	1.9908	0.8863	-0.202180081
19	2017	21.55957948	84.44	5.18	3.924038289	70.33640091	1.315424254	-0.7176	0.51993	0.33901	2.00124	0.96245	-0.185290696
19	2018	19.9638083	114.24	4.62	3.932752719	77.92855058	2.027324813	-0.7731	0.94376	0.2549	2.01725	1.31795	-0.174373697
19	2019	28.94464446	103.55	4.26	3.934892672	81.09670172	0.493841574	-0.4606	0.79172	0.20083	2.02119	1.46629	-0.197889672
20	2005	11.83948853	4.34	-0.04	2.831761027	29.11332734	-1.16333246	-1.0557	-0.6193	-0.445	-0.0063	-0.9678	-0.223302446
20	2006	53.4260388	0.58	0.19	2.822475378	29.16911222	-2.115404446	0.39113	-0.6728	-0.4105	-0.0233	-0.9652	-0.237902476
20	2007	107.383261	4.01	0.16	2.820260588	29.2804308	-0.508676088	2.26837	-0.624	-0.415	-0.0274	-0.96	-0.213263287
20	2008	42.96403945	3.99	-1.06	2.81078344	29.57700751	-2.158556324	0.02714	-0.6243	-0.5982	-0.0448	-0.9461	-0.23856421
20	2009	67.61893449	2.85	2.06	2.828324703	28.43440043	4.121703101	0.88492	-0.6405	-0.1296	-0.0126	-0.9996	-0.142256393
20	2010	72.69313698	0.15	0.54	2.833637887	28.01677985	1.230919998	1.06146	-0.6789	-0.3579	-0.0028	-1.0191	-0.18658657
20	2011	70.73627444	0.83	0.38	2.8244838	28.56864654	-2.085747393	0.99337	-0.6692	-0.3819	-0.0196	-0.9933	-0.237447685
20	2012	63.84963829	3.41	1.85	2.868967541	25.802177	10.78570894	0.75378	-0.6325	-0.1612	0.06212	-1.1228	-0.040063821
20	2013	100.0497933	11.98	3.33	2.936297547	36.92578482	16.76965722	2.01323	-0.5107	0.06114	0.18586	-0.602	0.051700063
20	2014	82.09315343	37.86	0.35	3.01541844	11.55249291	19.98332503	1.38849	-0.1426	-0.3864	0.33128	-1.7901	0.100981679
20	2015	51.16064473	36.01	0.58	3.12126759	10.45676986	27.59955218	0.31231	-0.1689	-0.3519	0.52582	-1.8414	0.2177657
20	2016	44.31756186	23.87	-1.2	3.126478834	7.38376916	1.20716128	0.07423	-0.3415	-0.6193	0.5354	-1.9853	-0.18695091
20	2017	67.26356646	29.4	2.93	3.250495631	10.2173217	33.05058779	0.87255	-0.2629	0.00106	0.76333	-1.8526	0.301368235
20	2018	19.32470672	30.9	-0.51	3.260059457	8.324953982	2.226578517	-0.7953	-0.2416	-0.5156	0.78091	-1.9412	-0.17131814
20	2019	39.22601938	32.8	-0.22	3.273834318	8.038965187	3.222616006	-0.1029	-0.2145	-0.4721	0.80622	-1.9546	-0.156043899
21	2005	41.9548074	8.57	-5.24	2.120178938	54.23870185	-5.414903536	-0.008	-0.5592	-1.2261	-1.3141	0.20868	-0.288500315
21	2006	47.86549708	44.29	1.23	2.23299611	58.63157895	29.6633303	0.19767	-0.0511	-0.2543	-1.1067	0.41438	0.249424621
21	2007	62.40795763	31.46	-2.35	2.189827063	61.99457434	-9.461988304	0.70362	-0.2336	-0.792	-1.1861	0.57185	-0.350562385
21	2008	37.76183644	37.59	-4.32	2.144262774	61.62840746	-9.959953494	-0.1539	-0.1464	-1.0879	-1.2698	0.5547	-0.358198685
21	2009	21.05312383	37.42	0.74	2.02905895	61.69098391	-23.29985653	-0.7352	-0.1488	-0.3279	-1.4816	0.55763	-0.562766181
21	2010	33.57378217	30.57	-1.39	2.050341082	62.5260335	5.022446689	-0.2996	-0.2463	-0.6478	-1.4424	0.59671	-0.128443484
21	2011	43.76974599	35.91	2.75	2.199371161	32.96474156	40.93864102	0.05517	-0.1703	-0.026	-1.1685	-0.7875	0.422331581
21	2012	64.42044298	19.04	5.64	2.106428895	59.60710652	-19.2657652	0.77364	-0.4102	0.4081	-1.3394	0.46006	-0.500903366
21	2013	49.70393283	19.24	0.94	2.053654558	61.63499779	-11.44243563	0.26163	-0.4074	-0.2978	-1.4363	0.55501	-0.38092558
21	2014	61.86259317	28.81	-2.83	2.131971345	64.2769921	19.7613787	0.68465	-0.2713	-0.8641	-1.2924	0.67866	0.097578131
21	2015	36.6129994	74.09	-1.44	2.303714309	34.24269529	48.50564534	-0.1938	0.37272	-0.6553	-0.9768	-0.7276	0.53837164
21	2016	34.29552128	88.96	-0.98	2.383474257	40.69724164	20.16000795	-0.2745	0.58421	-0.5862	-0.8302	-0.4254	0.103691113
21	2017	31.69000501	86.66	-1.22	2.41368526	36.05292597	7.204003143	-0.3651	0.5515	-0.6223	-0.7746	-0.6429	-0.094989302
21	2018	24.04816717	124.82	-0.72	2.52969038	43.78726167	30.70246499	-0.631	1.09424	-0.5472	-0.5609	-0.2807	0.265359758
21	2019	17.69684797	43.07	6.94	2.989396418	30.81833832	188.0231391	-0.8519	-0.0685	0.60336	0.28346	-0.888	0.2677873282
22	2005	74.94273128	11.36	13.77	2.753965866	51.08193833	5.15100982	1.13972	-0.5195	1.62921	-0.1492	0.06087	-0.126471968
22	2006	75.20994186	14.23	11.08	2.813033606	51.770279	14.569163	1.14902	-0.4787	1.22518	-0.0407	0.0931	0.01795547
22	2007	75.97938748	2.61	17.73	2.83447157	51.40247116	5.060137193	1.17579	-0.6439	2.224	-0.0013	0.07588	-0.12786655
22	2008	28.52884045	1.71	12.71	2.870005717	55.0787784	8.52608772	-0.4751	-0.6567	1.47	0.06403	0.24802	-0.074715127
22	2009	41.94556002	19.27	10.45	3.00365437	72.11661461	36.03437112	-0.0083	-0.407	1.13056	0.30966	1.04581	0.347124572
22	2010	56.69617931	19.56	10.76	3.098193626	77.07585547	24.31950022	0.5049	-0.4028	1.17712	0.48341	1.27802	0.167476953
22	2011	38.45467841	24.8	6.12	3.146639581	77.19045411	11.80106884	-0.1297	-0.3283	0.4802	0.57245	1.28338	-0.024493271
22	2012	34.57369964	20.76	8.44	3.211299457	71.63100076	16.05393643	-0.2648	-0.3858	0.82866	0.69129	1.02307	0.04072448
22	2013	47.68273665	14.78	10.59	3.255733095	66.62541414	10.77292874	0.19131	-0.4708	1.15158	0.77296	0.78868	-0.040259806
22	2014	70.00598058	9.78	17.52	3.323627432	65.3079048	16.92148886	0.96797	-0.5419	2.19246	0.89774	0.72699	0.054028402
22	2015	53.96991603	7.94	11.59	3.394985465	60.94198667	17.85771922	0.41005	-0.5681	1.30178	1.02889	0.52256	0.068385501
22	2016	36.83990339	6.77	11.81	3.454001358	55.64305477	14.5554862	-0.1859	-0.5848	1.33483	1.13735	0.27444	0.017745737
22	2017	38.26519181	2.68	7.82	3.462558208	56.58774176	1.989825873	-0.1363	-0.6429	0.73553	1.15308	0.31868	-0.174948743
22	2018	22.65374159	6.02	7.26	3.512091772	62.43618448	12.08140445	-0.6795	-0.5954	0.65142	1.24412	0.59253	-0.020194323
22	2019	22.77498328	3.54	7.47	3.53647006	60.8117931	5.77384394	-0.6753	-0.6307	0.68296	1.28892	0.51646	-0.116920803
23	2005	26.61956727	120.84	1.71	2.20011146	79.42345297	4.834016664	-0.5415	1.03763	-0.1822	-1.1672	1.38794	-0.13133306
23	2006	17.6449662	194.6	-16.71	2.14783085	87.52757026	-11.34170189	-0.8537	2.0867	-2.9488	-1.2633	1.76741	-0.379387805
23	2007	17.75663892	279.06	-7.34	2.100887255	88.36305985	-10.24546425	-0.8499	3.28795	-1.5415	-1.3495	1.80653	-0.362576994
23	2008	13.28423941	375.74	-15.41	2.141481129	79.76319399	9.97859691	-1.0055	4.663	-2.7536	-1.2749	1.40385	-0.055212496
23	2009	18.53281853	362.89	-2.16	2.112269768	80.7027027	-6.504945491	-0.8229	4.48024	-0.7634	-1.3286	1.44784	-0.305216115
23	2010	11.92063368	446.88	-2.88	2.105544246	79.94667085	-1.536679537	-1.0529	5.6748	-0.8716	-1.341	1.41244	-0.229027726
23	2011	40.03418549	75.62	-4.42	2.128915978	78.64149822	5.528978119	-0.0748	0.39448	-1.1029	-1.298	1.35133	-0.120675821
23	2012	34.55025291	58.53	-11.43	2.134846209	77.37702514	1.374851367	-0.2656	0.15142	-2.1558	-1.2871	1.29212	-0.184379381
23	2013	38.4514971	42.07	-0.4	2.088384186	79.46479563	-10.14588373	-0.1299	-0.0827	-0.4991	-1.3725	1.38988	-0.361049926
23	2014	44.80525242	40.52	-8.65	2.05196245	70.34868246	-8.044382802	0.0912	-0.1047	-1.7382	-1.4395	0.93602	-0.32883396
23	2015	37.25368365	48.35	-9.54	2.051769747	62.13385407	-0.044361636	-0.1715	0.00663	-1.8719	-1.4398	0.57837	-0.206143022
23	2016	44.16455237	38.91	0.22	2.042811692	61.42526278	-2.04154092	0.06891	-0.1276	-0.406	-1.4563	0.55924	-0.236769778
23	2017	70.66716924	20.95	-16.67	2.122707254	60.73724086	20.19753534	0.99097	-0.3831	-2.9428	-1.3094	0.49893	0.104266595
23	2018	66.95275394	19.75	0.91	2.079217436	56.97025248	-9.528835281	0.86174	-0.4001	-0.3023	-1.3894	0.336	



**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS**

24	2006	59.71363979	1.7	9.6	1.821840927	14.07686511	-34.11122145	0.60988	-0.6569	1.00289	-1.8624	-1.6719	-0.72855853
24	2007	53.08981409	3.1	7.4	1.882979654	12.76512176	15.11680482	0.37943	-0.6369	0.67245	-1.75	-1.7333	0.026353561
24	2008	39.27945686	5.6	8	1.960565903	13.84143671	19.56009427	-0.1011	-0.6014	0.76257	-1.6074	-1.6829	0.094491433
24	2009	52.11718929	4.6	4.7	1.94141204	21.27489128	-4.314498467	0.34559	-0.6156	0.26691	-1.6426	-1.3348	-0.271625597
24	2010	50.79110296	4.1	12.9	1.940616082	36.57418023	-0.183108263	0.29945	-0.6227	1.49854	-1.6441	-0.6184	-0.208270702
24	2011	31.75264091	32.4	4.4	2.112939976	31.68851195	48.70442559	-0.3629	-0.2202	0.22186	-1.3274	-0.8472	0.541419936
24	2012	56.15119737	33.6	5.2	2.106530854	38.04381847	-1.464919044	0.48594	-0.2032	0.34201	-1.3392	-0.5496	-0.227927278
24	2013	64.4749465	19.6	7.3	2.131939295	42.25830258	6.025039124	0.77553	-0.4023	0.65743	-1.2925	-0.3523	-0.113068723
24	2014	49.09324975	38.8	6.5	2.252124553	35.08114158	31.88191882	0.24038	-0.1292	0.53727	-1.0716	-0.6884	0.283446689
24	2015	61.98788742	21.9	9	2.226342087	30.40080048	-5.763850028	0.68901	-0.3696	0.91277	-1.119	-0.9074	-0.293851412
24	2016	57.3402203	6.3	13.1	2.206015877	32.49533292	-4.572446556	0.52731	-0.5914	1.52858	-1.1563	-0.8094	-0.275581232
24	2017	51.10971787	5.7	2.9	2.202760687	34.54545455	-0.746733043	0.31054	-0.6	-0.0034	-1.1623	-0.7134	-0.216913891
24	2018	35.41242667	5.8	2.1	2.22297645	37.66606822	4.764890282	-0.2356	-0.5985	-0.1236	-1.1252	-0.5673	-0.132393113
24	2019	35.53056586	3.8	4.6	2.223236273	52.72727273	0.059844405	-0.2315	-0.627	0.25189	-1.1247	0.13791	-0.204545021
25	2005	13.37798415	74.14	4.14	3.063941021	48.18404654	7.608433175	-1.0022	0.37343	0.1828	0.42046	-0.0748	-0.088787365
25	2006	17.83854756	74.13	0.96	3.043106736	50.64064835	-4.684020645	-0.847	0.37329	-0.2948	0.38217	0.04021	-0.277292221
25	2007	16.86051474	77.91	0.78	3.110188897	48.27321327	16.70303799	-0.881	0.42705	-0.3219	0.50546	-0.0706	0.050768457
25	2008	6.804408771	51.23	1.76	3.114594306	64.0439341	1.019545162	-1.2309	0.04759	-0.1747	0.51356	0.66781	-0.189828004
25	2009	18.08622834	62.92	-0.85	3.104002015	62.19600497	-2.409462729	-0.8384	0.21385	-0.5667	0.49409	0.58128	-0.242411862
25	2010	17.4552136	64.33	2.04	3.108710441	68.52611664	1.090053361	-0.8603	0.23391	-0.1326	0.50274	0.87768	-0.18874676
25	2011	20.38802578	94.68	3.05	3.167166635	59.93984307	14.40794749	-0.7583	0.66557	0.01909	0.61018	0.47564	-0.01548323
25	2012	22.62702002	81.49	3.29	3.156854928	35.34330771	-2.346392286	-0.6804	0.47797	0.05513	0.59123	-0.6761	-0.241444676
25	2013	37.2323752	43.9	22.88	3.303155003	53.95136854	40.05547	-0.1723	-0.0567	2.99752	0.86011	0.19523	0.408788148
25	2014	39.52911071	49.54	3.17	3.346280586	44.86918991	10.43979282	-0.0924	0.02355	0.03711	0.93937	-0.23	-0.045368447

25	2015	32.79236868	56.12	3.04	3.384102408	44.9925669	9.099264292	-0.3267	0.11714	0.01759	1.00889	-0.2243	-0.065925461
25	2016	37.90833481	51.1	3.25	3.451095312	45.58449832	16.67905517	-0.1488	0.04574	0.04913	1.13201	-0.1965	0.05031068
25	2017	40.7009309	63.66	3.33	3.597760983	47.17820532	40.17342063	-0.0516	0.22438	0.06114	1.40157	-0.1219	0.410596922
25	2018	22.81478365	92.67	2.26	3.640827145	52.18567365	10.42468313	-0.6739	0.63698	-0.0996	1.48072	0.11255	-0.045600154
25	2019	18.08162723	85.96	2.04	3.63245628	52.49056525	-1.9090061	-0.8386	0.54154	-0.1326	1.46534	0.12683	-0.234737356
26	2005	31.87888959	7.07	3.26	2.155366407	20.8936438	8.439490446	-0.3585	-0.5805	0.05063	-1.2494	-1.3527	-0.076043097
26	2006	35.96099705	6.8	2.73	2.16325085	21.2181556	1.832039718	-0.2165	-0.5843	-0.029	-1.2349	-1.3375	-0.177368395
26	2007	60.60915086	0.16	5.76	2.167583148	25.16826433	1.002540685	0.64104	-0.6788	0.42613	-1.227	-1.1525	-0.190088768
26	2008	40.40070025	0.17	4.17	2.188168859	25.20261946	4.854170916	-0.062	-0.6786	0.18731	-1.1891	-1.1509	-0.131023994
26	2009	43.91648668	0.03	6.43	2.184094931	36.08874926	-0.933670492	0.06028	-0.6806	0.52676	-1.1966	-0.6412	-0.219780578
26	2010	54.3701435	0	11.56	2.246276945	32.95332086	15.3936776	0.42397	-0.681	1.29728	-1.0823	-0.788	0.030599407
26	2011	49.80831316	0	12.41	2.297191289	37.47982244	12.43831887	0.26526	-0.681	1.42494	-0.9888	-0.576	-0.014721038
26	2012	41.07342527	2.69	7.05	2.428620673	56.00447261	35.34100081	-0.0386	-0.6428	0.61988	-0.7472	0.29136	0.336491733
26	2013	51.45269787	0.82	7.63	2.446350735	64.78459997	4.166977264	0.32247	-0.6694	0.707	-0.7146	0.70249	-0.141562113
26	2014	67.47294717	0.94	11.28	2.45144869	66.63837612	1.180764277	0.87984	-0.6677	1.25522	-0.7052	0.78929	-0.187355708
26	2015	58.00575264	0.86	7.56	2.523434287	67.47962608	18.02814909	0.55046	-0.6688	0.69648	-0.5729	0.82868	0.070999044
26	2016	45.62631211	0.79	8.02	2.552972237	71.15745276	7.037991371	0.11976	-0.6698	0.76557	-0.5187	1.00089	-0.097535094
26	2017	49.3123113	1.83	14.1	2.553543222	73.34227888	0.131560532	0.248	-0.655	1.67878	-0.5176	1.1032	-0.203445254
26	2018	31.56519467	0.62	6.67	2.582858462	69.13509276	6.983115286	-0.3694	-0.6722	0.56281	-0.4637	0.9062	-0.098376619
26	2019	29.73760933	0.63	0.59	2.576686805	70.38430957	-1.411026914	-0.433	-0.6721	-0.3504	-0.4751	0.96469	-0.227100842
27	2005	133.2311124	31.42	-14.06	1.554731377	38.55589629	-18.51431168	3.16765	-0.2342	-2.5508	-2.3533	-0.5257	-0.489379821
27	2006	62.8057554	30.74	-6.49	1.620136055	42.25419664	16.25313633	0.71746	-0.2438	-1.4138	-2.2331	-0.3525	0.043779212
27	2007	53.89100695	23.75	0.23	1.649237472	18.14308141	6.930455635	0.4073	-0.3433	-0.4045	-2.1796	-1.4815	-0.099184155
27	2008	48.26815642	57.7	-7.59	1.65079304	17.83240223	0.358824849	0.21168	0.13961	-1.579	-2.1768	-1.496	-0.199960154

