



## FACTORS AFFECTING COMPANY VALUE WITH PANEL QUANTIL REGRESSION: BIST STONE AND SOIL-BASED MANUFACTURING SECTOR EXAMPLE

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### Abstract

This study aims to determine the impact of profit margin, debt ratio, and company size on company value using panel quantile regression. Company value is a key indicator of financial performance for publicly traded companies, reflecting expected profitability for stakeholders. The research focuses on Stone And Earth-Based Manufacturing Sector companies listed on Borsa İstanbul (BIST) during the 2014-2023 period. Out of 26 companies in the stone and earth-based sector based on stone and earth traded on BIST, 17 with accessible data were included in the analysis. Purposeful sampling was used, and data evaluation was conducted using Stata 17 and Eviews 10 econometric methods. The study's findings suggest that the debt ratio positively influences company value, while profit margin and company size have negative effects. These results provide insights into how these financial ratios impact company value, offering guidance for stakeholders and decision-makers in the stone and earth-based sector.

**Keywords:** Financial Ratio, Company Value, Panel Quantile Regression

**JEL Classification:** C23, G10, G17

## PANEL KANTİL REGRESYONU İLE ŞİRKET DEĞERİNİ ETKİLEYEN FAKTÖRLER: BIST TAŞ VE TOPRAĞA DAYALI İMALAT SEKTÖRÜ ÖRNEĞİ

### Öz

Bu çalışmanın amacı panel kantil regresyonu kullanarak kâr marjı, borç oranı ve şirket büyüklüğünün şirket değeri üzerindeki etkisini belirlemektir. Şirket değeri, halka açık şirketler için finansal performansın temel bir göstergesi olup paydaşlar için beklenen kârlılığı yansıtır. Araştırma, 2014-2023 döneminde Borsa İstanbul'da (BİST) listelenen taş ve toprağa dayalı üretim sektörü şirketlerine odaklanmaktadır. BİST'te işlem gören taş ve toprağa dayalı üretim sektöründeki 26 şirketten erişilebilir verisi olan 17'si analize dahil edilmiştir. Amaçlı örnekleme kullanılmış ve veri değerlendirmesi Stata 17 ve Eviews 10 ekonometrik yöntemleri kullanılarak gerçekleştirilmiştir. Çalışmanın bulguları, borç oranının şirket değerini olumlu yönde etkilediğini, kâr marjı ve şirket büyüklüğünün ise olumsuz etkileri olduğunu göstermektedir. Bu sonuçlar, bu finansal oranların şirket değerini nasıl etkilediğine dair içgörüler sunarak, taş ve toprağa dayalı sektördeki paydaşlar ve karar vericiler için rehberlik sunmaktadır.

**Anahtar Kelimeler:** Finansal Oran, Şirket Değeri, Panel Kantil Regresyon

**JEL Sınıflandırması:** C23, G10, G17

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## 1. Introduction

Maintaining or enhancing firm value is crucial for safeguarding investors and attracting more potential investors. When expressing firm value, it is essential not to overlook the company's profitability, cash flow generation, and future growth potential. A firm's strong financial performance and robust cash flow generation positively impact its value. Particularly in capital-intensive industries, companies tend to have significant financing needs, which can pressure them to generate sufficient cash flow to meet debt-related obligations (Poretti and Heo, 2022).

Firm value is also a metric for assessing a company's operations. It is a financial indicator that investors consider when evaluating the risk levels they will encounter while investing in the company's shares. Among the factors influencing a company's investments, the market value of its stock plays a significant role. An increase in the value of shares aligns with the company's primary objective of enhancing firm value (Rahmadinar and Khuzaini, 2019).

Providing financial information to shareholders is crucial for sharing a company's financial indicators with stakeholders. These external stakeholders include investors, the government, citizens, and creditors. Even the slightest market information changes can prompt external stakeholders to take actions that could reduce the value of the company's stock. The decline in stock prices is seen as a response from external stakeholders who interpret the sudden change in information as significant. These abrupt information shifts influence shareholders' decisions regarding investments in the company (Lestari and Sapitri, 2016; Hartono, 2005).

In the constantly evolving and expanding global financial system, the worth of a company is a fundamental criterion that reflects not only the financial and operational health of the company but also its growth and sustainability potential. This is primarily because the market value of a firm, calculated through profits and assets, provides insights into how investors and market participants assess the firm's value by investors and market participants. In other words, the components of firm value not only reflect internal performance factors such as operational efficiency, the strength of the management structure, and strategic innovation, but also offer a broader perspective on the robustness and healthy functioning of the national economy (Ibnussoim and Suyanto, 2023).

Existing literature typically examines the individual effects of factors such as profitability, leverage, and firm size on company worth. However, there is a limited number of studies that thoroughly investigate the interactions between these factors and the outcomes they produce when considered together. Thus, this research aims to address these limitations. Additionally, some studies in the current literature focus on specific industries or geographic regions, making it difficult to generalize findings or draw conclusions across various sectors and regions. This study seeks to compare and generalize the impacts of profit margin, debt ratio, and company size on company worth across various industries and geographic regions. Furthermore, panel data analysis, through a broader dataset, can enhance statistical power, leading to more reliable results. Therefore, employing panel data analysis to explore the effects of profitability, leverage, and firm size on company worth can enrich this study's contribution to the literature and provide a more comprehensive analysis. This study has the potential to offer significant contributions to the related empirical literature.

## 2. Literature Review

The effect of profitability on firm value has been discussed in academic literature for many years. Although Modigliani and Miller (1958) claimed that firm value is independent of capital structure in their capital structure theory, agency theory developed by Jensen and Meckling (1976) suggested that profitability can affect firm value within the framework of information asymmetry between managers and shareholders. Titman and Wessels (1988) emphasized the positive effect of profitability on firm value and stated that firms with high profitability reach higher market values. Myers (2001) stated that firms with high profitability tend to turn to equity financing

instead of debt and that this situation can have significant effects on firm value. Similarly, Fama and French (2002) revealed that the relationship between profitability and firm value is also shaped by firm size and leverage levels. Graham and Harvey (2001) showed that the effect of profitability on firm value can vary over time and is affected by market conditions and macroeconomic variables. In contrast, Savsar (2012) and Pouraghajan et al. (2013) have shown that the effect of profitability on firm value is not always positive. Studies conducted especially for emerging markets have revealed that investors focus on long-term growth expectations in firms with high profitability, and therefore firm value can sometimes be negatively affected (Maharani & Mawardhi, 2022). In addition, Nesta and Amir (2023) have shown that the effect of profitability on firm value can vary depending on sectoral dynamics and market conditions. Prihanta et al. (2023) analyzed the indirect effect of profitability on firm value through dividend policy and revealed how financial decisions shape investors perception. Ross (1977) suggested that firm profitability and capital structure can affect investor behavior through market signals.

The effect of company size on profitability and firm value has been widely discussed in the capital markets literature. While Modigliani and Miller (1963) suggested that large-scale firms provide an advantage in financing costs, Barney (1991) stated that although large firms have more resources, they may experience fluctuations in firm value due to managerial difficulties. Frank and Goyal (2009) stated that large companies' financial flexibility can increase profitability and firm value, but corporate governance mechanisms are decisive in this process. Rajan and Zingales (1995) showed that large-scale firms gain financial flexibility and can provide financing with lower borrowing costs, while Nesta and Amir (2023) revealed that large-scale firms may not be able to fully benefit from economies of scale after a certain size threshold. Welch (2004) analyzed the role of company size on stock returns and capital structure decisions and revealed that large companies tend to make less risky capital decisions. These findings were supported by Demirgüç-Kunt and Maksimovic (1998) and emphasized that the financial system structures of countries can change the effect of firm size on value. Hou et al. (2024) showed that the effect of firm size on market value differs at extreme risk levels with panel quantile regression analyses. Titman and Tsyplakov (2007) analyzed how firm size can affect the optimal balance in the capital structure using mathematical models.