27	2009	36.28056974	48.89	-5.44	1.57065967	22.27895727	-16.84916201	-0.2054	0.01431	-1.2561	-2.324	-1.2878	-0.463844741
27	2010	17.41467347	29.55	0.41	1.57065967	21.23085192	0	-0.8618	-0.2608	-0.3774	-2.324	-1.3369	-0.205462736
27	2011	28.35389866	39.32	2.07	1.580810973	11.52533473	2.364955657	-0.4812	-0.1218	-0.1281	-2.3054	-1.7913	-0.169196126
27	2012	27.13567839	51.02	1.51	1.599883072	10.77889447	4.489367288	-0.5236	0.0446	-0.2122	-2.2703	-1.8263	-0.13661826
27	2013	105.8823529	28.94	-4.33	1.478422188	18.77700233	-24.39698492	2.21615	-0.2694	-1.0894	-2.4936	-1.4518	-0.579590652
27	2014	175.6873648	29.1192	-10.77	1.510142699	17.48532592	7.577268195	4.64477	-0.2669	-2.0567	-2.4353	-1.5123	-0.08926528
27	2015	83.849203	29.1192	-2.49	2.07397482	4.722948469	266.295953	1.44959	-0.2669	-0.813	-1.399	-2.1099	3.878187374
27	2016	37.15579873	29.1192	9.99	2.348265911	2.493497175	88.05768744	-0.1749	-0.2669	1.06146	-0.8949	-2.2143	1.144902453
27	2017	23.93132221	0	13.03	2.493597449	1.915917843	39.74347475	-0.635	-0.681	1.51807	-0.6278	-2.2413	0.404003699
27	2018	18.61299199	4.95	22.92	2.810810296	2.342083295	107.593068	-0.8201	-0.6106	3.00353	-0.0448	-2.2213	1.444477637
27	2019	59.16815959	3.15	9.32	3.093134395	28.39942543	91.56850014	0.5909	-0.6362	0.96083	0.47412	-1.0012	1.198740788
28	2005	11.22861486	48.88	-5.39	2.490253531	76.49170467	-6.583081571	-1.077	0.01417	-1.2486	-0.6339	1.25067	-0.306414333
28	2006	12.60025612	52.02	-3.15	2.472376092	74.72871874	-4.032857928	-1.0293	0.05883	-0.9121	-0.6668	1.16812	-0.267306637
28	2007	27.35731148	54.43	-3.59	2.459452802	72.62880156	-2.93185954	-0.5158	0.0931	-0.9782	-0.6905	1.06979	-0.25042282
28	2008	17.25276303	65.56	-6.07	2.445105802	75.08253194	-3.249548674	-0.8674	0.2514	-1.3507	-0.7169	1.18468	-0.255294885
28	2009	23.48265631	56.56	1.29	2.436178555	74.56137138	-2.034591646	-0.6506	0.1234	-0.2453	-0.7333	1.16028	-0.236663211
28	2010	25.30503979	39.36	-0.31	2.42143939	71.03069344	-3.336874107	-0.5872	-0.1212	-0.4856	-0.7604	0.99496	-0.256633721
28	2011	19.53033799	100.83	-0.004167	2.826981337	69.70509383	154.414551	-0.7882	0.75304	-0.4396	-0.015	0.93289	2.162485372
28	2012	14.16082403	100.83	-0.004167	2.664754765	85.01687873	-31.17068811	-0.975	0.75304	-0.4396	-0.3132	1.64985	-0.683465433
28	2013	13.39666982	166.12	-0.004167	2.843768306	81.22975955	51.01272397	-1.0015	1.68164	-0.4396	0.0158	1.47252	0.576817706
28	2014	36.5977671	203.93	6.03	2.970444512	77.49221267	33.86782449	-0.1944	2.2194	0.46668	0.24862	1.29751	0.313900565
28	2015	19.30207197	187.33	6.54	3.041550582	81.82842603	17.78936213						

**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN  
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28	2018	17.50597735	72.65	1.14	3.082329301	40.60791078	0.888080194	-0.8586	0.35224	-0.2678	0.45426	-0.4296	-0.19184402
28	2019	13.46364307	64.32	-0.16	3.071414337	40.08636414	-2.481943858	-0.9992	0.23377	-0.463	0.4342	-0.454	-0.24352336
29	2005	50.55054021	12.61	7.83	2.985938164	58.53595554	-8.489924005	0.29108	-0.5017	0.73704	0.2771	0.4099	-0.335655773
29	2006	42.0052758	6.53	0.34	2.927046832	59.46863504	-12.68101721	-0.0062	-0.5882	-0.388	0.16886	0.45357	-0.399926214
29	2007	40.30886772	6.24	1.18	2.933801	58.89916377	1.567361037	-0.0652	-0.5923	-0.2618	0.18128	0.42691	-0.181427244
29	2008	26.13339236	6.42	-0.92	2.859036169	56.32583042	-15.8149123	-0.5584	-0.5897	-0.5772	0.04387	0.30641	-0.447984515
29	2009	29.90502603	11.67	2.18	2.883332041	56.15891787	5.753773363	-0.4272	-0.5151	-0.1116	0.08852	0.2986	-0.117228585
29	2010	33.79570901	9.89	0.72	2.860481749	52.73150957	-5.125454593	-0.2918	-0.5404	-0.3309	0.04652	0.13811	-0.284061614
29	2011	29.72415144	2.66	1.03	2.82201762	52.5902539	-8.475814903	-0.4335	-0.6432	-0.2843	-0.0242	0.13172	-0.33543941
29	2012	34.20538379	0.87	1.15	2.81962947	54.18478179	-0.548382723	-0.2776	-0.6687	-0.2663	-0.0286	0.20616	-0.213872188
29	2013	40.71204879	0	2.36	2.782973995	47.68584144	-8.0938603	-0.0512	-0.681	-0.0845	-0.0959	-0.0982	-0.329582134
29	2014	99.25217298	0.27	-3.74	2.748412871	47.23446786	-7.649579693	1.98548	-0.6772	-1.0008	-0.1594	-0.1193	-0.322769088
29	2015	44.5257026	0.4	1.7	2.856003454	52.93953748	28.1122276	0.08147	-0.6754	-0.1837	0.03829	-0.14785	0.225638451
29	2016	55.01651386	0.21	1.7	2.749195042	42.54409407	-21.80273057	0.44646	-0.6781	-0.1837	-0.158	-0.3389	-0.539807745
29	2017	62.19908682	4.1	1.7	2.750408102	42.37035195	0.279707821	0.69635	-0.6227	-0.1837	-0.1558	-0.347	-0.201173414
29	2018	55.88664663	0	1.8	2.765109497	40.2644912	3.443068559	0.47673	-0.681	-0.1687	-0.1288	-0.4457	-0.152663258
29	2019	41.35338346	0	6.19	2.79779364	40.71301134	7.816230142	-0.0289	-0.681	0.49071	-0.0687	-0.4246	-0.085600797
30	2005	28.1769103	0.65	-3.18	1.682686478	27.09717608	-1.21025641	-0.4873	-0.6718	-0.9166	-2.1182	-1.0622	-0.224022025
30	2006	26.14182692	1325.6	-2.42	1.698274577	24.21875	3.65448505	-0.5581	18.1726	-0.8025	-2.0895	-1.197	-0.149421184
30	2007	41.70161774	72.69	27.15	1.699577591	18.19452766	0.300480769	-0.0168	0.35281	3.63887	-2.0871	-1.4791	-0.200854861
30	2008	62.20592728	0.32	6.63	1.815976001	13.23709135	30.73696824	0.69659	-0.6765	0.5568	-1.8732	-1.7112	0.265888865
30	2009	27.75440237	0	-2.2	1.807332039	11.45395044	-1.970669111	-0.502	-0.681	-0.7695	-1.8891	-1.7947	-0.235682959
30	2010	55.53246753	0	-57.55	1.284430734	0.987012987	-70.00155836	0.46441	-0.681	-9.0829	-2.8501	-2.2848	-1.278937072
30	2011	165.4	5.92	-6.44	1.301029996	0.75	3.896103896	4.28685	-0.5968	-1.4063	-2.8196	-2.2959	-0.145715958

30	2012	75.07136061	14.57	-7.77	1.322632712	41.7697431	5.1	1.1442	-0.4738	-1.6061	-2.7799	-0.3752	-0.127254204
30	2013	49.60414129	5.3	18.48	1.516403148	64.73812424	56.23215985	0.25816	-0.6057	2.33665	-2.4238	0.70031	0.656857788
30	2014	69.58516536	0	-2.26	1.71858472	42.45842095	59.28745432	0.95332	-0.681	-0.7785	-2.0522	-0.3429	0.703710748
30	2015	48.01940178	32.74	-1.03	1.87052095	35.3004581	41.88491684	0.20302	-0.2154	-0.5937	-1.7729	-0.6781	0.436842727
30	2016	39.91158825	71.54	-4.02	1.977769318	29.8073887	28.0113177	-0.0791	0.33645	-1.0428	-1.5758	-0.9353	0.224090997
30	2017	51.11315359	35.35	-3.68	1.990871405	27.36928105	3.062835491	0.31066	-0.1783	-0.9917	-1.5517	-1.0495	-0.158494134
30	2018	57.80001925	46.23	0.77	2.016657345	31.10383986	6.117238562	0.5433	-0.0235	-0.3234	-1.5043	-0.8746	-0.111654844
30	2019	55.08031931	32.5	4.22	2.00633766	31.41815315	-2.34818593	0.44868	-0.2188	0.19482	-1.5233	-0.8599	-0.241472181
31	2005	21.51099	84.8	-7.48	2.559044359	25.43060616	35.16397418	-0.7192	0.52505	-1.5625	-0.5075	-1.1402	0.333777029
31	2006	28.11251	64.98	0.05	2.607776604	17.30569948	11.87479298	-0.4896	0.24315	-0.4315	-0.4179	-1.5207	-0.023362711
31	2007	72.32394	86.09	9.95	2.896889814	3.083711612	94.58672588	1.04861	0.54339	1.05546	0.11344	-2.1866	1.245025299
31	2008	25.56723	64.78	6.68	2.958888647	3.816726761	15.3450156	-0.5781	0.24031	0.56431	0.22738	-2.1523	0.029853175
31	2009	44.68868	31.57	1.62	2.857712338	4.326769632	-20.78203324	0.08714	-0.232	-0.1957	0.04143	-2.1284	-0.524155346
31	2010	54.12504	89.93	-3.4	2.924212069	21.63072857	16.54663281	0.41545	0.59801	-0.9497	0.16365	-1.3182	0.048279982
31	2011	46.6373	105.18	-4.58	3.065378018	28.78034513	38.40951576	0.15494	0.8149	-1.1269	0.4231	-0.9834	0.383547429
31	2012	31.78349	101.84	2.43	3.207246479	21.23904788	38.63358739	-0.3618	0.7674	-0.074	0.68384	-1.3365	0.386983569
31	2013	44.00279	169.85	1.78	3.217246992	28.24146504	2.329419941	0.06328	1.73469	-0.1717	0.70222	-1.0086	-0.152941066
31	2014	24.13837	338.94	-1.46	3.313141385	11.70206559	24.70802256	-0.6278	4.1396	-0.6583	0.87847	-1.7831	0.173434945
31	2015	33.89777	47.42	37.65	3.184895757	49.19776314	-25.56891119	-0.2883	-0.0066	5.21595	0.64276	-0.0274	-0.597562149
31	2016	43.25933	39.11	4.17	3.199096089	60.33662342	3.51299049	0.03741	-0.1248	0.18731	0.67036	0.49421	-0.151524933
31	2017	43.97689	36.93	0.91	3.192034712	63.68976088	-1.796713283	0.06238	-0.1558	-0.3023	0.65588	0.65122	-0.233015345
31	2018	35.15168	40.61	-6.43	3.171149936	66.45583704	-4.695101183	-0.2447	-0.1035	-1.4048	0.6175	0.78074	-0.277462142
31	2019	33.6747	41.48	-4	3.158151325	84.79608143	-2.948692879	-0.296	-0.0911	-1.0398	0.59361	1.63951	-0.23680959
32	2005	34.43634	66.25	8.49	2.792055331	19.25845816	12.18310879	-0.2696	0.26121	0.83617	-0.0792	-1.4292	-0.018634686

32	2006	68.41337	39.52	11.77	2.873169415	7.800573158	20.5352531	0.91256	-0.119	1.32882	0.06984	-1.9658	0.109445499
32	2007	107.4632	25.48	8.86	3.045369927	5.357979318	48.66218496	2.27115	-0.3186	0.89174	0.38633	-2.0801	0.540772176
32	2008	83.61331	31.94	8.05	3.079003873	8.941984644	8.052282636	1.44138	-0.2268	0.77008	0.44814	-1.9123	-0.081980931
32	2009	82.44609	25.79	6.98	3.189363965	7.228346966	28.93181382	1.40077	-0.3142	0.60937	0.65098	-1.9925	0.238206811
32	2010	69.70003	54.1	6.86	3.341483986	7.728049197	41.9449743	0.95732	0.08841	0.59134	0.93056	-1.9691	0.437763708
32	2011	61.28762	90.46	6.68	3.454902762	8.549386398	29.84307027	0.66464	0.60555	0.56431	1.13901	-1.9307	0.252180934
32	2012	48.35818	76.69	7.19	3.555709767	18.80731776	26.12669188	0.21481	0.4097	0.64091	1.32428	-1.4504	0.195190248
32	2013	68.45269	61.5	6.83	3.661220923	18.28851923	27.50028511	0.91392	0.19366	0.58684	1.5182	-1.4747	0.216254309
32	2014	62.85538	65	6.83	3.724766427	23.40185338	15.75653122	0.71919	0.24344	0.58684	1.63499	-1.2352	0.03616377
32	2015	52.80863	40.88	6.45	3.82057449	21.92775346	24.68323536	0.36965	-0.0996	0.52976	1.81108	-1.3043	0.173054833
32	2016	55.39198	26.26	5.61	3.793801556	25.39934664	-5.97852375	0.45952	-0.3076	0.4036	1.76187	-1.1417	-0.297143435
32	2017	49.2669	18.28	5.38	3.853709768	28.2937849	14.79109862	0.24642	-0.421	0.36905	1.87198	-1.0602	0.021358855
32	2018	32.14939	12.17	3.85	3.839440336	32.6303297	-3.232266928	-0.3491	-0.5079	0.13925	1.84575	-0.8031	-0.255029569
32	2019	25.75511	11.82	2.99	3.822518513	35.29033792	-3.821460619	-0.5716	-0.5129	0.01008	1.81465	-0.6786	-0.264064858
33	2005	16.55356	29.74	-1.61	3.229443772	17.04823504	8.445066784	-0.8917	-0.2581	-0.6808	0.72464	-1.5327	-0.075957583
33	2006	14.16883	20.33	0.47	3.219715476	20.88453422	-2.215120838	-0.9747	-0.3919	-0.3684	0.70676	-1.3531	-0.239431627
33	2007	22.03799	36.8	0.57	3.29065999	27.13986512	17.74555321	-0.7009	-0.1576	-0.3534	0.83715	-1.0602	0.066665434
33	2008	15.77864	46.75	-0.36	3.257095125	27.96295579	-7.437487518	-0.9187	-0.0161	-0.4931	0.77546	-1.0217	-0.319516653
33	2009	14.65622	45.77	0.78	3.196234235	22.32674181	-13.07611877	-0.9577	-0.0301	-0.3219	0.6636	-1.2856	-0.405985099
33	2010	18.05408	31.4	4.86	3.185731922	28.65153521	-2.389241413	-0.8395	-0.2344	0.29095	0.6443	-0.9894	-0.242101768
33	2011	24.18294	23.18	8.59	3.312733625	30.89071998	33.96819394	-0.6263	-0.3514	0.85119	0.87772	-0.8846	0.315439731
33	2012	24.61394	27.02	6.67	3.256573438	33.71330453	-12.13016456	-0.6113	-0.2967	0.56281	0.7745	-0.7524	-0.391478885
33	2013	34.46984	33.62	3									