The effect of capital structure on firm value is an important research topic in the fields of capital markets and corporate finance. While Modigliani and Miller (1958, 1963) argued that the effect of capital structure on firm value is neutral, Jensen and Meckling (1976) suggested that leverage ratio can create a control mechanism on firm managers within the scope of agency theory and thus increase firm value. Myers and Majluf (1984) stated that firms tend to use equity financing instead of debt within the framework of information asymmetry and that the effect of leverage level on firm value varies according to market conditions. Fama and French (2002) stated that leverage use varies according to the level of profitability and that leverage ratio can affect firm value positively or negatively. Rajan and Zingales (1995) showed that capital structure can vary according to sectoral and country differences, while Düzer (2008) and Nur and Korkmaz (2022) presented empirical findings supporting the positive effect of leverage ratio on firm value. Santoso (2023) showed that leverage ratio contributes positively to firm value up to a certain level, but excessive debt can negatively affect firm value. In addition, Titman and Tsyplakov (2007) analyzed the long-term effects of leverage ratios on firm value and how debt management strategies change in financial crisis environments. Welch (2004) examined the sensitivity of the relationship between capital structure and stock returns to leverage ratios.

### **3. Method And Analysis**

In this study, the effect of commonly used ratios such as profit margin, debt ratio, and company size on company worth was analyzed using panel quantile regression analysis, as proposed by Koenker (2004). The variables selected for the analysis were obtained from the Public Disclosure Platform of Turkey (KAP). The sample for this study includes companies operating in the stone and

earth-based sub-sector of the BIST stone and earth-based sector. There are 26 companies in the stone and earth-based manufacturing sector listed on BIST. Out of these, 17 companies with accessible data during the analysis period were involved in the study. The analysis covers the period from 2014 to 2023, based on annual financial statements. The dependent and independent variables were selected by based on the studies of Putra and Lestari (2016), Apriantini et al. (2022), Hapsari (2018), Setiyowati (2018), and Dirganpratiwi and Yuniati (2021). The variables utilized in this research are shown in Table 1.

Table 1: Variables Used

Variable Type	Variable Code	Financial Ratios	Abbreviation
Dependent Variable	X1	Market Value/Book Value	MB
	X2	Initial Investment / Net Profit – Initial Investment × 100	ROI
Independent Variables	X3	Total Debt/Equity	LVR
	X4	Total Asset Log	LN

The independent variables selected in this study—profitability, leverage, and firm size—are widely accepted in the financial literature as the key determinants of firm value (Fama and French, 2002; Rajan and Zingales, 1995). Given the capital-intensive nature of the stone and earth-based manufacturing sector, leverage and firm size play a critical role in determining firm value (Düzer, 2008; Santoso, 2023). Furthermore, the selection of these variables is consistent with the methodological requirements for the panel quantile regression method and allows for capturing the significant effects of financial factors on firm value while minimizing multicollinearity issues. Additional independent variables such as capital expenditures or liquidity ratios may provide additional insights into the effects on firm value; however, these variables are beyond the scope of this study. Future research can examine the determinants of firm value in this sector more comprehensively by including these variables.

Table 2 lists the company names and stock exchange codes of the companies involved in the analysis.

Table 2: Company Names Included in the Analysis

	Company Name	Stock Exchange Code
1	Afyon Cementi Inc.	Afyon
2	Akçansa Cementi Inc.	Akcns
3	Baştaş Başkent Cementi Inc.	Bascm
4	Batı Anadolu Cementi Inc.	Btcim
5	Batısöke Cementi Inc.	Bsoke
6	Bursa Cementi Inc.	Bucim
7	Çimbeton Cementi Inc.	Cmbtn
8	Çimentaş İzmir Cementi Inc.	Ccement
9	Çimsa Cementi Inc.	Cimsa
10	Doğusan Cementi Inc.	Dogup
11	Ege Ceremic Inc.	Egser
12	Göлтаş Cementi Inc.	Golts
13	Kütahya Porcelain Inc.	Kutpo
14	Niğbaş Niğde Cementi Inc.	Nibas
15	Nuh Cementi Inc.	Nuhcm
16	Uşak Ceremic Inc.	Uşak
17	Yibitaş Yozgat Workers Inc.	Ybtas

In evaluating the data, econometric analysis methods using Stata 17 and EViews 10 were employed. Table 3 presents the descriptive statistics for the dependent and independent variables shown in Table 1. The analysis of skewness-kurtosis values, Jarque-Bera statistics, and probability scores in the descriptive statistics indicates that the variables frequently observed in financial data do not exhibit a normal distribution, which is also the case in this study.