**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN  
EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS**

33	2015	23.33768	68.75	3.19	3.413259519	15.48483257	3.215932597	-0.6557	0.29677	0.04011	1.06247	-1.6059	-0.156146389
33	2016	13.76357	60.98	1.98	3.540296933	10.47369544	33.97921043	-0.9888	0.18626	-0.1416	1.29596	-1.8406	0.315608669
33	2017	28.04829	57.25	2.69	3.61298401	9.383966903	18.21894436	-0.4918	0.13321	-0.035	1.42955	-1.8916	0.07392489
33	2018	10.03278	51.59	1.36	3.634795569	9.908976249	5.15055255	-1.1186	0.05271	-0.2347	1.46964	-1.867	-0.12647898
33	2019	9.765002	68.44	0.86	3.701957208	14.22720384	16.72439696	-1.1279	0.29236	-0.3098	1.59307	-1.6648	0.051005997
34	2005	76.55255	0.61	18.87	2.726327768	84.6857336	36.66016527	1.19573	-0.6724	2.39523	-0.2	1.63435	0.356721129
34	2006	72.28589	0.38	10.03	2.805296916	-24.38703617	19.94140955	1.04729	-0.6756	1.06747	-0.0549	-3.4729	0.100338905
34	2007	56.2552	7.21	2.72	3.009565616	-19.44300429	60.05479881	0.48956	-0.5785	-0.0305	0.32052	-3.2414	0.715477981
34	2008	23.29884	11.67	-1.3	2.950812551	50.58571877	-12.65321295	-0.657	-0.5151	-0.6343	0.21254	0.03763	-0.399499835
34	2009	19.65281	10.27	-11.8	2.880052911	80.86388021	-15.03494154	-0.7839	-0.535	-2.2114	0.08249	1.45539	-0.436023658
34	2010	21.76972	4.19	-7.83	2.796164821	57.0841528	-17.56494919	-0.7102	-0.6214	-1.6151	-0.0717	0.34192	-0.474821341
34	2011	34.95184	73.19	-1.3	3.113585747	66.54554133	107.6925537	-0.2516	0.35992	-0.6343	0.5117	0.78494	1.44600325
34	2012	17.77936	88.17	-4.8	3.110828675	65.03397355	-0.632828559	-0.8491	0.57298	-1.16	0.50664	0.71417	-0.215167165
34	2013	24.11772	109.81	-7.79	3.024391246	63.68114051	-18.04743126	-0.6285	0.88076	-1.6091	0.34777	0.65082	-0.482220207
34	2014	26.03229	96.99	-2.61	3.007389273	63.92406308	-3.839208902	-0.5619	0.69842	-0.831	0.31652	0.66219	-0.264337028
34	2015	36.39417	1.07	13.95	2.772637043	78.20164408	-41.75645916	-0.2014	-0.6658	1.65625	-0.1149	1.33073	-0.845798299
34	2016	39.67165	15.45	-3.24	3.586753881	69.32548689	24.1986395	-0.0874	-0.4613	-0.9257	0.05805	0.91511	-0.165623553
34	2017	27.44692	20.83	-6.37	2.976446274	70.06893931	28.73374196	-0.5127	-0.3848	-1.3958	0.25965	0.94992	0.235169378
34	2018	24.31742	21.88	0.84	3.030656383	64.11372235	13.2948343	-0.6216	-0.3698	-0.3129	0.35929	0.67107	-0.001586368
34	2019	37.66548	5.51	4.16	3.026463805	64.22099489	-0.960732057	-0.1572	-0.6027	0.18581	0.35158	0.6761	-0.220195568
35	2005	65.12549	51.49	5.89	3.647456324	49.03225806	1.218058446	0.79817	0.05129	0.44565	1.49291	-0.0351	-0.186783802
35	2006	38.88273	62.66	2.29	3.655681924	49.47875006	1.912064404	-0.1149	0.21016	-0.0951	1.50802	-0.0142	-0.176141216
35	2007	58.7358	76.82	0.51	3.673446694	56.60392566	4.175302608	0.57586	0.41155	-0.3624	1.54067	0.31943	-0.141434444
35	2008	16.03166	56.35	-2.87	3.645955476	53.66122614	-6.133898384	-0.9099	0.12041	-0.8701	1.49015	0.18164	-0.299526106
35	2009	26.74916	49.82	0.89	3.57671443	48.22672292	-14.73732496	-0.537	0.02754	-0.3053	1.36289	-0.0728	-0.431459706
35	2010	20.55955	39.53	0.59	3.580665005	53.54989337	0.913803522	-0.7523	-0.1188	-0.3504	1.37015	0.17643	-0.191449553
35	2011	22.90543	25.49	1.01	3.620814565	46.7295739	9.685586125	-0.6707	-0.3185	-0.2873	1.44394	-0.1429	-0.056934212
35	2012	18.32661	17.98	1.23	3.598033935	48.69811183	-5.110235316	-0.83	-0.4253	-0.2543	1.40207	-0.0508	-0.283828226
35	2013	21.68983	13.69	2.06	3.578187492	51.16083739	-4.466968956	-0.713	-0.4863	-0.1296	1.3656	0.06456	-0.273963732
35	2014	28.64415	8.12	3.34	3.583071755	48.25745388	1.130991057	-0.4711	-0.5656	0.06264	1.37457	-0.0714	-0.188118981
35	2015	23.72131	6.57	2.76	3.502267303	54.29576291	-16.97754957	-0.6423	-0.5876	-0.0245	1.22606	0.21136	-0.465813565
35	2016	21.53087	3.84	0.88	3.471677416	58.40655094	-6.801244483	-0.7185	-0.6264	-0.3068	1.16984	0.40384	-0.309759862
35	2017	20.13358	4.67	1.05	3.41584107	64.48794718	-12.06461826	-0.7672	-0.6146	-0.2813	1.06722	0.6886	-0.120729016
35	2018	17.73455	5.25	1.7	3.408990849	69.48951619	-1.564947029	-0.8506	-0.6064	-0.1837	1.05463	0.92279	-0.229461208
35	2019	13.03141	4.07	0.39	3.441516041	71.16207044	7.776776906	-1.0143	-0.6232	-0.3804	1.14441	1.00111	-0.086205813
36	2005	25.66157	1.01	6.59	2.767415623	65.43777227	5.525509284	-0.5748	-0.6667	0.55079	-0.1245	0.73307	-0.120729016
36	2006	26.00365	22.43	7.83	2.845990528	65.234375	19.8325788	-0.5629	-0.362	0.73704	0.01989	0.72355	0.098669985
36	2007	36.46196	31.72	8.11	2.928329269	61.62851555	20.87562728	-0.1991	-0.2299	0.77909	0.17122	0.55471	0.11466514
36	2008	26.37227	26.83	5.82	2.964137011	63.36316441	8.594477927	-0.5501	-0.2994	0.43514	0.23703	0.63593	-0.073666363
36	2009	29.97613	25.19	5.77	2.888215193	68.48292611	3.749158286	-0.4247	-0.3228	0.42763	0.26601	0.87566	-0.14796937
36	2010	29.06951	34.77	2.74	3.018105224	73.0713252	9.139920022	-0.4563	-0.1865	-0.0275	0.33622	1.09051	-0.065302005
36	2011	27.71901	51.3	3	3.106887522	68.8143544	22.68240981	-0.5033	0.04859	0.01158	0.49939	0.89118	0.142372161
36	2012	43.42383	62.87	5.35	3.174536601	67.91066745	16.85547868	0.04314	0.21314	0.36454	0.62372	0.84886	0.053016136
36	2013	49.3698	63.29	6.39	3.269636677	63.07288783	24.8014238	0.25	0.21912	0.52075	0.79851	0.62234	0.169940401
36	2014	72.40861	70.64	5.98	3.33103433	59.52283184	15.18545791	1.05156	0.32365	0.45917	0.91135	0.45611	0.027406357
36	2015	36.63675	84.64	4.08	3.414742777	53.98596178	21.25745429	-0.193	0.52277	0.17379	1.0652	0.19685	0.120520459
36	2016	37.77471	104.22	7.32	3.512340132	61.82939799	25.1979897	-0.1534	0.80125	0.66043	1.24458	0.56411	0.180948595
36	2017	38.13137	80.1	3.85	3.508463728	58.23086298	-0.888603377	-0.141	0.4582	0.13925	1.23745	0.39561	-0.219089474
36	2018	22.7723	67.82	2.37	3.511266894	55.12280496	0.647540246	-0.6754	0.28354	-0.083	1.2426	0.25008	-0.195532702
36	2019	20.59592	65.75	2.95	3.526406484	53.7872115	3.547493522	-0.7511	0.2541	0.00407	1.27043	0.18754	-0.1510619
37	2005	20.38518	255.09	0.71	3.308545206	67.36808999	6.499086736	-0.7584	2.94703	-0.3324	0.87002	0.82346	-0.1057992
37	2006	40.08721	213.94	1.5	3.299492045	64.7453749	-2.062990501	-0.0729	2.36177	-0.2137	0.85338	1.00565	-0.237098708
37	2007	109.8734	95.92	3.41	3.32351198	39.07922099	5.686602139	2.35501	0.6832	0.07316	0.89753	-0.5011	-0.118258656
37	2008	21.94128	248.36	-1.68	3.464789009	36.37916194	38.44492133	-0.7043	2.85131	-0.6914	1.57118	-0.6276	0.384909374
37	2009	39.87014	238.38	1.54	3.493980563	51.90509018	6.952651054	-0.0805	2.70937	-0.2077	1.21083	0.09941	-0.098843788
37	2010	62.67062	151.9	1.97	3.642300268	54.02361713	40.70829659	0.71276	1.47939	-0.1431	1.48343	0.19861	0.418799248
37	2011	55.16792	193.41	2.2	3.734578227	59.84489325	23.67387212	0.45173	2.06977	-0.1086	1.65303	0.47119	0.157576242
37	2012	36.12385	223.54	1.57	3.774868638	56.64839575	9.721165309	-0.2108	2.4983	-0.2032	1.72708	0.32152	-0.056388605
37	2013	32.26231	202.14	-1.96	3.819722881	69.81577289	10.8802617	-0.3452	2.19394	-0.7334	1.80951	0.93807	-0.038613854
37	2014	30.49481	178.77	2.45	3.847691087	59.3497228	6.651804105	-0.4067	1.86155	-0.071	1.86092	0.448	-0.103457278
37	2015	32.25535	146.81	5.15	3.850633984	68.74143135	0.679928201	-0.3454	1.407	0.3345	1.86633	0.88776	-0.195036032
37	2016	37.98755	95.22	4.37	3.875442696	61.12335961	5.87877186	-0.146	0.67325	0.21735	1.91192	0.53105	-0.115312417
37	2017	47.58439	67.67	2.25	4.01389637	42.02495848	37.54780799	0.18789	0.28141	-0.1011	2.16639	-0.3632	0.370333135
37	2018	32.40062	29.67	0.82	3.921286324	61.36202083	-19.20398251	-0.3404	-0.2591	-0.3159	1.99618	0.54223	-0.49995928
37	2019	38.12642	38.7	0.22	3.926736426	62.2202828	1.262839669	-0.1412	-0.1306	-0.406	2.0062	0.5825	-0.186097081
38	2005	104.8882131	0.09	13.01	2.851429586	26.94289576	8.03066253	2.18157	-0.6798	1.51506	0.02989	-1.0694	-0.082312475
38	2006	98.25657563	0.63	10.03	2.899732978	25.02267459	11.76437461	1.95084	-0.6721	1.06747	1.11866	-1.1594	-0.02505977
38	2007	130.1107044	17.89	9.42	2.957568979	31.85617254	14.24468407	3.05909	-0.4266	0.97585	0.22496	-0.8394	0.012979584
38	2008	37.66005523	9.4	8.92	2.980421548	35.59502887	5.40290213	-0.1574	-0.5473	0.90075	0.26696	-0.6643	-0.122609198
38	2009	69.52589958	20.91	8.44	3.024140722	36.207575	10.59084442	0.95126	-0.3836	0.82866	0.34731	-0.6163	-0.04305207
38	2010	79.88659422	16.92	9.46	3.023096003	42.31192278	-0.240266374	1.31173	-0				

# DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS

38	2012	31.48592078	41.25	7.09	3.145336278	40.2168235	8.408452671	-0.3722	-0.0944	0.62589	0.57006	-0.4479	-0.076519061
38	2013	53.20420503	33.13	15.31	3.234286915	46.71591578	22.72997245	0.38341	-0.2098	1.86052	0.73354	-0.1436	0.143101534
38	2014	39.99012324	20.26	12.33	3.27020353	51.49869026	8.621704983	-0.0763	-0.3929	1.41293	0.79955	0.08038	-0.073248836
38	2015	29.12042123	30.7	1.77	3.324677463	51.19180651	13.36367931	-0.4545	-0.2444	-0.1732	0.89967	0.06601	-0.00053063
38	2016	21.32224876	35.91	0.08	3.347860604	50.5485429	5.483162241	-0.7258	-0.1703	-0.427	0.94228	0.03589	-0.121378408
38	2017	16.74820605	48.38	-8.3	3.326260058	48.67830706	-4.852046038	-0.8849	0.00706	-1.6857	0.90258	-0.0517	-0.279868892
38	2018	11.89637205	46.75	2.89	3.354999174	48.00983821	6.841288338	-1.0537	-0.0161	-0.0049	0.9554	-0.083	-0.100551536
38	2019	24.50162893	35.33	2.57	3.350986079	51.76151278	-0.919792991	-0.6152	-0.1786	-0.053	0.94802	0.09269	-0.219567767
39	2005	28.65389	17.79	2.79	3.318914386	-7.045794787	-8.945618504	-0.4707	-0.428	-0.02	0.88908	-2.6609	-0.342643851
39	2006	32.41078	45.14	5.53	3.581715333	-36.28665895	83.14747994	-0.34	-0.039	0.39158	1.37208	-4.0301	1.069604391
39	2007	18.41601	22.97	5.67	3.927714685	-22.16220941	121.8193108	-0.8269	-0.3543	0.41261	2.00799	-3.9687	1.662637159
39	2008	10.85479	18.33	1.9	3.788074287	29.52512515	-27.4963947	-1.09	-0.4203	-0.1536	1.75135	-0.9485	-0.627120121
39	2009	11.65142	20.97	1.76	3.995069805	14.49926773	61.06290125	-1.0623	-0.3828	-0.1747	2.13179	-1.6521	0.730997238
39	2010	18.97344	41.96	1.52	3.99950897	16.24405578	1.02739726	-0.8075	-0.0843	-0.2107	2.13994	-1.5704	-0.189707592
39	2011	17.67623	52.81	0.22	3.987107399	22.38629925	-2.815181155	-0.8527	0.07006	-0.406	2.11715	-1.2828	-0.248633556
39	2012	53.13229	6.41	0.24	3.419352602	74.86130942	-72.94514551	0.38091	-0.5899	-0.403	1.07367	1.17432	-1.324076999
39	2013	54.67767	11.18	7.05	3.466024894	71.38138097	11.34540332	0.43467	-0.522	0.61988	1.15945	0.01138	-0.031480905
39	2014	63.11408	13.97	6.76	3.493720082	74.16005749	6.584778684	0.72819	-0.4823	0.57632	1.21035	1.14149	-0.104485113
39	2015	29.73209	51.08	10.54	3.885985635	29.75887558	146.7547676	-0.4332	0.04546	1.14407	1.9313	-0.9376	2.045022545
39	2016	25.42081	50.35	3.27	3.887963136	34.78588948	0.456374617	-0.5832	0.03507	0.05213	1.93493	-0.7022	-0.198464228
39	2017	28.36978	49.21	5.16	3.897773847	46.25196294	2.284708425	-0.4806	0.01886	0.33601	1.95297	-0.1653	-0.170426718
39	2018	22.52453	53	4.4	3.90810954	31.45582602	2.408426519	-0.684	0.07276	0.22186	1.97196	-0.8581	-0.1685295
39	2019	26.04768	47.58	5.09	3.922510073	32.75686272	3.371432102	-0.5614	-0.0043	0.32549	1.99843	-0.7972	-0.153761803
40	2005	28.65727	52.19	8.35	2.841334438	58.88091533	8.480405184	-0.4706	0.06124	0.81514	0.01133	0.42605	-0.075415669
40	2006	31.26251	12.55	9.4	2.819201629	57.94565415	-4.968586086	-0.38	-0.5025	0.97285	-0.0293	0.38226	-0.281656034
40	2007	39.41551	6.7	7.83	2.821605225	54.22686009	0.554982714	-0.0963	-0.5857	0.73704	-0.0249	0.20813	-0.196952072
40	2008	26.89247	19.56	6.21	2.878079233	66.12687526	13.88696203	-0.532	-0.4028	0.49371	0.07886	0.76534	0.007493914
40	2009	38.8791	16.66	7.21	2.924299966	55.1878482	11.22969162	-0.115	-0.4441	0.64391	0.16381	0.25313	-0.033255344
40	2010	56.33541	8.77	16.43	2.983946365	44.67526538	14.721918	0.49235	-0.5563	0.20874	0.27344	-0.2391	0.020297969
40	2011	50.48767	20.24	7.2	3.013010065	54.1493192	6.921169231	0.2889	-0.3932	0.64241	0.32685	0.2045	-0.099326562
40	2012	42.50044	36.1	5.08	3.076374616	74.46970904	15.70831028	0.01101	-0.1676	0.32399	0.44331	1.15599	0.035424301
40	2013	39.42703	43.7	4.29	3.114721045	66.83248746	9.231130533	-0.0959	-0.0595	0.20533	0.51379	0.79932	-0.063903291
40	2014	39.35927	40.46	4.34	3.218059989	67.27131867	26.86415885	-0.0983	-0.1056	0.21284	0.70372	0.81893	0.206499309
40	2015	36.75229	50.39	4.14	3.285060811	76.67105304	16.82796773	-0.189	0.03564	0.1828	0.82786	1.25906	0.052594255
40	2016	29.12157	56.11	4.49	3.305073934	75.97871908	4.584451513	-0.4545	0.117	0.23537	0.86364	1.22665	-0.135160143
40	2017	29.53251	62.56	6.6	3.405339529	72.8500799	25.96955481	-0.4402	0.20873	0.55229	1.04792	1.08052	-0.19278055
40	2018	32.65287	66.9	3	3.427426057	65.30985226	5.21714852	-0.3316	0.27046	0.01158	1.08851	0.72708	-0.12545773
40	2019	24.10135	63.86	1.9	3.487278402	50.06463714	14.77633305	-0.6291	0.22722	-0.1536	1.19851	0.01324	0.021132424
41	2005	12.33415	24.42	0.14	2.991460886	63.45649802	0.358228509	-1.0385	-0.3337	-0.418	0.28725	0.6403	-0.199869299
41	2006	14.75966	51.86	-1.06	3.091853295	61.79291478	26.00634351	-0.9541	0.05655	-0.5982	0.47176	0.5624	0.193344705
41	2007	22.86283	27.27	8.45	3.047239811	46.42347813	-9.762611996	-0.6722	-0.2932	0.83016	0.38977	-0.1573	-0.355172452
41	2008	10.5058	27.85	-0.71	3.003507923	43.7234032	-9.579248549	-1.1021	-0.2849	-0.5457	0.30939	-0.2837	-0.352360572
41	2009	15.77368	28.65	-1.61	3.001218656	41.12045153	-0.525736279	-0.9189	-0.2736	-0.6808	0.30518	-0.4056	-0.213524905
41	2010	16.71894	8.64	0.88	3.043916092	49.20508672	10.33096997	-0.886	-0.5582	-0.3068	0.38366	-0.027	-0.047037246
41	2011	14.80115	32.16	-0.71	3.043594102	52.41545238	-0.074113575	-0.9527	-0.2236	-0.5457	0.38307	0.12331	-0.206599268
41	2012	11.70881	25.15	1.84	3.038798929	41.46508757	-1.098056241	-1.0603	-0.3233	-0.1627	0.37425	-0.3894	-0.222301435
41	2013	16.48074	28.53	2.47	2.976175676	35.33730536	-13.42814029	-0.8943	-0.2753	-0.068	0.25916	-0.6764	-0.411383351
41	2014	14.72255	29.83	1.17	2.980557823	34.17937295	1.0141345	-0.9554	-0.2568	-0.2633	0.26721	-0.7306	-0.189910977
41	2015	12.04878	36.49	-5.19	2.904168953	38.17628649	-16.12913346	-1.0484	-0.1621	-1.2185	0.12682	-0.5434	-0.452803098
41	2016	22.03267	43.88	-4.67	2.888937303	39.64228062	-3.446427013	-0.7011	-0.0569	-1.1404	0.09882	-0.4748	-0.258313715
41	2017	28.76142	38.89	0.77	2.967473091	47.75931195	19.82178601	-0.467	-0.1279	-0.3234	0.24316	-0.0947	0.098504477
41	2018	26.26135	29.44	-1.15	2.960803625	45.08700887	-1.52396965	-0.554	-0.2623	-0.6117	0.2309	-0.2198	-0.22883282
41	2019	27.37368	12.53	-2.4	2.934048774	45.8905146	-5.974608734	-0.5153	-0.5028	-0.7995	0.18173	-0.1822	-0.297083398
42	2005	41.30626	0.91	12.03	2.470557485	24.89340102	3.746094161	-0.0305	-0.6681	1.36787	-0.6701	-1.1654	-0.148016358
42	2006	36.60519	0.47	8.63	2.493095407	23.6473461	5.326565144	-0.1941	-0.6744	0.85719	-0.6287	-1.2237	-0.123779826
42	2007	40.74074	0.03	4.6	2.502140227	25.00393342	2.104485285	-0.0502	-0.6806	0.25189	-0.6121	-1.1602	-0.173190441
42	2008	37.29961	11.86	3.19	2.495738547	23.48470333	-1.463230435	-0.1699	-0.5124	0.04011	-0.6238	-1.2314	-0.227901383
42	2009	30.54062	0	2.81	2.497302926	23.63254526	0.360860957	-0.4051	-0.681	-0.017	-0.621	-1.2244	-0.199928931
42	2010	32.53115	0	0.58	2.544948149	24.21373785	11.59512521	-0.3358	-0.681	-0.3519	-0.5334	-1.1972	-0.027651418
42	2011	33.16727	0	-1.42	2.533059933	26.22201383	-2.700236663	-0.3137	-0.681	-0.6523	-0.5552	-1.1032	-0.246870882
42	2012	31.20055	0.03	4.43	2.559607421	30.12267402	6.303481421	-0.3821	-0.6806	0.22636	-0.5065	-0.9205	-0.108798808
42	2013	36.04944	0	1.93	2.558312486	30.23474438	-0.297725706	-0.2134	-0.681	-0.1491	-0.5088	-0.9153	-0.210028361
42	2014	64.02129	11.86	3.56	2.563836919	30.00546001	1.280172533	0.75975	-0.5124	0.09569	-0.4987	-0.926	-0.185831282
42	2015	56.85265	11.47	6.55	2.636678423	40.43953	18.26098826	0.51034	-0.5179	0.54478	-0.3648	-0.4375	0.074569634
42	2016	71.87004	22.18	10.95	2.70756166	40.49687249	17.72894111	1.03282	-0.3656	1.20565	-0.2345	-0.4348	0.066410688
42	2017	67.69747	19.54	9.31	2.743713537	36.97903511	8.680562364	0.88765	-0.4031	0.59933	-0.1681	-0.5995	-0.072346257
42	2018	33.78831	52.52	6.23	2.993612558	47.40714431	77.78659835	-0.2921	0.06594	0.49672	0.2912	-0.1112	0.987395238
42	2019	28.3007	47.05	6.75	3.039172116	57.17614379	11.06048305	-0.483	-0.0119	0.57482	0.37494	0.34623	-0.035850159
43	2005	38.63519	72.88	3.9	2.240773825	44.18404274	17.02742673	-0.1235	0.35551	0.14676	-1.0924	-0.2621	0.05565296
43	2006	51.42802	58.07	-0.0064	2.195512211	33.85821752	-9.89717962	0.32161	0.14487	-0.44	-1.1756	-0.7456	-0.357236047
43	2007	32.60634	89.12	-0.0064	2.266654963	29.15899989	17.79931149	-0.3332	0.58649	-0.44	-1.0449	-0.9657	0.067489818
43													

DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN  
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43	2009	34.93021	84.61	-5.2	2.228092239	31.36976579	-5.620987999	-0.2524	0.52234	-1.2201	-1.1157	-0.8621	-0.291660622
43	2010	30.43165	94.06	-2.28	2.220996697	31.91054467	-1.620534658	-0.4089	0.65675	-0.7815	-1.1288	-0.8368	-0.230313645
43	2011	18.75882	72.44	-5.06	2.313044233	47.7797725	23.60827221	-0.815	0.34925	-1.199	-0.9596	-0.0938	0.156570267
43	2012	22.96313	62.15	-4.19	2.251540889	53.84399866	-13.20461067	-0.6687	0.2029	-1.0683	-1.0727	0.1902	-0.407955523
43	2013	22.50436	40.56	-0.27	2.205961823	62.56534727	-9.963016923	-0.6847	-0.1042	-0.4796	-1.1564	0.59857	-0.358245663
43	2014	23.69205	30.66	0.25	2.197804153	69.52248082	-1.860841424	-0.6434	-0.245	-0.4015	-1.1714	0.92434	-0.23399875
43	2015	27.52816	26.22	-4.21	2.17868924	73.10801856	-4.305916672	-0.5099	-0.3081	-1.0714	-1.2065	0.19223	-0.271493995
43	2016	31.81566	20.51	2.8	2.256043899	71.93322981	19.4963552	-0.3607	-0.3893	-0.0185	-1.0644	1.03722	0.093513994
43	2017	37.10953	0	3.78	2.18110008	50.82377751	-15.84960071	-0.1765	-0.681	0.12873	-1.2021	0.04878	-0.448516462
43	2018	20.95515	51.8	-2.81	2.160438517	25.78616352	-4.64610518	-0.7386	0.0557	-0.8611	-1.2401	-1.1236	-0.276710788
43	2019	26.10752	4.17	-1.91	2.157228684	26.72647611	-0.62201949	-0.5593	-0.6217	-0.7259	-1.2451	-1.0796	-0.215001408
44	2005	28.30379	2.34	8.51	2.775399256	52.42280405	7.462014023	-0.4829	-0.6478	0.83917	-0.1099	0.12366	-0.091032704
44	2006	28.88495	6.69	8.36	2.815790195	50.43403839	9.746565807	-0.4627	-0.5859	0.81664	-0.0356	0.03053	-0.055999088
44	2007	55.62177	7.44	8.47	2.83224698	50.31121706	3.862024697	0.46752	-0.5752	0.83316	-0.0054	0.02478	-0.146238563
44	2008	40.39846	2.95	11.06	2.870321955	47.05739627	9.162877617	-0.0621	-0.6391	1.22218	0.06461	-0.1276	-0.06494995
44	2009	39.10103	0.82	10.18	2.91654343	42.5585031	11.22988165	-0.1073	-0.6694	1.09	0.14956	-0.3382	-0.033252543
44	2010	46.03999	0.17	9.88	2.944319781	21.4091648	6.604699638	0.13416	-0.6786	1.04494	0.20061	-1.3285	-0.104179625
44	2011	59.31322	0	9.79	2.978358582	49.13757765	8.153057397	0.59595	-0.681	1.03142	0.26317	-0.0302	-0.080435549
44	2012	50.26775	0.0321	7.42	2.999587224	49.44297082	5.009512398	0.28125	-0.6806	0.67545	0.30218	-0.0159	-0.128641832
44	2013	55.27071	0.0321	7.61	3.019282496	46.15553855	4.639407437	0.45531	-0.6806	0.70399	0.33838	-0.1698	-0.134317393
44	2014	66.39578	0.0321	8.04	3.054827468	41.57647017	8.528792807	0.84236	-0.6806	0.76858	0.40371	-0.3842	-0.074673644
44	2015	45.4957	3.21	12.03	3.224463135	57.83041992	47.78680722	0.11522	-0.6354	1.36787	0.71548	0.37686	0.527348253
44	2016	37.05204	2.68	3	3.227567934	58.67855705	0.717467929	-0.1785	-0.6429	0.01158	0.72119	0.41658	-0.19446036
44	2017	38.5026	2.05	2.98	3.234086825	58.28093099	1.512352258	-0.1281	-0.6519	0.00857	0.73317	0.39796	-0.182270804
44	2018	33.17962	1.56	2.7	3.236539781	61.33839131	0.566411947	-0.3133	-0.6589	-0.0335	0.73768	0.54112	-0.196776805
44	2019	28.35897	8.61	2.27	3.279872182	68.71804294	10.49239854	-0.481	-0.5586	-0.0981	0.81732	0.88667	-0.044561738
45	2005	98.83375	36.11	8.04	3.38653	41.46955436	-7.2312932	1.97092	-0.1675	0.76858	1.01335	-0.3892	-0.316354662
45	2006	99.08109	34.26	9.41	3.41928	42.07804473	7.83398216	1.97953	-0.1938	0.97435	1.07354	-0.3607	-0.08532857
45	2007	182.0356	35.75	9.44	3.4597	40.90172552	9.75273522	4.86563	-0.1726	0.97886	1.14783	-0.4158	0.05590448
45	2008	79.3742	56.89	6.63	3.55156	42.85064366	23.5545778	1.2939	0.12809	0.5568	1.31666	-0.3246	0.155746863
45	2009	99.56455	70.56	4.52	3.59684	40.8582453	10.9908225	1.99635	0.32251	0.23988	1.39988	-0.4178	-0.036918404
45	2010	120.3182	74.77	6.08	3.64207	38.43996662	10.9762793	2.7184	0.38239	0.47419	1.48301	-0.5311	-0.037141424
45	2011	125.7359	39.35	6.47	3.74707	41.15109047	27.350287	2.90689	-0.1214	0.53277	1.67599	-0.4041	0.021954087
45	2012	77.41054	96.12	5.19	3.97096	57.44346915	67.452011	1.22558	0.68605	0.34051	2.08747	0.35874	0.828914276
45	2013	62.9441	70.72	4.54	4.07889	51.06967234	28.2113265	0.72227	0.32479	0.24288	2.28584	0.0603	0.227158133
45	2014	59.97413	61.93	3.91	4.14378	50.1918199	16.1151735	0.61894	0.19977	0.14826	2.4051	0.01919	0.041663551
45	2015	72.63194	58.36	5.57	4.0898	55.2539963	-11.688451	1.05933	0.149	0.39759	2.30589	0.25622	-0.384705205
45	2016	57.11219	53.71	5.57	4.38034	51.77116518	95.2300519	0.51937	0.08286	0.39759	2.83988	0.09314	1.254890707
45	2017	32.66641	47.15	3.98	4.45079	55.85705396	17.610891	-0.3311	-0.0104	0.15877	2.96936	0.28446	0.064600388
45	2018	22.12474	68.41	2.76	4.46589	64.9991397	3.53756136	-0.6979	0.29194	-0.0245	2.99711	0.71253	-0.15121421
45	2019	13.39486	71.3	1.46	4.47687	63.42523124	2.56139147	-1.0016	0.33304	-0.2197	3.01729	0.63884	-0.166183781
46	2005	36.95591905	24.4	2.7	2.557146142	31.411145	-5.526453641	-0.1819	-0.334	-0.0335	-0.511	-0.8602	-0.290210937
46	2006	40.00921871	41.5	2.7	2.63738965	42.12952293	20.29387302	-0.0757	-0.0908	-0.0335	-0.3635	-0.3583	0.105743935
46	2007	34.39431536	58.1	1.2	2.646795689	33.06269734	2.189444572	-0.271	0.1453	-0.2588	-0.3462	-0.7829	-0.171887589
46	2008	56.58227848	35.4	1.8	2.569724949	29.08699165	-16.26071267	0.50094	-0.1776	-0.1687	-0.4879	-0.969	-0.454820866
46	2009	47.22288796	37	-3.5	2.523486332	38.28639904	-10.09964988	0.17531	-0.1548	-0.9647	-0.5728	-0.5383	-0.36034093
46	2010	38.50964737	68.4	2.5	2.654080235	30.51674429	35.08088676	-0.1278	0.29179	-0.0635	-0.3328	-0.9021	0.332502883
46	2011	42.6185671	55.4	3.6	2.598133646	20.77447023	-12.08693724	0.01512	0.1069	0.1017	-0.4356	-1.3583	-0.390815994
46	2012	44.38855354	62.6	4.9	2.650598898	24.74849095	12.84056509	0.0767	0.2093	0.29695	-0.3392	-1.1722	-0.008552589
46	2013	39.03276437	72	4.5	2.707314634	24.28879733	13.95036888	-0.1096	0.343	0.23687	-0.235	-1.1937	0.008466259
46	2014	48.72049264	74.6	4.3	2.766858811	34.72459802	14.69491858	0.22741	0.37997	0.20684	-0.1255	-0.7051	0.019883933
46	2015	41.71854734	82.4	1	2.665205628	33.05231301	-20.86897024	-0.0162	0.49091	-0.2888	-0.3124	-0.7834	-0.525488525
46	2016	33.04960742	114.1	-0.5	2.748498127	31.15631692	21.14137484	-0.3178	0.94177	-0.5141	-0.1593	-0.8721	0.11874038
46	2017	50.15706806	131.3	0.1	2.758154622	34.08376963	2.248394004	0.27739	1.1864	-0.424	-0.1415	-0.7351	-0.170983599
46	2018	38.16899696	168.2	-1.2	2.915135907	44.41337386	43.54275742	-0.1397	1.71122	-0.6193	0.14697	-0.2514	0.462265722
46	2019	22.74718398	223.7	1.3	2.981728025	43.33541927	16.57142857	-0.6762	2.50058	-0.2438	0.26936	-0.3019	0.048660225
47	2005	36.05904059	73.1	0.6	2.432969291	85.60885609	-10.14588859	-0.2131	0.35864	-0.3489	-0.7392	1.67757	-0.361050001
47	2006	18.00135731	107	1	2.469380136	95.89412962	8.745387454	-0.8413	0.84079	-0.2888	-0.6723	2.15917	-0.071352164
47	2007	12.87932045	21.7	-3.3	2.53263517	89.27943761	15.84662369	-0.10195	-0.3724	-0.9347	-0.5549	1.84944	0.037545338
47	2008	12.07943262	173.4	-1.9	2.547159121	85.33333333	3.251318102	-1.0474	1.78518	-0.7244	-0.5293	1.66467	-0.155603752
47	2009	6.054200542	177.8	-1.3	2.567026366	81.00271003	4.680851064	-1.257	1.84776	-0.6343	-0.4928	1.46189	-0.133681851
47	2010	16.56122171	155.3	-1.6	2.56431091	80.41996182	-0.623306233	-0.8915	1.52775	-0.6793	-0.4978	1.4346	-0.215021141
47	2011	48.02876481	86.1	0.1	2.549738731	58.1500282	-3.299700027	0.20335	0.54354	-0.424	-0.5246	0.39183	-0.256063656
47	2012	32.16378663	0.7	37.2	2.60129931	77.41046832	12.60575296	-0.3486	-0.6711	5.14836	-0.4298	1.29369	-0.012153435
47	2013	23.30298432	5.7	8.4	2.597036665	78.80627213	-0.976709241	-0.6569	-0.6	0.82265	-0.4377	1.35904	-0.220440578
47	2014	35.61555076	0.6	2.5	2.568670978	86.71706263	-6.322711179	-0.2285	-0.6725	-0.0635	-0.4898	1.72946	-0.302421551
47	2015	24.77671756	35.2	5.3	2.719331287	88.56870229	41.46868251	-0.6056	-0.1804	0.35703	-0.2129	1.81616	0.430459771
47	2016	35.17228603	39.1	0.5	2.73223288	56.74323824	3.015267176	-0.2439	-0.1249	-0.3639	-0.1892	0.32596	-0.159223595
47	2017	25.71400277	0.1	19.2	2.703205371	60.68528421	-6.46535754	-0.573	-0.6796	2.44479	-0.2425	0.51054	-0.304609034
47	2018	24.49786975	0.1	2.7	2.692758818	64.19151958	-2.376708259	-0.6153	-0.6796	-0.0335	-0.2617	0.67472	-0.241909572
47	2019	18.41688654	1.3	-1.2	2.692582562	66.38928354	-0.040576182	-0.8269	-0.6625	-0.6193	-0.2621	0.77763	-0.206084972
48	2005	19.45886251	36.5	0.6	2								

**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS**

48	2006	14.04043201	36.3	0.3	2.557627488	66.85128773	-0.303699613	-0.9792	-0.1648	-0.394	-0.5101	0.79926	-0.210119971
48	2007	12.92303706	22	-0.8	2.586474779	61.9849702	6.867903628	-1.018	-0.3681	-0.5592	-0.4571	0.5714	-0.10014339
48	2008	11.61091549	36.8	1	2.532499586	66.16784038	-11.68696554	-1.0637	-0.1576	-0.2888	-0.5563	0.76726	-0.384682425
48	2009	9.909828674	30.3	1.5	2.522052801	60.47490231	-2.376760563	-1.1229	-0.2501	-0.2137	-0.5755	0.50069	-0.241910374
48	2010	11.75448126	31.8	2.8	2.566083784	55.86637697	10.67027352	-1.0587	-0.2288	-0.0185	-0.4946	0.2849	-0.041834024
48	2011	13.16928627	34.2	3.5	2.588943643	55.5526926	5.404671374	-1.0095	-0.1946	0.08668	-0.4525	0.27021	-0.122582066
48	2012	18.02931988	28.3	5.6	2.619197716	63.47031963	7.214635403	-0.8404	-0.2785	0.40209	-0.3969	0.64095	-0.094826256
48	2013	18.82014082	25.9	6.3	2.670894954	55.08854278	12.64119202	-0.8129	-0.3127	0.50723	-0.3019	0.24848	-0.011609977
48	2014	51.78794561	19.2	6.6	2.735758537	52.44395443	16.10838489	0.33414	-0.408	0.55229	-0.1827	0.12465	0.041559448
48	2015	36.22996035	21.6	3.1	2.763502865	51.93932081	6.596839397	-0.2071	-0.3738	0.0266	-0.1317	0.10102	-0.104300162
48	2016	29.05716277	27.8	2.3	2.758760544	52.64900662	-1.086019652	-0.4567	-0.2856	-0.0936	-0.1404	0.13425	-0.222116854
48	2017	27.40419492	24.3	-0.6	2.802157753	47.75272039	10.5088811	-0.5142	-0.3354	-0.5291	-0.0607	-0.095	-0.04430887
48	2018	18.13982522	23.3	0.2	2.806722503	47.56554307	1.056615676	-0.8365	-0.3497	-0.409	-0.0523	-0.1038	-0.189259528
48	2019	18.38967972	19.7	2	2.828917562	45.2995255	5.243445693	-0.8278	-0.4009	-0.1386	-0.0115	-0.2099	-0.125054463
49	2005	35.13769282	13	3.6	3.023951707	72.66963187	-2.320207062	-0.2451	-0.4961	0.1017	0.34696	1.0717	-0.241043125
49	2006	26.5515985	57.8	3	3.128722284	72.2602305	27.28305101	-0.5438	0.14103	0.01158	0.53952	1.05253	0.212923023
49	2007	44.73477786	66.6	3.5	3.191814172	62.47026297	15.63568773	0.08875	0.26619	0.08668	0.65548	0.59412	0.034310634
49	2008	31.2427878	93.7	11.5	3.339212862	60.09249931	40.41021025	-0.3807	0.61563	1.28826	0.92638	0.48278	0.414228092
49	2009	16.37390345	88.5	1.7	3.27959851	59.85186742	-12.82626614	-0.898	0.57767	-0.1837	0.81682	0.47152	-0.402153607
49	2010	22.25012579	93.4	2.7	3.339670024	55.77969901	14.83427011	-0.6935	0.64736	-0.0335	0.92722	0.28084	0.02202089
49	2011	30.08192484	93.5	2.7	3.40045164	50.48319745	15.02218563	-0.421	0.64878	-0.0335	1.03893	0.03283	0.024902575
49	2012	24.43002707	87	3.8	3.400088785	48.73029772	-0.083515609	-0.6177	0.55634	0.13174	1.03827	-0.0492	-0.206743448
49	2013	26.78467209	90.2	3.8	3.415707687	53.08324374	3.661837287	-0.5358	0.60185	0.13174	1.06697	0.15458	-0.149308438
49	2014	31.04711641	78.9	4.7	3.417438476	49.6099128	0.399324221	-0.3875	0.44113	0.26691	1.07016	-0.0081	-0.199339096

49	2015	29.72010496	65.5	4.8	3.380374072	46.65750344	-8.180357962	-0.4336	0.25055	0.28193	1.00203	-0.1463	-0.330908576
49	2016	26.20911912	69.3	2.9	3.403360776	57.60448764	5.435461702	-0.5558	0.30459	-0.0034	1.04428	0.36628	-0.122109896
49	2017	24.6429829	71.8	3.6	3.407543858	63.32407371	0.967843881	-0.6103	0.34015	0.1017	1.05197	0.6341	-0.190620844
49	2018	23.40556112	52.1	2.7	3.379341783	52.35470942	-6.287413436	-0.6533	0.05996	-0.0335	1.00014	0.12047	-0.30188026
49	2019	19.39462541	48.6	1.7	3.377543008	57.13327464	-0.413326653	-0.7929	0.01018	-0.1837	0.99683	0.34422	-0.211801102
50	2005	60.89203835	15.6	6.7	2.857151503	58.57996387	8.258122744	0.65088	-0.4592	0.56731	0.0404	0.41196	-0.078824371
50	2006	37.99311769	15.2	3.5	2.861235619	45.97384721	0.944838127	-0.1458	-0.4649	0.08668	0.04791	-0.1783	-0.190973637
50	2007	50.84948842	23.9	2.1	2.870871895	43.68605277	2.243633861	0.30149	-0.3411	-0.1236	0.06562	-0.2854	-0.217056596
50	2008	47.56908972	27.2	8	2.882809041	42.22658808	2.786752827	0.18736	-0.2942	0.76257	0.08756	-0.3538	-0.162727863
50	2009	35.42312106	18.5	3	2.843357378	45.39586919	-8.683693517	-0.2352	-0.4179	0.01158	0.01505	-0.2054	-0.33862723
50	2010	47.42173704	0.4	3.9	2.794418331	39.74955852	-10.65691337	0.18223	-0.6754	0.14676	-0.0749	-0.4698	-0.368886569
50	2011	58.28351164	0.4	4.4	2.803183889	46.47577093	2.038850538	0.56012	-0.6754	0.22186	-0.0588	-0.1548	-0.17419695
50	2012	49.75943922	0.4	3	2.797752129	49.25920025	-1.242920076	0.26356	-0.6754	0.01158	-0.0688	-0.0443	-0.214522923
50	2013	47.93041392	0.4	5.5	2.823995991	46.70065987	6.22909033	0.19993	-0.6754	0.38707	-0.0205	-0.1025	-0.109939596
50	2014	68.4780321	0.3	8.2	2.880927865	37.7400684	14.00719856	0.91481	-0.6768	0.79261	0.0841	-0.5639	0.009337742
50	2015	84.03559191	0.2	12.5	2.95650459	37.3383442	19.00815575	1.45607	-0.6782	1.43846	0.223	-0.5827	0.086027452
50	2016	81.39284075	0.1	9	2.940317222	35.76181735	-3.658671383	1.36413	-0.6796	0.91277	0.19325	-0.6567	-0.261568484
50	2017	76.65031769	0.1	9.4	2.952840857	34.51120276	2.92565397	1.19913	-0.6796	0.97285	0.21627	-0.715	-0.160597814
50	2018	64.81992988	0.1	7.6	2.973728059	31.54148518	4.926986958	0.78754	-0.6796	0.70249	0.25466	-0.8541	-0.12990736
50	2019	58.49018621	0	7.2	2.997167871	29.38097635	5.54552215	0.56732	-0.681	0.64241	0.29774	-0.9553	-0.120422119
51	2005	9.074093211	116.3	1.4	2.875740741	51.72057456	-14.68747245	-1.1519	0.97306	-0.2287	0.27674	0.09077	-0.3840695218
51	2006	10.22336409	115	0.7	2.979366242	52.46434564	-1.457063139	-1.112	0.95457	-0.3339	0.26502	0.1256	-0.227806808
51	2007	12.51169218	96.6	2.2	2.973497309	44.96173469	-1.342281879	-1.0323	0.69287	-0.1086	0.25423	-0.2257	-0.226046637
51	2008	5.538051074	81.9	1	2.896029912	38.57197307	-16.33715986	-1.275	0.4838	-0.2888	0.11186	-0.5249	-0.455993184