Table 3: Descriptive Statistics of Variables

	X1	X2	X3	X4
Mean	4.366539	40.05480	1.788211	8.095377
Median	1.688732	9.504621	0.700565	8.849428
Maximum	96.83400	2913.844	97.10127	10.58417
Minimum	-20.30795	-248.5081	-27.91041	-0.207608
Std. Giant.	9.961548	241.9800	8.535551	2.566550
Skewness	5.835990	10.17657	8.868763	-2.429500
Kurtosis	48.88374	119.0471	97.88105	7.537783
Jarque-Bera	15877.67	98325.06	65995.65	313.0929
Probability	0.000000	0.000000	0.000000	0.000000
Sum	742.3117	6809.315	303.9960	1376.214
Sum Sq. Giant.	16770.28	9895679.	12312.60	1113.233
Observations	170	170	170	170

Figure 1 displays the quantile process estimation graphs for all the financial ratios used in the study. It shows that certain periods contain extreme values, and the data do not follow a normal distribution. The mean value of X1 (4.3665): The average firm value (market/book ratio) is 4.37, indicating that companies are valued by the market at approximately 4.37 times their book value. Median (1.6887): A distribution that is skewed to the right as the median value is significantly lower than the mean, this indicates a right-skewed distribution. This indicates that most firms have low market values, but some companies have extremely high valuations. Min (-20.3079) & Max (96.8340): Firm values exhibit significant variation. A negative firm value for some companies may indicate that they are experiencing financial difficulties or that investors expect poor future performance. Mean for X2 (40.05): The average ROI (Return on Investment) is 40.05%, indicating that the firms have an average return of 40.05% on their assets. Standard Deviation (241.98): The relatively high standard deviation indicates that the profitability levels among the firms vary widely. Min (-248.5) & Max (2913.8): The minimum value (-248.5%) indicates that some firms have experienced significant financial losses. The maximum value (2913.8%) indicates that some firms have achieved exceptionally high returns on investment, thus the distribution is quite skewed to the right. Average for X3 (1.7882): The average leverage ratio is 1.79, indicating that companies are 1.79 times their equity in debt. Skewness (8.8687) & Kurtosis (97.88): Very high skewness and kurtosis values indicate that leverage ratios are extreme and some companies are over-leveraged. Min (-27.91) & Max (97.10): The maximum leverage ratio is 97.10, meaning that some companies are almost entirely financed with debt. A negative leverage ratio (-27.91) may indicate that some companies are losing equity or are unable to service their debt. For X4, mean (8.09) & Median (8.85): It is seen that the company sizes are distributed close to the mean, but in general, large firms are more dominant. Skewness (-2.43) & Kurtosis (7.54): Negative skewness shows that large firms are more numerous and small firms lower the mean. Min (-0.2076) & Max (10.58): A wide range of variation shows that firms show great differences in terms of size and the market structure is heterogeneous.

### 3.1. Panel Quantile Regression

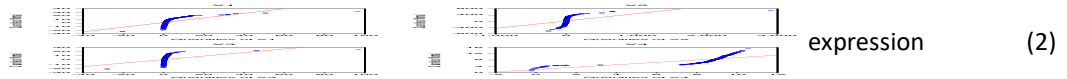
Individual fixed effects panel quantile regression methods control for unobserved individual heterogeneity and consider the non-linear effects of predictors on the dependent variables. These methods are commonly used in statistics, econometrics, and finance (Hou et al., 2024). Koenker and Bassett (1978) first introduced the quantile regression approach. In this approach, a fixed-effects panel quantile regression model is used to account for unobserved individual heterogeneity. Quantile regression on panel data is extensively applied both theoretically and in practice. This approach allows for the assessment of a range of conditional quantiles, the examination of various forms of conditional heterogeneity, and the monitoring of unobserved individual effects. Kato et al. (2012) noted that the quantile regression approach is consistent when

the number of individuals, N, and the number of time periods, T, tend towards infinity, determining the robustness and normality of the estimates.