51	2009	10.96235353	66.1	3.7	2.904282658	42.64522563	1.918434761	-1.0862	0.25908	0.11672	0.12702	-0.3342	-0.176043526
51	2010	18.06207916	22.1	-1.7	2.784545974	38.84053211	-24.09623535	-0.8392	-0.3667	-0.6944	-0.093	-0.5123	-0.574978656
51	2011	18.29931973	6.4	-2.7	2.658679029	48.97959184	-25.16012482	-0.831	-0.59	-0.8446	-0.3244	-0.0376	-0.591293407
51	2012	16.03039134	18.4	-3.4	2.681602999	46.0865945	5.420232609	-0.9099	-0.4193	-0.9497	-0.2822	-0.173	-0.122343435
51	2013	17.15233415	20	-7.8	2.609594409	52.94840295	-15.27893422	-0.8709	-0.3966	-1.6106	-0.4146	0.14827	-0.439765288
51	2014	14.84599044	18.9	-4.6	2.575880316	55.39033457	-7.469287469	-0.9511	-0.4122	-1.1299	-0.4765	0.26261	-0.320004306
51	2015	16.60568442	17.7	-1.7	2.48586333	56.22345639	-18.72012746	-0.8899	-0.4293	-0.6944	-0.642	0.30162	-0.492536007
51	2016	16.48968549	15.6	0.8	2.470851325	56.13797768	-3.397582489	-0.8939	-0.4592	-0.3189	-0.6696	0.29762	-0.257564684
51	2017	19.01745495	15.9	14.2	2.550472957	66.44144144	20.12174501	-0.806	-0.4549	1.6938	-0.5232	0.78007	0.10310435
51	2018	13.62193764	14.9	1.5	2.555336328	63.36302895	1.126126126	-0.9937	-0.4691	-0.2137	-0.5143	0.63592	-0.188193584
51	2019	15.5150463	14.5	-4.2	2.538573734	65.39351852	-3.786191537	-0.9278	-0.4748	-1.0699	-0.5451	0.731	-0.263524006
52	2005	17.38753885	81.5	1.9	3.593928171	37.99735086	-17.39157881	-0.8627	0.47811	-0.1536	1.39453	-0.5518	-0.472162706
52	2006	4.086953829	252	-21.6	3.509108393	47.42204193	-17.74160681	-1.3254	2.90308	-3.6833	1.23864	-0.1105	-0.477530387
52	2007	4.342105263	232.3	0	3.513270884	47.45123298	0.963057009	-1.3166	2.6229	-0.439	1.24629	-0.1091	-0.19069425
52	2008	5.164654756	236.1	0.1	3.492271358	49.71833253	-4.72027972	-1.288	2.67694	-0.424	1.20769	-0.003	-0.277848255
52	2009	3.072364522	190.8	2	3.482501989	50.72759597	-2.22436826	-1.3607	2.03265	-0.1386	1.18974	0.04428	-0.239573437
52	2010	8.65165082	150.4	0.3	3.511869998	57.32484076	6.996115098	-1.1666	1.45806	-0.394	1.24371	0.35319	-0.098172767
52	2011	12.16947459	117.3	-5.5	3.447406129	42.85051399	-13.79427059	-1.0442	0.98728	-1.2651	1.12523	-0.3246	-0.416997962
52	2012	10.76671238	80.2	-5	3.354166085	40.1141441	-19.32110223	-1.093	0.45962	-1.19	0.95387	-0.4527	-0.501751959
52	2013	9.165205191	77.5	-0.9	3.300952557	48.65460741	-11.70641065	-1.1488	0.42122	-0.5742	0.85449	-0.0528	-0.384980616
52	2014	13.84302265	63.1	0.4	3.282440836	40.13672894	-3.983564664	-0.986	0.21641	-0.3789	0.82204	-0.4516	-0.266550725
52	2015	22.41237387	48.8	-8	3.177940307	41.09798194	-21.38607661	-0.6879	0.10303	-1.6406	0.62998	-0.4066	-0.533418354
52	2016	20.64206314	46.3</										

**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS**

52	2018	18.74833407	29.3	-2.4	2.954435486	67.4366948	-5.84544599	-0.8154	-0.2643	-0.7995	0.2192	0.82667	-0.295102686
52	2019	12.80461165	20.8	-3.2	2.915927212	83.60436893	-8.485117725	-1.0221	-0.3852	-0.9197	0.14843	1.58371	-0.335582069
53	2005	15.09819967	6.5	1.6	2.087071206	68.32242226	13.78026071	-0.9424	-0.5886	-0.1987	-1.3749	0.86814	0.005857649
53	2006	25.07159005	14.7	0.5	2.122870923	72.51695554	8.592471358	-0.5954	-0.472	-0.3639	-1.3091	1.06455	-0.073697133
53	2007	65.6030984	12.3	0.1	2.110926242	71.40975988	-2.712886209	0.81469	-0.5061	-0.424	-1.3311	1.01271	-0.247064863
53	2008	11.4556213	41	1.2	2.227886705	76.98224852	30.90627421	-1.0691	-0.0979	-0.2588	-1.1161	1.27364	0.268485173
53	2009	16.58645775	30.6	3.3	2.252124553	67.48740907	5.73964497	-0.8906	-0.2458	0.05664	-1.0716	0.82905	-0.117445244
53	2010	24.45887446	27.9	0	2.266701967	75.91991342	3.41354225	-0.6167	-0.2842	-0.439	-1.0448	1.22389	-0.153116044
53	2011	18.23672674	29.1	0.5	2.312388949	46.19581101	11.09307359	-0.8332	-0.2672	-0.3639	-0.9608	-0.1679	-0.035350382
53	2012	15.97289025	29.8	1.4	2.359266165	40.23174464	11.39795421	-0.9119	-0.2572	-0.2287	-0.8747	-0.4472	-0.030675036
53	2013	27.74507156	95.3	3	2.568553712	15.78990008	61.9151272	-0.5023	0.67438	0.01158	-0.49	-1.5917	0.744006826
53	2014	27.77292576	85.6	1.6	2.50963518	17.20212102	-13.42155009	-0.5014	0.53642	-0.1987	-0.605	-0.65	-0.41128229
53	2015	37.15355805	101	0.1	2.60260252	16.38951311	24.92202121	-0.175	0.75545	-0.424	-0.4274	-1.5636	0.176716616
53	2016	16.30761395	111.4	-4.2	2.594060901	15.36287242	-1.947565543	-0.9003	0.90337	-1.0699	-0.4431	-1.6117	-0.235328665
53	2017	19.80195599	103.3	0.5	2.611723308	13.80195599	4.15075121	-0.7787	0.78817	-0.3639	-0.4107	-1.6847	-0.14181094
53	2018	24.6553236	71	5.4	2.5834255	12.4243215	-6.30806846	-0.6098	0.32877	0.37205	-0.4627	-1.7492	-0.302197005
53	2019	23.99336021	56.4	5.2	2.625003601	16.78444392	10.04697286	-0.6329	0.12112	0.34201	-0.3863	-1.5451	-0.051392344
54	2005	22.86067247	4.1	3.9	2.96890303	40.3370798	-6.965820508	-0.6723	-0.6227	0.14676	0.24579	-0.4422	-0.312283637
54	2006	20.66487509	4.3	4.5	3.002036402	39.59390863	7.927811795	-0.7487	-0.6199	0.23687	0.30669	-0.477	-0.083889692
54	2007	34.83135741	5.5	5.3	3.03666881	48.6442606	8.300985369	-0.2558	-0.6028	0.35703	0.37034	-0.533	-0.078167073
54	2008	19.41894339	19.9	4.3	3.103837916	58.14502795	16.72640382	-0.792	-0.398	0.20684	0.49379	0.39159	0.051036772
54	2009	31.3528093	16.5	4.4	3.154545692	54.85498108	12.38485159	-0.3768	-0.4464	0.22186	0.58698	0.23754	-0.015540959
54	2010	30.42589106	21.9	3.2	3.187605315	61.79964942	7.909485778	-0.4091	-0.3696	0.04162	0.64774	0.56272	-0.084170222
54	2011	24.64721713	85.7	4.1	3.408901082	71.02461094	66.45458677	-0.6101	0.53785	0.1768	1.05446	0.99467	0.813618769

54	2012	17.83970299	82.1	5.1	3.660770644	75.88119677	78.59510901	-0.847	0.48664	0.32699	1.51738	1.22208	0.999793754
54	2013	24.89558951	70.1	7.6	3.734455777	65.75557071	18.49093689	-0.6015	0.31597	0.70249	1.6528	0.74795	0.078095898
54	2014	20.51323631	76.5	6.1	3.852826335	50.08731809	32.97823322	-0.754	0.407	0.47719	1.8803	0.0143	0.300258678
54	2015	21.47263017	52.3	3	3.828724327	56.81501261	-6.56964657	-0.7206	0.06281	0.01158	1.82606	0.32932	-0.306208307
54	2016	19.75933383	53.1	1.6	3.864837273	53.62364344	8.670820353	-0.7802	0.07419	-0.1987	1.89243	1.17988	-0.072495651
54	2017	18.01521096	51.5	2.6	3.873221755	52.93038576	1.949354993	-0.8409	0.05143	-0.0485	1.90784	0.14742	-0.175569365
54	2018	16.16679844	51.3	2.3	3.908206123	56.05944557	8.388789952	-0.9052	0.04859	-0.0936	1.97214	0.29394	-0.082802589
54	2019	12.17759079	47.6	3.5	4.052693942	79.12400354	39.47225379	-1.044	-0.004	0.08668	2.23769	1.37392	0.399844524
55	2005	30.6335844	160.9	-2.2	2.353531559	26.59282233	1.120071685	-0.4019	1.60739	-1.0699	-0.8852	-1.0858	-0.188286429
55	2006	18.92857143	145.8	-4.4	2.360971884	19.80400697	1.727957466	-0.8091	1.39263	-0.7995	-0.8715	-1.4037	-0.178964497
55	2007	29.41077441	54.7	-4.8	2.074816441	21.91077441	-48.25783972	-0.4444	0.09694	-1.16	-1.3975	-1.3051	-0.94549701
55	2008	15.92960289	56.1	-6	2.04453976	29.33212996	-6.734006734	-0.9134	0.11685	-1.3402	-1.4531	-0.9576	-0.308728771
55	2009	27.01403819	15.6	1.5	1.898011739	45.28898444	-28.63718412	-0.5278	-0.4592	-0.2137	-1.7224	-2.104	-0.644614133
55	2010	23.11585282	7.6	0.8	1.863976784	46.77882643	-7.537624889	-0.6634	-0.5729	-0.3189	-1.785	-0.1406	-0.321052226
55	2011	3.825543916	3.2	4.7	2.695831773	34.24657534	578.9768841	-1.3345	-0.6355	0.26691	-0.2561	-0.7274	8.673151412
55	2012	57.35511714	0.3	2	2.687172105	31.66872174	-1.974214343	0.52782	-0.6768	-0.1386	-0.272	-0.8481	-0.235737325
55	2013	53.15113963	0.2	3.3	2.655042341	28.43549458	-7.131113851	0.38156	-0.6782	0.05664	-0.3311	-0.9999	-0.314818411
55	2014	52.78707539	0.2	5.3	2.780677274	19.13835957	33.54724497	0.3689	-0.6782	0.35703	-0.1002	-1.4349	-0.308984476
55	2015	67.72212948	0.2	8.4	2.731669332	37.13596735	-10.67108534	0.88851	-0.6782	0.82265	-0.1902	-0.5921	-0.369103896
55	2016	62.31132933	0.5	5.2	2.74028372	30.98745226	2.003338898	0.70026	-0.6739	0.34201	-0.1744	-0.88	-0.174741521
55	2017	55.7701669	3.2	1.4	2.759818877	30.68497914	4.600836516	0.47268	-0.6355	-0.2287	-0.1385	-0.8942	-0.134908879
55	2018	57.20719051	2.8	3.3	2.732071941	37.54633062	-6.189151599	0.52268	-0.6412	0.05664	-0.1895	-0.5729	-0.300373414
55	2019	43.56339788	2.4	1.2	2.806451323	45.69019363	18.68050408	0.04799	-0.6469	-0.2588	-0.0528	-0.1916	0.081002912
56	2005	68.35144928	26.6	9.9	2.219060332	46.73309179	36.40856672	0.9104	-0.3027	1.04795	-1.1323	-0.1428	0.352862863

56	2006	109.873083	19.9	10.8	2.276691529	44.90745637	14.19082126	2.355	-0.398	1.18313	-1.0264	-0.2282	0.012153597
56	2007	113.0101505	21.2	10	2.45591024	35.10675534	51.0840825	2.46414	-0.3795	1.06297	-0.697	-0.6872	0.57791199
56	2008	37.50504177	39	7.6	2.540454614	0.329876116	21.49107455	-0.1628	-0.1264	0.70249	-0.5417	-2.3156	0.124103027
56	2009	52.685564	29.2	4.4	2.534280005	34.30742256	-1.411696917	0.36536	-0.2657	0.22186	-0.553	-0.7246	-0.227111117
56	2010	60.45650999	26.7	4.5	2.568436414	40.41058887	8.182349503	0.63573	-0.3013	0.23687	-0.4902	-0.4388	-0.079986355
56	2011	60.67831985	39.6	3.8	2.583538819	56.71797548	3.538627769	0.64344	-0.1178	0.13174	-0.4625	0.32477	-0.151197857
56	2012	55.44980443	49.1	3.7	2.662946614	54.08518036	20.06261414	0.46154	0.0173	0.11672	-0.3165	0.20149	0.102197578
56	2013	48.17408907	67	2.8	2.693726949	56.41700405	7.344632768	0.2084	0.27188	-0.0185	-0.26	0.31068	-0.092832746
56	2014	53.51802811	77.1	2.8	2.690993032	55.67325321	-0.627530364	0.39433	0.41553	-0.0185	-0.265	0.27586	-0.215085918
56	2015	41.62702823	91.8	0.4	2.653115993	67.65947988	-8.352006519	-0.0194	0.6246	-0.3789	-0.3346	0.8371	-0.333540808
56	2016	38.48194867	99.7	1.9	2.662568967	67.42061766	2.200488998	-0.1288	0.73696	-0.1536	-0.3172	0.82592	-0.171718223
56	2017	35.00382263	91.3	2.1	2.718667735	67.24006116	13.78860374	-0.2498	0.61749	-0.1236	-0.2141	0.81746	0.005985589
56	2018	30.32416682	99.5	0.7	2.739651444	65.79857949	4.95030581	-0.4126	0.73412	-0.3339	-0.1756	0.74997	-0.129549765
56	2019	61.6809816	62.4	1.8	2.756255649	72.72567923	3.897286469	0.67833	0.20646	-0.1687	-0.145	1.07432	-0.145697823
57	2005	25.23514851	43.7	-1	2.384532615	29.82260726	11.29476584	-0.5897	-0.0595	-0.5892	-0.8282	-0.9346	-0.032257431
57	2006	14.78163993	63.9	-19.7	2.351022853	36.76916221	-7.425742574	-0.9534	0.22779	-3.3979	-0.8898	-0.6093	-0.319336544
57	2007	12.50095456	62.8	-3.4	2.418135498	30.65673921	16.71122995	-1.0327	0.21215	-0.9497	-0.7665	-0.8955	0.05080408
57	2008	8.14800759	68.8	-0.2	2.42078062	27.02466793	0.610920199	-1.1842	0.29748	-0.4691	-0.7616	-0.9656	-0.19609427
57	2009	6.451612903	71.7	-3	2.383456297	28.51116625	0.348253153	-1.2432	0.33873	-0.8896	-0.8302	-0.9696	-0.00122271
57	2010	6.949152542	65	-1.9	2.414304688	25.18104777	7.361455749	-1.2259	0.24344	-0.7244	-0.7735	-1.1519	-0.092574765
57	2011	8.744993324	75.4	0.7	2.476541809	22.32977303	15.40832049	-1.1634	0.39135	-0.3339	-0.6591	-1.2854	0.030823956
57	2012	14.09982175	92.9	-9.3	2.226084116	34.80095068	-43.82510013	-0.9771	0.64025	-1.8359	-1.1194	-0.7015	-0.877520921
57	2013	40.59201141	95.6	-10.2	2								

**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS**

57	2015	48.15324165	22.3	0.9	2.405687787	40.5108055	84.95639535	0.20768	-0.3639	-0.3038	-0.7893	-0.4341	1.09734412
57	2016	134.7144341	2.5	0.7	2.284656283	23.85254413	-24.32220039	3.21926	-0.6455	-0.3339	-1.0118	-1.2141	-0.578443831
57	2017	103.5924643	0	3.9	2.965483924	42.83234998	379.5430945	2.13649	-0.681	0.14676	0.23951	-0.3254	0.5614832998
57	2018	67.72944328	45.3	1.9	3.23482088	54.97321221	85.9246427	0.88876	-0.0368	-0.1536	0.73452	0.24308	1.112192199
57	2019	17.05844685	47.1	-7.6	3.234972598	62.17836768	0.034940601	-0.8742	-0.0111	-1.5805	0.7348	0.58045	-0.204926921
58	2005	206.6658345	5	-8.1	1.903686732	31.54412683	-6.609923285	5.72255	-0.6099	-1.6556	-1.712	-0.854	-0.30682609
58	2006	138.547486	0	0.4	1.865368888	27.86483172	-8.388465859	3.35262	-0.681	-0.3789	-1.7819	-1.0263	-0.334099912
58	2007	128.3076454	1.2	-2	1.816440168	23.79063025	-10.70990598	2.99636	-0.664	-0.7394	-1.8723	-1.217	-0.369699211
58	2008	128.5318133	0.8	0.3	1.812311609	21.84563241	-0.946131543	3.00416	-0.6697	-0.394	-1.8799	-1.3081	-0.219971669
58	2009	69.64675098	39.7	2.3	1.962464046	72.37243785	41.30334309	0.95547	-0.1164	-0.0936	-1.6039	1.05778	0.42792429
58	2010	80.83839762	17.9	2.2	1.90649666	64.49212452	-12.09114697	1.34484	-0.4265	-0.1086	-1.7068	0.68879	-0.39088055
58	2011	81.42410993	13.8	2.9	1.903361336	59.9412867	-0.71935235	1.36522	-0.4848	-0.0034	-1.7126	1.04976	-0.216493746
58	2012	88.6079391	1.3	2.2	1.866641721	39.13811854	-8.107432854	1.61515	-0.6625	-0.1086	-1.7801	-0.4984	-0.329790269
58	2013	88.09298554	14.77	1.3	1.869173027	27.5983241	0.584556824	1.59724	-0.471	-0.2438	-1.7754	-1.0387	-0.196498553
58	2014	208.4469697	14.77	2	2.023663918	10.40719697	42.72198946	5.78452	-0.471	-0.1386	-1.4915	-1.8437	0.449679241
58	2015	28.72442028	5.4	2.65	3.016740927	62.93659194	884.1856061	-0.4683	-0.6042	-0.041	0.33371	0.61596	13.35352908
58	2016	60.24198227	32.2	2.65	3.081599313	42.97671335	16.10699509	0.62826	-0.2231	-0.041	0.45292	-0.3187	0.041538135
58	2017	75.37155128	28.3	7.9	3.186617352	46.39510672	27.355959791	1.15464	-0.2785	0.74755	0.64593	-0.1586	-0.21403553
58	2018	47.25581701	28	13.9	3.182243412	46.64125148	-1.002082249	0.17646	-0.2828	1.64874	0.63789	-0.1471	-0.220829673
58	2019	39.4249603	18.4	9.3	3.179321945	49.49047115	-0.670435126	-0.096	-0.4193	0.95783	0.63252	-0.0136	-0.215743862
59	2005	27.39476129	52.33	4.49	3.267791716	39.53259962	-12.39630698	-0.5145	0.06323	0.23537	0.79512	-0.4799	-0.395560181
59	2006	29.70185334	48.2	4.49	3.239899817	58.67388051	-6.220459431	-0.4343	0.0045	0.23537	0.74386	0.41636	-0.30085352
59	2007	37.49249732	75.3	8.1	3.270911639	44.06752412	7.401864856	-0.1632	0.38993	0.77759	0.80085	-0.2676	-0.091955092
59	2008	38.31790404	45.1	5.5	3.218194027	37.20578447	-11.43086817	-0.1345	-0.0396	0.38707	0.70396	-0.5889	-0.380755171
59	2009	23.29915388	39.8	3.1	3.144449661	35.34346766	-15.61686937	-0.657	-0.115	0.0266	0.56843	-0.6761	-0.444947525
59	2010	29.76806307	25.4	4.7	3.186080086	34.48433123	10.06023232	-0.432	-0.3198	0.26691	0.64494	-0.7163	-0.05118901
59	2011	46.77835348	36.1	1.6	3.239799818	31.00172712	13.16698156	0.15984	-0.1676	-0.1987	0.74367	-0.8794	-0.003546991
59	2012	31.29330962	37	5.9	3.212374071	31.04801619	-6.11974669	-0.3789	-0.1548	0.44715	0.69327	-0.8772	-0.299309089
59	2013	26.88594215	62.9	9.3	3.326151451	39.2997027	29.95032808	-0.5322	0.21357	0.95783	0.90238	-0.4908	0.253825733
59	2014	27.50446407	54	4.8	3.316410711	36.59089812	-2.217922703	-0.5107	0.08699	0.28193	0.88448	-0.6177	-0.239474594
59	2015	22.03076923	57.4	3.9	3.275311355	37.29973475	-9.029486994	-0.7012	0.13534	0.14676	0.80894	-0.5845	-0.343929975
59	2016	19.65904853	60.8	1	3.27348741	35.79990411	-0.419098143	-0.7837	0.1837	-0.2888	0.80559	-0.6547	-0.211889608
59	2017	22.4753542	62.3	2.6	3.268648165	36.76668642	-1.10809227	-0.6857	0.20504	-0.0485	0.79669	-0.6094	-0.25245337
59	2018	18.60250312	70.5	2.7	3.335518076	43.03329793	16.64601627	-0.8204	0.32166	-0.0335	0.91959	-0.316	0.049804028
59	2019	16.93029435	57.9	5.4	3.381782713	47.73114128	11.24093659	-0.8786	0.14246	0.37205	1.00462	-0.096	-0.033082902
60	2005	3.786745521	375.9	-7.5	2.759592309	80.27483041	-6.62707922	-1.3359	4.66528	-1.5655	-0.1389	1.42781	-0.307779092
60	2006	3.620472157	3.5	-7.8	2.744214725	81.69039467	-3.47886589	-1.3417	-0.6313	-1.6106	-0.1672	1.49409	-0.258811666
60	2007	23.16190814	81.5	36.4	2.751202095	67.40556836	1.621913858	-0.6618	0.47811	5.02821	-0.1543	0.82521	-0.180590676
60	2008	4.804519369	0.2	-14.6	2.746322765	78.53299857	-1.117219365	-1.3005	-0.6782	-2.6319	-0.1633	1.34625	-0.222595302
60	2009	6.404371585	0.2	0.9	2.739572344	79.58105647	-1.542324247	-1.2448	-0.6782	-0.3038	-0.1757	1.39532	-0.229114288
60	2010	13.72265419	47.56	-3.91	2.593764524	73.99404891	-28.51874317	-0.9902	-0.0046	-1.0263	-0.4437	1.13371	-0.642797841
60	2011	23.54111406	0.1	-3.91	2.57634135	72.0424032	-3.932425507	-0.6486	-0.6796	-1.0263	-0.4757	1.04233	-0.267966505
60	2012	17.05202312	9.8	-3.91	2.560265398	73.16267547	-3.633952255	-0.8744	-0.5417	-1.0263	-0.5052	1.09479	-0.261189416
60	2013	21.89045936	17.7	-25.8	2.451786436	66.89045936	-22.10294522	-0.706	-0.4293	-4.3141	-0.7046	0.80109	-0.544411539
60	2014	19.06174543	23.2	-10.2	2.462248215	69.54122111	2.438162544	-0.8045	-0.3511	-1.971	-0.6854	0.92521	-0.168073498
60	2015	16.404209	29.2	-5.3	2.440279213	74.96371553	-4.932735426	-0.8969	-0.2657	-1.2351	-0.7258	1.17912	-0.281106264
60	2016	8.707280832	33.8	-3.2	2.430075056	75.74294205	-3.22206096	-1.1647	-0.2003	-0.9197	-0.7445	1.21561	-0.241073781
60	2017	25.63468635	29.4	-4.3	2.432969291	66.38376384	0.668647845	-0.5758	-0.2629	-1.0849	-0.7392	0.77737	-0.195209017
60	2018	28.50017687	28.5	-0.2	2.451325808	65.9356208	4.317343173	-0.4761	-0.2757	-0.4691	-0.7055	0.75638	-0.139256251
60	2019	11.66607586	32.5	-5.5	2.450403086	67.49379653	-0.212239123	-1.0618	-0.2188	-1.2651	-0.7072	0.82934	-0.208717424
61	2008	76.73279811	22.08	15.3	2.83309609	28.29407273	23.211061	1.202	-0.367	1.85902	-0.0038	-1.0062	0.15047903
61	2009	76.73279811	10.01	23.73	2.911738056	27.53250254	19.85108383	1.202	-0.5387	3.12519	0.14073	-1.0418	0.098953759
61	2010	76.73279811	22.28	30.49	3.110633474	40.28896313	58.08673063	1.202	-0.3642	4.14053	0.50628	-0.4445	0.685297643
61	2011	76.52958268	0.89	23.49	3.330572039	39.47299582	65.93521583	1.19493	-0.6684	3.08914	0.9105	-0.4827	0.805654213
61	2012	85.52862133	1.94	13.78	3.412512626	27.76262808	20.76486141	1.50802	-0.6534	1.63072	1.0611	-1.031	0.112966544
61	2013	83.86210012	1.27	14.27	3.491270623	31.08103312	19.8831088	1.45004	-0.663	1.70431	1.20585	-0.8757	0.099444862
61	2014	87.60377791	2.75	10.9	3.537626452	38.21868829	11.26429735	1.58022	-0.6419	1.19815	1.29105	-0.5414	-0.032724665
61	2015	71.48140881	6.33	12.46	3.641743726	35.94594225	27.09172474	1.0193	-0.591	1.43245	1.48241	-0.6479	0.2098989033
61	2016	76.95903195	3.18	15.17	3.697652966	47.27013397	13.73895663	1.20987	-0.6358	1.83949	1.58516	-0.1176	0.005224251
61	2017	74.12742868	2.76	10.25	3.747529883	45.96889576	12.17005091	1.11136	-0.6418	1.10052	1.67683	-0.1785	-0.018834928
61	2018	67.53341161	1.58	7.23	3.762783562	47.1695963	3.57469883	0.88194	-0.6586	0.64692	1.70487	-0.1223	-0.15064707
61	2019	66.96981995	1.07	6.95	3.775456069	49.86667516	2.960942087	0.86233	-0.6658	0.60486	1.72816	0.00397	-0.16005667
62	2009	95.5521	181.69	14.2	2.792853757	76.7312216	14.8	1.85675	1.90308	1.6938	-0.0778	1.26188	0.021495357
62	2010	95.5521	158.98	3.45	2.817016371	72.38672905	5.721328908	1.85675	1.58009	0.07917	-0.0334	1.05845	-0.117726121
62	2011	95.5521	7.27	13.75	2.704459391	8.821786871	-22.83097368	1.85675	-0.5776	1.62621	-0.2402	-1.9179	-0.55557586
62	2012	95.5521	6.53	18.93	2.768726875	7.707112686	15.9491271	1.85675	-0.5882	2.40424	-0.1221	-1.9701	0.039117229
62	2013	116.9757164	9.61	20.69	2.94347473	13.40152171	49.53672162	2.60211	-0.5444	2.66859	0.19906	-1.7035	0.554183201
62	2014	119.0659039	11.78	19.04	3.015573496	22.89413513	18.05890929	2.67483	-0.5135	2.42076	0.33157	-1.259	0.071470752
62	2015	95.5521	47.9	14.2	2.9946	40.2	14.8	1.85675	0.00023	1.6938	0.29302	-0.4487	0.021495357
62	2016	95.5521	23.09	14.2	3.114547603	52.67128076	14.8	1.85675	-0.3526	1.6938	0.51347	0.13529	0.021495357
62	2017	93.76961062	26.78	14.2	3.191808587	64.77097372	19.47058326	1.79473	-0				



**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN  
EMPIRICAL ANALYSIS OF FIRM CHARACTERISTICS**

62	2019	67.82035454	27.28	11.01	3.321786853	35.14068764	12.50234613				0.89192	-0.293	1.21467	0.89436	-0.6856	-0.013739179
63	2005	77.281875	339.42	4.3	3.530012617	68.60063626	12.5830177				1.2211	4.14643	0.20684	1.27706	0.88117	-0.01250208
63	2006	77.281875	344.7	3.12	3.549275531	67.91249555	4.535286584				1.2211	4.22153	0.0296	1.31246	0.84895	-0.135914087
63	2007	77.281875	34.24	16.92	3.434206308	62.07496698	-23.2760811				1.2211	-0.1941	2.10234	1.10097	0.57561	-0.562401585
63	2008	42.44563886	35.2	2.6	3.485799479	55.6210485	12.61420377				0.0091	-0.1804	-0.0485	1.1958	0.27341	-0.012023842
63	2009	102.4050314	35.37	3.5	3.548144867	61.32504578	15.43709464				2.09517	-0.1748	0.08668	1.31038	0.5405	0.031265208
63	2010	223.7934794	12.99	5.22	3.598914104	55.11076192	12.40075743				6.31844	-0.4963	0.34502	1.40369	0.24952	-0.015297043
63	2011	134.2495792	22.18	5.15	3.891747028	60.03007534	96.26051023				3.20309	-0.3656	0.3345	1.94189	0.47986	1.270692792
63	2012	100.0258626	29.48	5.31	3.958396153	55.05437193	16.58673092				2.0124	-0.2618	0.35854	2.06438	0.24688	0.048894887
63	2013	109.1633901	29.99	6.13	3.991645543	52.87951337	7.956647726				2.33031	-0.2545	0.4817	2.12549	0.14504	-0.083447493
63	2014	57.58634874	34.58	4.59	4.045709759	48.70399257	13.25678146				0.53587	-0.1892	0.25039	2.22486	-0.0505	-0.002169909
63	2015	42.72180843	38.37	2.23	4.07537905	56.71040907	7.070367033				0.01871	-0.1353	-0.1041	2.27939	0.32442	-0.097038613
63	2016	35.22863479	51.64	1.17	4.131104199	56.98060555	13.69075441				-0.242	0.05342	-0.2633	2.3818	0.33707	0.004485069
63	2017	34.61392323	58.19	0.79	4.134592709	60.96688633	0.806493951				-0.2634	0.14658	-0.3204	2.38822	0.52373	-0.193095146
63	2018	21.36361094	62.95	2.02	4.149956786	61.35661574	3.601031025				-0.7244	0.21428	-0.1356	2.41645	0.54198	-0.150240902
63	2019	23.78519572	44.19	1.6	4.128692577	72.11682881	-4.778330738				-0.6401	-0.0525	-0.1987	2.37737	1.04582	-0.27838467
64	2013	37.56703	4.85	4.2	4.078573895	75.49433667	19.28788				-0.1606	-0.6121	0.19182	2.28526	1.20396	0.090317025
64	2014	55.43141362	18.2	6.77	4.168057663	74.18384145	22.88072581				0.4609	-0.4222	0.57783	2.44972	1.1426	0.145413338
64	2015	37.91247051	20.67	5.43	4.265749141	64.37837252	25.22512611				-0.1486	-0.3871	0.37656	2.62927	0.68347	0.181364732
64	2016	45.57371788	26.61	5.33	4.358131759	65.15347864	23.7036796				0.11793	-0.3026	0.36154	2.79906	0.71976	0.15803334
64	2017	36.14741877	67.58	3.43	4.526697681	71.09704666	47.42322999				-0.21	0.28013	0.07616	3.10887	0.99806	0.521772794
64	2018	26.92569831	64.69	2.35	4.514800553	72.88092805	-2.702233335				-0.5309	0.23903	-0.0861	3.087	1.08159	-0.246901501
64	2019	23.41147552	60.48	2.03	4.511297939	76.36311314	-0.803263176				-0.6531	0.17915	-0.1341	3.08056	1.24464	-0.217780781
65	2005	63.50643	6.3	10	2.623042	33.8	6.480659				0.74184	-0.5914	1.06297	-0.3899	-0.7483	-0.106081789

65	2006	63.50482	4.8	8.8	2.638888	30.9	3.716055				0.74178	-0.6128	0.88273	-0.3607	-0.8841	-0.148477009
65	2007	84.9921	2.6	9	2.646502	30.7	1.768489				1.48935	-0.6441	0.91277	-0.3468	-0.8935	-0.178342946
65	2008	78.15182	0.4	6	2.657534	28.6	2.572783				1.25137	-0.6754	0.46217	-0.3265	-0.9918	-0.166009092
65	2009	68.98315	12.67777778	3.6	2.521661	33.1	-26.8647				0.93238	-0.5007	0.1017	-0.5762	-0.9811	-0.617433078
65	2010	72.4847	12.67777778	4.5	2.611192	29.4	22.8941				1.0542	-0.5007	0.23687	-0.4116	-0.9544	0.145618431
65	2011	48.25448	12.67777778	0	2.638888	26	6.585067				0.2112	-0.5007	-0.439	-0.3607	-1.1136	-0.104480692
65	2012	50.93693	12.67777778	5	2.641077	25.1	0.505282				0.30453	-0.5007	0.31197	-0.3567	-1.1557	-0.197714233
65	2013	50.25724	12.67777778	0.5	2.567379	25.4	-15.6079				0.28088	-0.5007	-0.3639	-0.4922	-1.1417	-0.44480998
65	2014	72.97728	12.67777778	-0.1	2.399501	26	-32.0607				1.07134	-0.5007	-0.454	-0.8007	-1.1136	-0.697113771
65	2015	60.45273	28.5	5.4	2.4777	46.1	19.72898				0.63559	-0.2757	0.37205	-0.657	-0.1724	0.097801296
65	2016	66.75305	25	1.5	2.431525	38.2	-10.0866				0.85479	-0.3255	-0.2137	-0.7419	-0.5423	-0.36014081
65	2017	60.23936	16	-5.6	2.353339	61.5	-16.4754				0.62817	-0.4535	-1.2801	-0.8856	0.54869	-0.458113098
65	2018	59.04847	13.2	-5.5	2.351989	21.1	-0.31028				0.58674	-0.4933	-1.2651	-0.888	-1.343	-0.210220881
65	2019	50.42544	17.3	-1.2	2.348889	21.8	-0.71143				0.28673	-0.435	-0.6193	-0.8937	-1.3102	-0.216372519
66	2005	87.79389	41.1125	6.81	2.581995	47.99445	6.206551				1.58683	-0.0963	0.58383	-0.4653	-0.0837	-0.110285237
66	2006	71.29198	41.1125	7.01	2.579383	52.21388	-0.59957				1.01271	-0.0963	0.61387	-0.4701	0.11387	-0.214657145
66	2007	75.66725	41.1125	8.68	2.577974	53.72338	-0.32398				1.16493	-0.0963	0.8647	-0.4727	0.18455	-0.210430971
66	2008	79.4955	41.1125	13.05	2.616034	44.3885	9.159135				1.29812	-0.0963	1.52107	-0.4027	-0.2525	-0.065007343
66	2009	44.5239	41.1125	9.1	2.550449	45.84718	-14.0167				0.08141	-0.0963	0.92779	-0.5233	-0.1842	-0.420408918
66	2010	60.77605	41.1125	7.49	2.58752	44.65269	8.910975				0.64684	-0.0963	0.68597	-0.4552	-0.2402	-0.068812878
66	2011	68.67243	41.1125	8.39	2.644173	44.23116	13.93377				0.92157	-0.0963	0.82115	-0.351	-0.2599	0.008211715
66	2012	64.98348	41.1125	7.1	2.651239	39.85177	1.64046				0.79323	-0.0963	0.62739	-0.338	-0.466	-0.180306271
66	2013	58.45443	41.1125	22.41	2.726417	33.38778	18.89901				0.56607	-0.0963	0.92693	-0.1999	-0.7675	0.084353701
66	2014	77.11078	41.1125	8.23	2.70565	30.27671	-4.66937				1.21515	-0.0963	0.79712	-0.238	-0.9133	-0.277067554

66	2015	76.57781	41.1125	6.69	2.701628	37.1499	-0.92171				1.19661	-0.0963	0.56581	-0.2454	-0.5915	-0.219597164
66	2016	34.90049	38.22	5.43	2.826904	51.63568	33.4367				-0.2534	-0.1374	0.37656	-0.0152	0.0868	0.307289269
66	2017	26.25229	53.85	2.03	2.882297	54.12405	13.60386				-0.5543	0.08485	-0.1341	0.08662	0.20331	0.003152543
66	2018	34.48897	31.98	2.26	3.004248	52.19393	32.41935				-0.2677	-0.2262	-0.0996	0.31075	0.11294	0.2916882
66	2019	26.82329	40.4	0.31	3.045194	54.98121	9.886813				-0.5344	-0.1064	-0.3925	0.38601	0.24345	-0.053848396
67	2005	50.54847	12.61	7.83	2.985938	58.53596	-8.48992				0.29101	-0.5017	0.73704	0.2771	0.4099	-0.335655712
67	2006	42.01001	6.53	0.34	2.927047	59.46864	-12.681				-0.0061	-0.5882	-0.388	0.16886	0.45357	-0.39992595
67	2007	40.31353	6.24	1.18	2.933801	58.89916	1.567361				-0.0651	-0.5923	-0.2618	0.18128	0.42691	-0.181427245
67	2008	26.12924	6.42	-0.92	2.859036	56.32583	-15.8149				-0.5586	-0.5897	-0.5772	0.04387	0.30641	-0.447984326
67	2009	29.90633	11.67	2.18	2.883332	56.15892	5.753773				-0.4272	-0.5151	-0.1116	0.08852	0.2986	-0.117228591
67	2010	33.79019	9.89	0.72	2.860482	52.73151	-5.12545				-0.292	-0.5404	-0.3309	0.04652	0.13811	-0.284061543
67	2011	29.71963	2.66	1.03	2.822018	52.59503	-8.47581				-0.4337	-0.6432	-0.2843	-0.0242	0.13172	-0.335439335
67	2012	34.20235	0.87	1.15	2.819629	54.18478	-0.54838				-0.2777	-0.6687	-0.2663	-0.0286	0.20616	-0.213872146
67	2013	40.7137	5.251818182	2.36	2.782974	47.68584	-8.09386				-0.0512	-0.6063	-0.0845	-0.0959	-0.0982	-0.329582129
67	2014	99.25753	0.27	-3.74	2.748413	47.23447	-7.64958				1.98567	-0.6772	-1.0008	-0.1594	-0.1189	-0.322769093
67	2015	44.29486857	0.4	1.965384615	2.749195	42.54409	0.180246				0.07344	-0.6754	-0.1438	-0.158	-0.3389	-0.202698386
67	2016	62.19376	0.21	1.965384615	2.750408	42.37035	0.279708				0.69617	-0.6781	-0.1438	-0.1558	-0.347	-0.201173412
67	2017	55.88321	5.251818182	1.81	2.765109	40.26449	3.443069				0.47662	-0.6063	-0.1672	-0.1288	-0.4457	-0.152663251
67	2018	41.35338	5.251818182	6.19	2.797794	40.71301	7.81623				-0.0289	-0.6063	0.49071	-0.0687	-0.4246	-0.085600799
67	2019	34.10683	5.251818182	5.42	2.810804	40.12213	3.040971				-0.281	-0.6063	0.37506	-0.0448	-0.45	

**DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN  
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68	2009	53.81808	59.29	-18.1	2.564903	75.05174	-12.3607	0.40477	0.16222	-3.1576	-0.4967	1.18324	-0.395014148
68	2010	110.4257	32.88	-2.52	2.627806	67.51643	15.58551	2.37422	-0.2134	-0.8175	-0.3811	0.8304	0.033541158
68	2011	97.36835	32.88	0.31	2.599719	66.17821	-6.26252	1.91994	-0.2134	-0.3925	-0.4327	0.76774	-0.301498519
68	2012	104.8678	32.88	-1.49	2.5989	66.95291	-0.18851	2.18086	-0.2134	-0.6628	-0.4342	0.80402	-0.208353538
68	2013	111.7385	32.88	2.52	2.566473	64.66231	-7.19466	2.4199	-0.2134	-0.0605	-0.4938	0.69676	-0.315792892
68	2014	71.556415	32.88	-2.016153846	2.659136	21.45425	23.78368	1.02191	-0.2134	-0.7418	-0.3235	-1.3264	0.159260146
68	2015	105.5833	32.88	-2.016153846	2.611808	15.78175	-10.3249	2.20575	-0.2134	-0.7418	-0.4105	-1.592	-0.363795142
68	2016	105.644	32.88	0.76	2.582063	29.90838	-6.61973	2.20786	-0.2134	-0.3249	-0.4652	-0.9306	-0.306976337
68	2017	67.58372	32.88	-0.27	2.782157	41.56318	58.52356	0.88369	-0.2134	-0.4796	-0.0974	-0.3848	0.691996424
68	2018	61.13335	19.78	-0.89	2.700903	16.09223	-17.0635	0.65927	-0.3997	-0.5727	-0.2468	-1.5775	-0.467131615
68	2019	63.88433	0.5	2.59	2.570251	2.356422	-25.9801	0.75498	-0.6739	-0.05	-0.4869	-2.2207	-0.603867732
69	2005	26.15894	56.21	-1.25	2.12346	30.46358	-21.6325	-0.5575	0.11842	-0.6268	-1.3081	-0.9046	-0.537197259
69	2006	34.5697	59.07	0.36	2.178142	39.24093	13.41812	-0.2649	0.1591	-0.3849	-1.2076	-0.6007304219	
69	2007	34.63137	68.57	-1.1	2.226497	31.88888	11.77759	-0.2628	0.29421	-0.6042	-1.1187	-0.8378	-0.024853319
69	2008	15.84579	65.82	-5.38	2.119817	43.62905	-21.7797	-0.9163	0.2551	-1.2471	-1.3147	-0.2881	-0.539454572
69	2009	20.59859	95.12	-16.85	2.076568	35.68913	-9.47864	-0.751	0.67182	-2.9699	-1.3942	-0.6599	-0.350817739
69	2010	34.17032	44.14	-10.7	2.203305	18.24671	33.88665	-0.2788	-0.0532	-2.0461	-1.1613	-1.4766	0.314189255
69	2011	31.80619	31.55	1.65	2.342028	37.42493	37.63306	-0.3611	-0.2323	-0.1912	-0.9063	-0.5786	0.371640475
69	2012	32.74871833	9.6	-3.905454545	2.340206	43.24287	-0.41856	-0.3283	-0.5445	-1.0256	-0.9097	-0.3062	-0.217881356
69	2013	57.98389	4.04	-3.905454545	2.557856	17.85269	65.06305	0.5497	-0.6236	-1.0256	-0.5097	-1.4951	0.792279544
69	2014	47.06615	0.81	-0.17	2.472581	19.9003	-17.8278	0.16986	-0.6695	-0.4646	-0.6664	-1.3992	-0.47885216
69	2015	30.30783	4.91	-0.98	2.578387	29.8115	27.5869	-0.4132	-0.6112	-0.5862	-0.4719	-0.4935	0.217582549
69	2016	41.5309	6.43	-2.65	2.561066	41.04184	-3.90992	-0.0227	-0.5896	-0.837	-0.5038	-0.4093	-0.265421383
69	2017	18.31495	7.81	-5.89	2.596993	45.71277	8.624337	-0.8304	-0.57	-1.3237	-0.4377	-0.1905	-0.073208474

69	2018	32.74871833	3.39	-3.905454545	2.722626	45.4573	33.54664	-0.3283	-0.6328	-1.0256	-0.2068	-0.2025	0.308975199
69	2019	32.74871833	4.04	-3.905454545	2.669856	74.50917	-11.4415	-0.3283	-0.6236	-1.0256	-0.3038	1.15784	-0.38091821
70	2005	61.37478331	0.1	4.4	2.457276186	40.54431263	4.674945215	0.66767	-0.6796	0.22186	-0.6945	-0.4325	-0.133772421
70	2006	37.82728525	0.2	18.5	2.638888425	46.78456592	51.91905094	-0.1516	-0.6782	2.33965	-0.3607	-1.404	0.2036716236
70	2007	75.10648367	0	4.9	2.625929493	48.41457643	-2.939825448	1.14542	-0.681	0.29695	-0.3846	-0.064	-0.250544977
70	2008	56.1784897	0.1	4.3	2.640481437	46.77345538	3.40747752	0.48689	-0.6796	0.20684	-0.3578	-1.4009	-0.153209046
70	2009	41.61434978	0.1	5	2.649334859	44.01345291	2.059496568	-0.0198	-0.6796	0.31197	-0.3415	-0.2701	-0.173880343
70	2010	55.48331166	0.1	5.1	2.66407759	42.5877633	3.452914798	0.4627	-0.6796	0.32699	-0.3144	-0.3369	-0.152512265
70	2011	71.8232463	0.1	2.4	2.66238002	42.92863359	-0.390117035	1.03119	-0.6796	-0.0785	-0.3176	-0.3209	-0.211444583
70	2012	78.07475011	0.1	2.3	2.662946614	40.26510213	0.130548303	1.24869	-0.6796	-0.0936	-0.3165	-0.4456	-0.203460776
70	2013	72.7535673	0.1	3	2.714832512	62.01311223	12.69013472	1.06356	-0.6796	0.01158	-0.2212	0.57272	-0.01085944
70	2014	95.95312214	0.1	8.9	2.737272177	59.1649881	5.302738141	1.8707	-0.6796	0.89775	-0.1799	0.43935	-0.124145213
70	2015	90.75164531	0.1	7.8	2.76147678	60.68583304	5.731550998	1.68974	-0.6796	0.73253	-0.1354	0.51057	-0.117569365
70	2016	88.84971987	0.1	3.6	2.745070886	63.05812103	-3.707135435	1.62357	-0.6796	0.1017	-0.1656	0.62165	-0.262311681
70	2017	89.01313454	0.1	5.42	2.750816843	63.0457934	1.331846509	1.62925	-0.6796	0.37506	-0.155	0.62107	-0.185038861
70	2018	59.49542077	0.1	3.5	2.762453482	63.52168654	2.715654952	0.60229	-0.6796	0.08668	-0.1336	0.64335	-0.16381815
70	2019	56.88858463	0.1	2.2	2.766635886	63.37497861	0.967686193	0.51159	-0.6796	-0.1086	-0.126	0.63648	-0.190623262
71	2007	69.10127438	8.7	5.925	1.92680531	29.39992899	17.6240988	0.93649	-0.5573	0.45091	-1.6695	-0.9544	0.06480293
71	2008	111.3024758	6.2	6.7	1.968015714	29.40796555	9.953840691	2.40473	-0.5929	0.56731	-1.5937	-0.954	-0.052820526
71	2009	110.6217888	4.3	9.7	1.979411783	25.34339939	2.658772874	2.38105	-0.6199	1.01791	-1.5728	-1.1443	-0.164690437
71	2010	111.3391984	2.8	9.3	2.009875634	22.41446725	7.266435986	2.406	-0.6412	0.95783	-1.5168	-1.2815	-0.094031894
71	2011	85.13004484	4.2	5.5	2.047274867	23.48878924	8.99315738	1.49415	-0.6213	0.38707	-1.4481	-1.2312	-0.075526211
71	2012	56.04554865	54.3	4.3	2.161068385	55.27260179	29.95515695	0.48226	0.09125	0.20684	-1.2389	0.25709	0.253899784
71	2013	73.41684064	58	1.1	2.157456768	58.97703549	-0.82815735	1.08663	0.14388	-0.2738	-1.2456	0.43055	-0.218162534

71	2014	58.52231604	41.2	1.9	2.219584526	51.32689988	15.37926235	0.56843	-0.0951	-0.1536	-1.1314	0.07234	0.030378349
71	2015	75.7058988	108.2	6.1	2.55351894	28.01230081	115.7418577	1.16627	0.85786	0.47719	-0.5176	-1.0194	1.569439377
71	2016	38.54763144	96.3	4.1	2.584557361	26.08016658	7.408442829	-0.1265	0.68861	0.1768	-0.4606	-1.1098	-0.091854218
71	2017	34.65656829	56.1	1.6	2.583085366	26.61269261	-0.338365435	-0.2619	0.11685	-0.1987	-0.4633	-1.0849	-0.210651572
71	2018	36.37605281	48.8	11.2	2.642761203	23.37810153	14.72969444	-0.2021	0.01303	1.2432	-0.3536	-1.2363	0.020417221
71	2019	37.55092802	40.5	9.6	2.645225712	24.26437302	0.569087184	-0.1612	-0.105	1.00289	-0.3491	-1.1948	-0.19673578
72	2005	60.57259714	23.61666667	4.6	2.166430114	10.27948194	-0.811359026	0.63977	-0.3451	0.25189	-1.2291	-1.8497	-0.217904931
72	2006	54.43656981	23.61666667	1.8	2.149527014	7.384833451	-3.817314247	0.42628	-0.3451	-0.1687	-1.2601	-1.9852	-0.264001273
72	2007	73.00357569	23.61666667	1.3	2.224791956	6.728247914	18.92274982	1.07226	-0.3451	-0.2438	-1.1218	-2.016	0.084717752
72	2008	51.76571921	23.61666667	7.7	2.365862215	9.633936262	38.37902265	0.33336	-0.3451	0.71751	-0.8625	-1.8799	0.383079817
72	2009	54.52380952	23.61666667	0.4	2.32219295	20.91428571	-9.560723514	0.42932	-0.3451	-0.3789	-0.9428	-1.3517	-0.352076491
72	2010	45.10306917	23.61666667	1.6	2.339053736	30.65506184	3.952380952	0.10156	-0.3451	-0.1987	-0.9118	-0.8596	-0.144852949
72	2011	39.45147679	23.61666667	0.5	2.328990855	40.88607595	-2.290426019	-0.0951	-0.3451	-0.3639	-0.9303	-0.4165	-0.240586433
72	2012	58.06328631	23.61666667	7	2.418798291	44.91040793	22.97233943	0.55246	-0.3451	0.61237	-0.7652	-0.2281	0.146818234
72	2013	88.76923077	23.61666667	15	2.511883361	43.66153846	23.9039268	1.62076	-0.3451	1.81396	-0.5942	-0.2866	0.161104132
72	2014	40.72373751	26.9	7.4	3.045674967	33.66639662	241.8153846	-0.0508	-0.2984	0.67245	0.38689	-0.7546	3.502777703
72	2015	42.19855134	24.9	3.8	3.069483094	33.8052833	5.635070663	0.00051	-0.3269	0.13174	0.43065	-0.782	-0.119048892
72	2016	43.33089312	23.7	5.2	3.135450699	31.91068814	16.4039199	0.0399	-0.344	0.34201	0.55189	-0.8368	0.046091479
72	2017	33.98573018	21.9	4.3	3.184038079	37.45499771	11.8374817	-0.2852	-0.3696	0.20684	0.64119	-0.5772	-0.023934879
72	2018	22.79721942	20.9	3.7	3.22610992	43.46146991	10.17215422	-0.6745	-0.3838	0.11672	0.71851	-0.293	-0.049472687
72	2019	13.88268302	23.4	3.2	3.284363046	45.86688835	14.35446498	-0.9846	-0.3482	0.04162	0.82558	-0.1836	0.014663075
73	2010	68.38467508	17.3	13.05555556	2.332842267	29.03810409	17.48718089	0.91156	-0.435	1.52191	-0.9232	-0.9713	0.062703293
73	2011	42.17877095	41.6	12.5	2.508125536	31.09896946	49.72118959	-0.0002	-0.0894	1.43846	-0.6011	-0.8748	0.557102019
73	2012	52.87226853	32</										

DETERMINANTS OF FIRM VALUE IN THE MALAYSIAN PROPERTY SECTOR: AN  
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73	2013	119.8027772	31.3	18.7	2.696268997	31.61601932	11.93962604	2.70046	-0.2359	2.36969	-0.2553	-0.8506	-0.022368495
73	2014	103.0069507	38.3	17.8	2.820726763	49.16893321	33.18575166	2.11611	-0.1363	2.23451	-0.0265	-0.0287	0.303440974
73	2015	77.27390181	40.7	14.2	2.888740961	46.95090439	16.95376247	1.22083	-0.1022	1.6938	0.09846	-0.1326	0.054523318
73	2016	79.27122264	25.6	14.9	2.874597769	43.91350774	-3.204134367	1.29032	-0.3169	1.79894	0.07247	-0.2748	-0.254598156
73	2017	59.01989585	18.3	10.9	2.874423831	41.79463213	-0.040042712	0.58574	-0.4208	1.19815	0.07215	-0.374	-0.206076791
73	2018	44.43840826	15.7	7.5	2.8670548	41.87151976	-1.682467619	0.07843	-0.4577	0.68747	0.0586	-0.3704	-0.231263387
73	2019	37.59787977	25.1	6.1	2.919130414	54.76448621	12.73937254	-0.1596	-0.324	0.47719	0.15431	0.2333	-0.010104378
74	2005	71.18644068	28.53	11.29	2.071882007	76	26.10879555	1.00904	-0.2753	1.25672	-1.4028	1.32323	0.194915808
74	2006	64.14635889	30.22	11.04	2.145910834	76.60973344	18.58474576	0.7641	-0.2512	1.21917	-1.2668	1.25619	0.079534457
74	2007	55.7806256	47.88	6.16	2.337878378	61.69675256	55.58493532	0.47305	-6E-05	0.4862	-0.914	0.5579	0.646932596
74	2008	11.65562914	34.4	1.09	2.434249452	65.78734364	24.84497726	-1.0621	-0.1918	-0.2753	-0.7369	0.74944	0.175535147
74	2009	17.09022306	37.72	0.13	2.431894244	67.48048681	-0.540838852	-0.873	-0.1446	-0.4195	-0.7412	0.82872	-0.213756503
74	2010	13.05530372	40.12	-8.46	2.384998193	78.68210665	-10.23563792	-1.0134	-0.1104	-1.7097	-0.8274	1.35323	-0.362426307
74	2013	16.76722769	50.72	1.225833333	2.197142665	58.04382344	8.695790849	-0.8843	0.04034	-0.2549	-1.1726	0.38686	-0.072112728
74	2014	16.41253845	44.37	-0.91	2.184151776	71.62489366	-2.946967291	-0.8966	-0.053	-0.5757	-1.1965	1.02278	-0.250654497
74	2015	52.07241911	6.15	-0.21	2.113274692	80.77812018	-15.05791506	0.34403	-0.5936	-0.4706	-1.3268	1.45137	-0.436375957
74	2016	46.42969984	1.82	0.25	2.102433706	83.13586098	-2.465331279	0.14771	-0.6552	-0.4015	-1.3467	1.56177	-0.243268606
74	2017	49.64607465	0.03	0.03	2.094541001	83.71138996	-1.800947867	0.25962	-0.6806	-0.4345	-1.3612	1.58872	-0.233080282
74	2018	35.3828865	4.42	-4.09	2.095448327	79.37871247	0.209137709	-0.2366	-0.6182	-1.0533	-1.3595	1.38585	-0.202256607
74	2019	31.57366951	10.04	-1.61	2.144916527	75.39574529	12.06453684	-0.3691	-0.5382	-0.6808	-1.2686	1.19935	-0.020452987
75	2009	21.07621703	105.8	3.154285714	2.567120512	29.81467433	9.818269212	-0.7344	0.82372	0.03475	-0.4926	-0.935	-0.054899516
75	2010	40.60188619	54.81	8.43	2.673803959	26.16509484	27.84491167	-0.055	0.09851	0.82715	-0.2966	-1.1058	0.22153916
75	2011	30.33408013	83.15	4.53	2.783217309	34.43924618	28.65105436	-0.4123	0.50158	0.24138	-0.0955	-0.7184	0.233901363
75	2012	26.55915829	79.05	4.54	2.910400264	25.19113056	34.02411703	-0.5436	0.44327	0.24288	0.13827	-1.1515	0.316297312

75	2013	28.20144194	84.37	1.68	2.969453189	21.78031929	14.5652548	-0.4865	0.51893	-0.1867	0.2468	-1.3112	0.017895538
75	2015	23.18383873	74.61	3.154285714	2.960622968	22.63609688	9.818269212	-0.661	0.38012	0.03475	0.23057	-1.2711	-0.054899516
75	2016	17.44697052	61.02	3.154285714	2.96345726	26.24932013	0.654754084	-0.8606	0.18683	0.03475	0.23578	-1.1019	-0.195422078
75	2017	34.82038242	38.1	1.06	2.904315139	25.84947523	-12.73142609	-0.2562	-0.1392	-0.2798	0.12708	-1.1206	-0.400699234
75	2018	18.57513863	32.34	1.78	2.852693429	31.42135186	-11.20708997	-0.8214	-0.2211	-0.1717	0.03221	-0.8597	-0.37732353
75	2019	14.22311219	30.97	0.06	2.838320062	14.89639561	-3.255422194	-0.9728	-0.2406	-0.43	0.00579	-1.6335	-0.255384655
76	2008	40.15180752	34.71	8.593	2.034788831	12.83920989	27.88443209	-0.0707	-0.1874	0.85164	-1.471	-1.7298	0.222145205
76	2009	40.15180752	68.74	5.91	2.174117981	40.7581034	37.82536459	-0.0707	0.29663	0.44865	-1.2149	-0.4225	0.374589468
76	2010	40.15180752	46.83	9.94	2.234745001	36.98526414	14.98124833	-0.0707	-0.015	1.05395	-1.1035	-0.5992	0.024274801
76	2011	40.15180752	49.03	19.27	2.359247174	52.06174297	33.19937096	-0.0707	0.0163	2.45531	-0.8747	0.10675	0.303649826
76	2012	102.4176779	22.5	17.37	2.508139015	59.65984917	40.89378635	2.09561	-0.361	2.16993	-0.601	0.46253	0.421643734
76	2013	60.2660472	33.41	13.64	2.659259986	61.49547457	41.61882002	0.6291	-0.2059	1.60969	-0.3233	0.54848	0.43276213
76	2014	102.11759	47.16	5.2	2.819043551	64.8822887	44.47195985	2.08517	-0.0103	0.34201	-0.0296	0.70706	0.476515048
76	2015	66.88221509	40.39	4.76	2.839641427	62.81283453	4.857108185	0.85929	-0.1066	0.27593	0.00822	0.61016	-0.130978951
76	2016	46.69180907	68.52	4.3	2.928651847	57.28697702	22.74686804	0.15683	0.2935	0.20684	0.17181	0.35142	0.143360628
76	2017	39.02860997	86.87	4.06	3.00990535	53.65419766	20.57395404	-0.1098	0.55449	0.17079	0.32115	0.18131	0.110038979
76	2018	24.2659335	85.09	1.48	3.080594022	59.19213323	17.67620984	-0.6234	0.52917	-0.2167	0.45107	0.44062	0.066502053

### Appendix 4.1.1 Panel Unit Root Test

#### 1. Firm value – Level – Individual intercept

Panel unit root test: Summary

Series: FIRM\_VALUE

Date: 02/03/24 Time: 15:13

Sample: 2005 2019

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
<u>Null: Unit root (assumes common unit root process)</u>				
Levin, Lin & Chu t*	-10.7967	0.0000	76	941
<u>Null: Unit root (assumes individual unit root process)</u>				
Im, Pesaran and Shin W-stat	-7.03987	0.0000	75	938
ADF - Fisher Chi-square	288.893	0.0000	76	941
PP - Fisher Chi-square	321.867	0.0000	76	954

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

#### 2. Firm value – 1<sup>st</sup> difference – Individual intercept

Panel unit root test: Summary

Series: D(FIRM\_VALUE)

Date: 02/03/24 Time: 15:15

Sample: 2005 2019

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
<u>Null: Unit root (assumes common unit root process)</u>				
Levin, Lin & Chu t*	-34.1867	0.0000	75	858
<u>Null: Unit root (assumes individual unit root process)</u>				
Im, Pesaran and Shin W-stat	-25.8850	0.0000	74	855
ADF - Fisher Chi-square	777.747	0.0000	75	858
PP - Fisher Chi-square	993.165	0.0000	75	876

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

### 3. Capital structure – Level – Individual intercept

Panel unit root test: Summary  
 Series: CAPITAL\_STRUCTURE  
 Date: 02/03/24 Time: 15:14  
 Sample: 2005 2019  
 Exogenous variables: Individual effects  
 Automatic selection of maximum lags  
 Automatic lag length selection based on SIC: 0 to 2  
 Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-16.4596	0.0000	75	911
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-6.97699	0.0000	74	908
ADF - Fisher Chi-square	284.511	0.0000	75	911
PP - Fisher Chi-square	271.756	0.0000	75	940