Quantile regression is fundamentally a location model, and the simple location model is shown in Equation 1 (Topbaş and Unat, 2018: 112).

$$Y_t = \beta + \epsilon_t \tag{1}$$

In this model,  $Y_t$  is an independent, symmetrically distributed random variable with a median  $\beta$ , belonging to the symmetric F distribution. According to this model, the  $\theta$ th sample quantile is;



If minimized with respect to the  $\beta$  parameter, the parameter estimate:

$$\min_{\beta} \frac{1}{n} \left\{ \sum_{i=1}^n \rho_{\theta}(y_i - x_i \beta) \right\} \tag{3}$$

It is calculated with the help of equation. According to this equation, the appropriate  $\theta$  for the value  $\beta$  estimator, Under the condition  $0 < \theta < 1$ ;

$$\hat{\beta}(\theta) = \operatorname{argmin}_{\beta \in R^p} \left\{ \sum_{i=1}^n \rho_{\theta}(y_i - x_i \beta) \right\} \tag{4}$$

According to the quantile regression approach, different estimates can be derived for various quantiles, meaning that the values of the dependent variable at different quantiles can be calculated. This situation can be considered as the varying reactions of the dependent variable's conditional distribution to changes in independent variables at different points (Çamurlu and Erilli, 2019: 18). Panel data and quantile regression models are widely applied in econometrics research. Quantile regression approaches allow researchers to account for unobserved heterogeneity and heterogeneous responses of variables, while the presence of panel data enables the inclusion of fixed effects to control for certain unobserved common variables (Uyar and Gökçe, 2017: 369).

### 3.2. Analysis Findings

The panel quantile regression estimation results are presented in Table 4. The graphs of the coefficients by quantile are shown in Figure 1.