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

### 4. Capital structure – 1<sup>st</sup> difference – Individual intercept

Panel unit root test: Summary  
 Series: D(CAPITAL\_STRUCTURE)  
 Date: 02/03/24 Time: 15:16  
 Sample: 2005 2019  
 Exogenous variables: Individual effects  
 Automatic selection of maximum lags  
 Automatic lag length selection based on SIC: 0 to 2  
 Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-1004.08	0.0000	75	855
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-100.163	0.0000	74	852
ADF - Fisher Chi-square	619.849	0.0000	75	855
PP - Fisher Chi-square	717.061	0.0000	75	876

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

5. Profitability – Level – Individual intercept

Panel unit root test: Summary

Series: PROFITABILITY

Date: 02/03/24 Time: 15:14

Sample: 2005 2019

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
<u>Null: Unit root (assumes common unit root process)</u>				
Levin, Lin & Chu t*	-13.6328	0.0000	76	932
<u>Null: Unit root (assumes individual unit root process)</u>				
Im, Pesaran and Shin W-stat	-10.6313	0.0000	75	929
ADF - Fisher Chi-square	371.375	0.0000	76	932
PP - Fisher Chi-square	341.190	0.0000	76	954

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

6. Profitability – 1<sup>st</sup> difference – Individual intercept

Panel unit root test: Summary

Series: D(PROFITABILITY)

Date: 02/03/24 Time: 15:16

Sample: 2005 2019

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
<u>Null: Unit root (assumes common unit root process)</u>				
Levin, Lin & Chu t*	-28.7723	0.0000	75	845
<u>Null: Unit root (assumes individual unit root process)</u>				
Im, Pesaran and Shin W-stat	-22.6558	0.0000	74	842
ADF - Fisher Chi-square	714.333	0.0000	75	845
PP - Fisher Chi-square	994.548	0.0000	75	876

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

7. Firm size – Level – Individual intercept

Panel unit root test: Summary

Series: FIRM\_SIZE

Date: 02/03/24 Time: 15:14

Sample: 2005 2019

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.17761	0.0000	76	935
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.69318	0.9548	75	932
ADF - Fisher Chi-square	177.273	0.0787	76	935
PP - Fisher Chi-square	245.223	0.0000	76	954

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

8. Firm size – 1<sup>st</sup> difference – Individual intercept

Panel unit root test: Summary

Series: D(FIRM\_SIZE)

Date: 02/03/24 Time: 15:16

Sample: 2005 2019

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-29.6372	0.0000	75	865
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-17.1526	0.0000	74	862
ADF - Fisher Chi-square	534.403	0.0000	75	865
PP - Fisher Chi-square	612.184	0.0000	75	876

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

9. Investment decision – Level – Individual intercept

Panel unit root test: Summary  
 Series: INVESTMENT\_DECISION  
 Date: 02/03/24 Time: 15:15  
 Sample: 2005 2019  
 Exogenous variables: Individual effects  
 Automatic selection of maximum lags  
 Automatic lag length selection based on SIC: 0 to 2  
 Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
<u>Null: Unit root (assumes common unit root process)</u>				
Levin, Lin & Chu t*	-6.13821	0.0000	76	927
<u>Null: Unit root (assumes individual unit root process)</u>				
Im, Pesaran and Shin W-stat	-3.53072	0.0002	75	924
ADF - Fisher Chi-square	245.819	0.0000	76	927
PP - Fisher Chi-square	223.069	0.0002	76	954

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

10. Investment decision – 1<sup>st</sup> difference – Individual intercept

Panel unit root test: Summary  
 Series: D(INVESTMENT\_DECISION)  
 Date: 02/03/24 Time: 15:17  
 Sample: 2005 2019  
 Exogenous variables: Individual effects  
 Automatic selection of maximum lags  
 Automatic lag length selection based on SIC: 0 to 2  
 Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
<u>Null: Unit root (assumes common unit root process)</u>				
Levin, Lin & Chu t*	-26.9731	0.0000	75	848
<u>Null: Unit root (assumes individual unit root process)</u>				
Im, Pesaran and Shin W-stat	-19.1928	0.0000	74	845
ADF - Fisher Chi-square	590.214	0.0000	75	848
PP - Fisher Chi-square	753.810	0.0000	75	876

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.



### 11. Firm growth – Level – Individual intercept

Panel unit root test: Summary

Series: FIRM\_GROWTH

Date: 02/03/24 Time: 15:15

Sample: 2005 2019

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-19.5163	0.0000	76	936
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-12.8571	0.0000	75	933
ADF - Fisher Chi-square	466.922	0.0000	76	936
PP - Fisher Chi-square	558.884	0.0000	76	954

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

### 12. Firm growth – 1<sup>st</sup> difference – Individual intercept

Panel unit root test: Summary

Series: D(FIRM\_GROWTH)

Date: 02/03/24 Time: 15:17

Sample: 2005 2019

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-37.2112	0.0000	75	836
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-29.3807	0.0000	74	833
ADF - Fisher Chi-square	892.812	0.0000	75	836
PP - Fisher Chi-square	1380.58	0.0000	75	876

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Appendix 4.2.1.1 POLS, FEM & REM

1. POLS

Dependent Variable: FIRM\_VALUE  
 Method: Panel Least Squares  
 Date: 03/14/24 Time: 23:10  
 Sample: 2005 2019  
 Periods included: 15  
 Cross-sections included: 76  
 Total panel (unbalanced) observations: 1030

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_STRUCTURE	-0.093740	0.016943	-5.532562	0.0000
PROFITABILITY	1.623215	0.134920	12.03092	0.0000
FIRM_SIZE	-5.594217	1.344284	-4.161484	0.0000
INVESTMENT_DECISION	-0.171838	0.033136	-5.185913	0.0000
FIRM_GROWTH	0.032193	0.034247	0.940011	0.3474
C	63.94041	3.766661	16.97536	0.0000
R-squared	0.244096	Mean dependent var	40.72615	
Adjusted R-squared	0.240405	S.D. dependent var	24.12153	
S.E. of regression	21.02306	Akaike info criterion	8.934925	
Sum squared resid	452576.2	Schwarz criterion	8.963686	
Log likelihood	-4595.486	Hannan-Quinn criter.	8.945840	
F-statistic	66.13378	Durbin-Watson stat	0.750280	
Prob(F-statistic)	0.000000			

2. FEM

Dependent Variable: FIRM\_VALUE  
 Method: Panel Least Squares  
 Date: 03/14/24 Time: 23:10  
 Sample: 2005 2019  
 Periods included: 15  
 Cross-sections included: 76  
 Total panel (unbalanced) observations: 1030

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_STRUCTURE	-0.076183	0.017747	-4.292775	0.0000
PROFITABILITY	1.177712	0.129367	9.103665	0.0000
FIRM_SIZE	-15.30835	2.332517	-6.563021	0.0000
INVESTMENT_DECISION	-0.122181	0.039088	-3.125829	0.0018
FIRM_GROWTH	0.032764	0.027744	1.180928	0.2379
C	89.61689	6.666663	13.44254	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.608143	Mean dependent var	40.72615
Adjusted R-squared	0.575110	S.D. dependent var	24.12153
S.E. of regression	15.72328	Akaike info criterion	8.423538
Sum squared resid	234613.1	Schwarz criterion	8.811812
Log likelihood	-4257.122	Hannan-Quinn criter.	8.570897
F-statistic	18.41004	Durbin-Watson stat	1.319120
Prob(F-statistic)	0.000000		

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3. REM

Dependent Variable: FIRM\_VALUE  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 03/14/24 Time: 23:11  
 Sample: 2005 2019  
 Periods included: 15  
 Cross-sections included: 76  
 Total panel (unbalanced) observations: 1030  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_STRUCTURE	-0.084248	0.016849	-5.000049	0.0000
PROFITABILITY	1.266190	0.125485	10.09038	0.0000
FIRM_SIZE	-11.39083	1.941106	-5.868216	0.0000
INVESTMENT_DECISION	-0.128801	0.036741	-3.505671	0.0005
FIRM_GROWTH	0.025097	0.027376	0.916728	0.3595
C	79.64799	5.762085	13.82277	0.0000

Effects Specification		S.D.	Rho
Cross-section random		13.89804	0.4386
Idiosyncratic random		15.72328	0.5614

Weighted Statistics			
R-squared	0.185983	Mean dependent var	11.98292
Adjusted R-squared	0.182009	S.D. dependent var	17.57462
S.E. of regression	15.82237	Sum squared resid	256355.6
F-statistic	46.79193	Durbin-Watson stat	1.227068
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.216756	Mean dependent var	40.72615
Sum squared resid	468945.3	Durbin-Watson stat	0.670794

Appendix 4.2.1.2 Chow Tests (Poolability)

Redundant Fixed Effects Tests  
Equation: Untitled  
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	11.755349	(75,949)	0.0000
Cross-section Chi-square	676.728771	75	0.0000

Cross-section fixed effects test equation:  
Dependent Variable: FIRM\_VALUE  
Method: Panel Least Squares  
Date: 02/02/24 Time: 02:05  
Sample: 2005 2019  
Periods included: 15  
Cross-sections included: 76  
Total panel (unbalanced) observations: 1030

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_STRUCTURE	-0.093740	0.016943	-5.532562	0.0000
PROFITABILITY	1.623215	0.134920	12.03092	0.0000
FIRM_SIZE	-5.594217	1.344284	-4.161484	0.0000
INVESTMENT_DECISION	-0.171838	0.033136	-5.185913	0.0000
FIRM_GROWTH	0.032193	0.034247	0.940011	0.3474
C	63.94041	3.766661	16.97536	0.0000
R-squared	0.244096	Mean dependent var	40.72615	
Adjusted R-squared	0.240405	S.D. dependent var	24.12153	
S.E. of regression	21.02306	Akaike info criterion	8.934925	
Sum squared resid	452576.2	Schwarz criterion	8.963686	
Log likelihood	-4595.486	Hannan-Quinn criter.	8.945840	
F-statistic	66.13378	Durbin-Watson stat	0.750280	
Prob(F-statistic)	0.000000			

Appendix 4.2.1.3 Hausman Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.755606	5	0.0050

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CAPITAL_STRUCTURE	-0.076183	-0.084248	0.000031	0.1478
PROFITABILITY	1.177712	1.266190	0.000989	0.0049
FIRM_SIZE	-15.308355	-11.390827	1.672743	0.0025
INVESTMENT_DECISION	-0.122181	-0.128801	0.000178	0.6197
FIRM_GROWTH	0.032764	0.025097	0.000020	0.0886

Cross-section random effects test equation:

Dependent Variable: FIRM\_VALUE

Method: Panel Least Squares

Date: 02/02/24 Time: 02:11

Sample: 2005 2019

Periods included: 15

Cross-sections included: 76

Total panel (unbalanced) observations: 1030

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	89.61689	6.666663	13.44254	0.0000
CAPITAL_STRUCTURE	-0.076183	0.017747	-4.292775	0.0000
PROFITABILITY	1.177712	0.129367	9.103665	0.0000
FIRM_SIZE	-15.30835	2.332517	-6.563021	0.0000
INVESTMENT_DECISION	-0.122181	0.039088	-3.125829	0.0018
FIRM_GROWTH	0.032764	0.027744	1.180928	0.2379

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.608143	Mean dependent var	40.72615
Adjusted R-squared	0.575110	S.D. dependent var	24.12153
S.E. of regression	15.72328	Akaike info criterion	8.423538
Sum squared resid	234613.1	Schwarz criterion	8.811812
Log likelihood	-4257.122	Hannan-Quinn criter.	8.570897
F-statistic	18.41004	Durbin-Watson stat	1.319120
Prob(F-statistic)	0.000000		

#### Appendix 4.2.1.4 Breusch-Pagan Lagrange Multiplier Test

Lagrange Multiplier Tests for Random Effects

Null hypotheses: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided  
(all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	1083.716 (0.0000)	83.43657 (0.0000)	1167.152 (0.0000)
Honda	32.91984 (0.0000)	9.134362 (0.0000)	29.73681 (0.0000)
King-Wu	32.91984 (0.0000)	9.134362 (0.0000)	21.52159 (0.0000)
Standardized Honda	33.95563 (0.0000)	9.704310 (0.0000)	24.73154 (0.0000)
Standardized King-Wu	33.95563 (0.0000)	9.704310 (0.0000)	17.56123 (0.0000)
Gourieroux, et al.	--	--	1167.152 (0.0000)

#### Appendix 4.3.1.1 Cross-sectional Dependence Test

Residual Cross-Section Dependence Test

Null hypothesis: No cross-section dependence (correlation) in  
residuals

Equation: Untitled

Periods included: 15

Cross-sections included: 76

Total panel (unbalanced) observations: 1030

Test employs centered correlations computed from pairwise samples

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	4997.713	2850	0.0000
Pesaran scaled LM	28.44716		0.0000
Bias-corrected scaled LM	25.73287		0.0000
Pesaran CD	27.60265		0.0000

Appendix 4.3.2.1 Panel Cross-Section Heteroscedasticity LR Test

Panel Cross-section Heteroskedasticity LR Test  
Equation: UNTITLED  
Specification: FIRM\_VALUE CAPITAL\_STRUCTURE PROFITABILITY  
FIRM\_SIZE INVESTMENT\_DECISION FIRM\_GROWTH C  
Null hypothesis: Residuals are homoskedastic

	Value	df	Probability
Likelihood ratio	499.2049	76	0.0000

LR test summary:

	Value	df
Restricted LogL	-4595.486	1024
Unrestricted LogL	-4345.884	1024

Unrestricted Test Equation:  
Dependent Variable: FIRM\_VALUE  
Method: Panel EGLS (Cross-section weights)  
Date: 02/02/24 Time: 02:12  
Sample: 2005 2019  
Periods included: 15  
Cross-sections included: 76  
Total panel (unbalanced) observations: 1030  
Iterate weights to convergence  
Convergence achieved after 18 weight iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_STRUCTURE	-0.084791	0.007483	-11.33124	0.0000
PROFITABILITY	1.387575	0.083416	16.63435	0.0000
FIRM_SIZE	-7.616333	0.952812	-7.993529	0.0000
INVESTMENT_DECISION	-0.097659	0.020713	-4.714969	0.0000
FIRM_GROWTH	0.077012	0.020978	3.671024	0.0003
C	58.94247	2.722943	21.64661	0.0000

Weighted Statistics

R-squared	0.463113	Mean dependent var	54.37290
Adjusted R-squared	0.460491	S.D. dependent var	30.72122
S.E. of regression	22.30106	Akaike info criterion	8.450260
Sum squared resid	509273.6	Schwarz criterion	8.479021
Log likelihood	-4345.884	Hannan-Quinn criter.	8.461175
F-statistic	176.6580	Durbin-Watson stat	0.989773
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.149393	Mean dependent var	40.72615
Sum squared resid	509277.1	Durbin-Watson stat	0.648520

Appendix 4.3.2.2 Panel Period Heteroscedasticity LR Test

Panel Period Heteroskedasticity LR Test

Equation: UNTITLED

Specification: FIRM\_VALUE CAPITAL\_STRUCTURE PROFITABILITY

FIRM\_SIZE INVESTMENT\_DECISION FIRM\_GROWTH C

Null hypothesis: Residuals are homoskedastic

	Value	df	Probability
Likelihood ratio	35.91288	76	1.0000

LR test summary:

	Value	df
Restricted LogL	-4595.486	1024
Unrestricted LogL	-4577.530	1024

Unrestricted Test Equation:

Dependent Variable: FIRM\_VALUE

Method: Panel EGLS (Period weights)

Date: 02/02/24 Time: 02:12

Sample: 2005 2019

Periods included: 15

Cross-sections included: 76

Total panel (unbalanced) observations: 1030

Iterate weights to convergence

Convergence achieved after 6 weight iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_STRUCTURE	-0.090929	0.016153	-5.629098	0.0000
PROFITABILITY	1.646817	0.132299	12.44769	0.0000
FIRM_SIZE	-6.059064	1.284933	-4.715469	0.0000
INVESTMENT_DECISION	-0.165416	0.032093	-5.154243	0.0000
FIRM_GROWTH	0.018400	0.032340	0.568959	0.5695
C	63.86638	3.629548	17.59624	0.0000

Weighted Statistics

R-squared	0.253204	Mean dependent var	41.25366
Adjusted R-squared	0.249557	S.D. dependent var	23.89080
S.E. of regression	21.04938	Akaike info criterion	8.900058
Sum squared resid	453710.4	Schwarz criterion	8.928819
Log likelihood	-4577.530	Hannan-Quinn criter.	8.910974
F-statistic	69.43818	Durbin-Watson stat	0.699304
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.242201	Mean dependent var	40.72615
Sum squared resid	453710.6	Durbin-Watson stat	0.746009



Appendix 4.3.3.1 Autocorrelation (With GLS)

Dependent Variable: FIRM\_VALUE  
 Method: Panel EGLS (Cross-section weights)  
 Date: 02/02/24 Time: 02:26  
 Sample: 2005 2019  
 Periods included: 15  
 Cross-sections included: 76  
 Total panel (unbalanced) observations: 1030  
 Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_STRUCTURE	-0.062890	0.010699	-5.878011	0.0000
PROFITABILITY	1.007736	0.087372	11.53384	0.0000
FIRM_SIZE	-11.24202	1.865343	-6.026785	0.0000
INVESTMENT_DECISION	-0.078932	0.029159	-2.706910	0.0069
FIRM_GROWTH	0.048777	0.019569	2.492581	0.0129
C	75.76769	5.416403	13.98856	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

R-squared	0.763488	Mean dependent var	50.05880
Adjusted R-squared	0.743550	S.D. dependent var	26.71858
S.E. of regression	15.58307	Sum squared resid	230447.6
F-statistic	38.29353	Durbin-Watson stat	1.456800
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.604326	Mean dependent var	40.72615
Sum squared resid	236898.3	Durbin-Watson stat	1.301402

Appendix 4.4.1 Fixed Effect Model (Without GLS)

Dependent Variable: FIRM\_VALUE  
 Method: Panel Least Squares  
 Date: 02/02/24 Time: 02:25  
 Sample: 2005 2019  
 Periods included: 15  
 Cross-sections included: 76  
 Total panel (unbalanced) observations: 1030

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_STRUCTURE	-0.076183	0.017747	-4.292775	0.0000
PROFITABILITY	1.177712	0.129367	9.103665	0.0000
FIRM_SIZE	-15.30835	2.332517	-6.563021	0.0000
INVESTMENT_DECISION	-0.122181	0.039088	-3.125829	0.0018
FIRM_GROWTH	0.032764	0.027744	1.180928	0.2379
C	89.61689	6.666663	13.44254	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.608143	Mean dependent var	40.72615
Adjusted R-squared	0.575110	S.D. dependent var	24.12153
S.E. of regression	15.72328	Akaike info criterion	8.423538
Sum squared resid	234613.1	Schwarz criterion	8.811812
Log likelihood	-4257.122	Hannan-Quinn criter.	8.570897
F-statistic	18.41004	Durbin-Watson stat	1.319120
Prob(F-statistic)	0.000000		

Appendix 4.4.2 Fixed Effect Generalized Least Square (With GLS)

Dependent Variable: FIRM\_VALUE  
 Method: Panel EGLS (Cross-section weights)  
 Date: 02/02/24 Time: 02:26  
 Sample: 2005 2019  
 Periods included: 15  
 Cross-sections included: 76  
 Total panel (unbalanced) observations: 1030  
 Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_STRUCTURE	-0.062890	0.010699	-5.878011	0.0000
PROFITABILITY	1.007736	0.087372	11.53384	0.0000
FIRM_SIZE	-11.24202	1.865343	-6.026785	0.0000
INVESTMENT_DECISION	-0.078932	0.029159	-2.706910	0.0069
FIRM_GROWTH	0.048777	0.019569	2.492581	0.0129
C	75.76769	5.416403	13.98856	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

R-squared	0.763488	Mean dependent var	50.05880
Adjusted R-squared	0.743550	S.D. dependent var	26.71858
S.E. of regression	15.58307	Sum squared resid	230447.6
F-statistic	38.29353	Durbin-Watson stat	1.456800
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.604326	Mean dependent var	40.72615
Sum squared resid	236898.3	Durbin-Watson stat	1.301402