Figure 1: Quantile Process Estimates

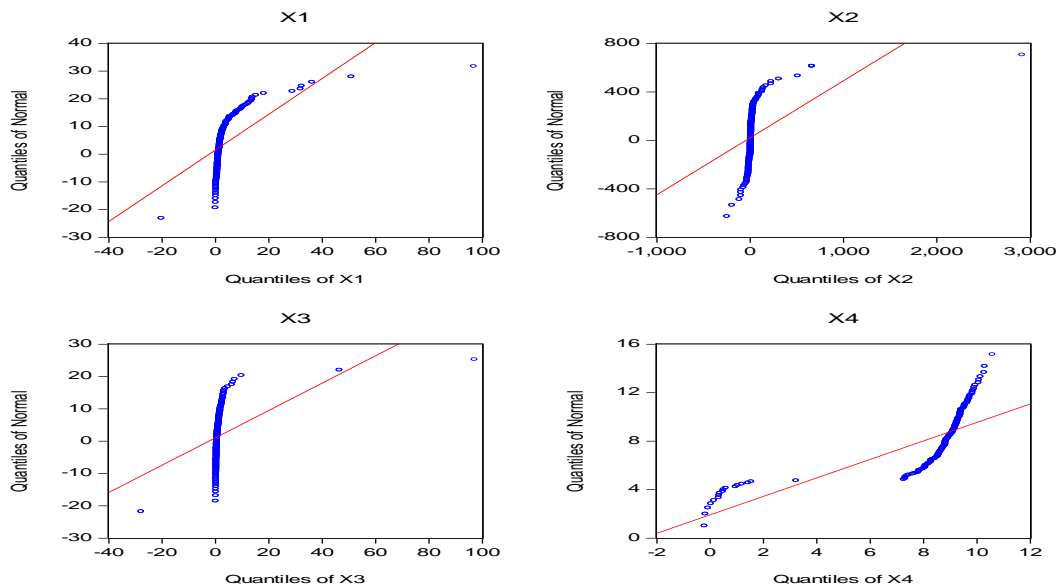


Table 4: Panel Quantile Model Estimation Results

	Variables	Coefficient	St. Mistake	t-Statistics	p
0.25	X2	-0.000210	0.000352	0.597228	0.5512
	X3	0.366090	0.012370	29.59421	0.0000
	X4	-0.001436	0.047706	-0.030107	0.9760
0.40	X2	-0.000331	0.000443	-0.747337	0.4559
	X3	0.362430	0.015604	23.22713	0.0000
	X4	-0.011914	0.052866	-0.225353	0.8220
0.50	X2	-0.000449	0.000940	-0.477213	0.6338
	X3	0.397662	2.063110	0.192749	0.8474
	X4	-0.016980	0.069957	-0.242723	0.8085
0.60	X2	-0.000689	0.000399	-1.727205	0.0860
	X3	0.663065	0.059751	11.09714	0.0000
	X4	0.022987	0.052677	0.436385	0.6631
0.75	X2	-0.001237	0.000374	-3.310205	0.0011
	X3	0.626325	0.050939	12.29556	0.0000
	X4	0.092232	0.122326	0.753982	0.4519
0.90	X2	-0.002942	0.001093	-2.691685	0.0078
	X3	0.839850	1.542289	0.544547	0.5868
	X4	0.093100	5.842399	0.015935	0.9873

The statistical analysis results in Table 4 show that the effect of profitability (X2) on firm value varies across different quantiles. In particular, at quantiles 0.25, 0.40 and 0.50, profitability is negative but statistically insignificant ( $p > 0.05$ ), while at quantile 0.60 it is very close to being significant ( $p = 0.0860$ ). However, at high quantiles (0.75 and 0.90), the effect of profitability on firm value is negative and statistically significant ( $p < 0.05$ ). This shows that the effect of profitability on firm value is not always obvious, but it can have a negative and significant effect in firms with high value. The leverage ratio (X3) is positive and statistically significant ( $p = 0.0000$ ) at quantiles 0.25, 0.40, 0.60 and 0.75, but loses its significance at quantiles 0.50 ( $p = 0.8474$ ) and 0.90 ( $p = 0.5868$ ). This finding shows that leverage increases firm value at low and medium quantiles, but leverage use does not provide an additional advantage in firms with the highest value. The firm size (X4) variable was statistically insignificant at all quantiles ( $p > 0.05$ ). The firm size effect, which is negative but insignificant at quantiles 0.25, 0.40 and 0.50, shows a positive trend at quantiles 0.60, 0.75 and 0.90, but again does not reveal a significant relationship. This situation shows that firm size does not have a decisive effect on firm value.

#### 4. Conclusion

Stone and earth-based sector companies listed on the Istanbul Stock Exchange (Borsa İstanbul) are a significant part of Turkey's economy. The period from 2014 to 2023 has experienced significant effects from both local and global economic developments on the performance of these companies. Examining the effects of factors such as profit margin, debt ratio, and company size on company worth during this period is crucial for investors, financial managers, and policymakers. Understanding these impacts can lead to more informed investment decisions and provide critical insights for strategic planning, aiding companies in achieving growth and long-term value creation. Therefore, this study is expected to contribute to academic literature and offer practical guidance in financial decision-making processes.

Based on the findings from the analysis of the 2014-2023 period for stone and earth-based sector companies listed on the Istanbul Stock Exchange, several conclusions have been drawn regarding the impact of profit margin, debt ratio, and company size on company worth. Profitability (X2) generally has a negative impact on company worth, but this effect is only significant in certain quantiles, indicating that profitability may have a negative effect on firms with high valuations. The leverage ratio (X3) generally shows a positive effect, being particularly significant at medium and high quantiles, suggesting that leverage can enhance firm value in these segments. Company size

(X4) generally exhibits a positive effect on firm value, but this effect is not significant in most quantiles, indicating that the impact of company size on value may be insignificant or highly variable.

These results suggest that firm value is influenced by factors such as profitability, leverage, and company size in different ways, depending on the firm's quantile in the value distribution. All variables except leverage exhibit negative coefficients, except for leverage, indicate adverse effects of these variables on firm value. Negative coefficients for profitability and company size in certain quantiles suggest that factors such as profitability strategies, management challenges related to size, or market perceptions may contribute to these effects. Therefore, companies should optimize their strategic decisions by considering the heterogeneous effects of these factors across different value quantiles.

In the study, it was found that the effect of profitability on firm value is insignificant at low and medium quantiles, but has a negative and significant effect at high quantiles. According to the theory, although Modigliani and Miller's (1958) Capital Structure Theory suggests that firm value is independent of capital structure, this study shows that the effect of profitability on firm value is variable. The Profitability-Firm Value Theory of Fama and French (2002) states that firms with high profitability generally make investments using low leverage and are evaluated as more stable investments by the market. The finding obtained in this study is consistent with the prediction of Fama and French. Because it is seen that firms with high profitability carry the risk of overvaluation and act according to the long-term expectations of investors. The negative effect of profitability at high quantiles may indicate the situation known as the "growth trap" in the literature (Myers and Majluf, 1984). Since investors do not see excessively high profit rates as sustainable, they may reduce firm value.

The effect of leverage ratio on firm value is found to be positive and significant at low and medium quantiles, but it is insignificant at the 0.50 and 0.90 quantiles. According to the theory, Jensen and Meckling's (1976) Agency Theory emphasizes the disciplinary effect of debt on firm managers. The findings of the study show that when the debt ratio is at low levels, it contributes positively to firm value, but this effect disappears after exceeding a certain level. Trade-off Theory (Kraus and Litzenberger, 1973) suggests that the use of debt initially increases firm value, but after a certain level, excessive debt will increase firm risk and create a negative effect. In this study, it is observed that debt usage increases firm value at low quantiles, which supports that reasonable debt usage can be beneficial for the firm as predicted by Trade-Off Theory. However, the insignificance of the effect of leverage ratio on firm value at high quantiles shows that debt usage does not provide an additional advantage since large firms already have sufficient financial resources.

The effect of firm size on firm value was statistically insignificant in all quantiles, but it shows a negative trend in firms with low firm value and a positive trend in firms with high firm value. According to the theory, the Tax Advantage Theory of Modigliani and Miller (1963) suggests that large firms generally provide financing with lower borrowing costs. The Financial Flexibility Theory of Rajan and Zingales (1995) states that large firms have wider financing options and therefore the relationship between financial leverage and profitability may be variable. The findings of this study show that the effect of firm size on firm value is not clear. This is because large firms do not provide a decisive advantage in terms of market value and firm value is directly related to investor perceptions. In addition, the positive and significant effect of leverage on firm value is consistent with previous literature such as the findings of Düzer (2008), Nur and Korkmaz (2022), and Santoso (2023). When evaluating the effect of profit margin on firm value, similar to our study, the study conducted by Savsar (2012) and Pouraghajan et al. (2013) found negative and insignificant results. However, the study conducted by Asiri and Hameed (2014) concluded that profitability has a significant effect on firm value, contrary to our findings.

Future studies should explore the factors affecting company value by including different sectors, a longer observation period, and additional variables. By doing so, researchers can conduct more comprehensive analyses and compare different results.

### References

- Adi Putra, A. D. ve Lestari, P. V. (2016). Pengaruh Kebijakan Dividen, Likuiditas, Profitabilitas Dan Ukuran Perusahaan Terhadap Nilai Perusahaan. *E-Jurnal Manajemen Unud*, 5, 7.
- Apriantini, N. M., Widhiastuti, N. L. P. ve Novitasari, N. L. G. (2022). Pengaruh Profitabilitas, Leverage, Likuiditas, Kepemilikan Manajerial, dan Ukuran Perusahaan Terhadap Nilai Perusahaan. *Jurnal Kharisma*, 4(2), 190–201.
- Asiri, B. K. ve Hameed, S. A. (2014). Financial Ratios and Firm's Value in the Bahrain Bourse. *Research journal of finance and accounting*, 5(7), 1-9.
- Astawinetu, E. D., Istiono, T. R. ve Penangsang, P. Can. (2023). Can Profitability Intervene in the Effects of Liquidity, Activity, and Leverage on Company Value?. *Journal of Economics, Finance and Management Studies*. 06. 10.47191/jefms/v6-i7-37.
- Baker, H. K. ve Weigand, R. A. (2022). Corporate Finance: A Focused Approach. *Journal of Corporate Finance*, 72(1), 102103. <https://doi.org/10.1016/j.jcorpfin.2021.102103>.
- Çamurlu, S. ve Erilli, N. A. (2019). Kantil Regresyon Analizinde Bootstrap Tahmini. *Erciyes Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 35(2), 16-25.
- Demirgüç-Kunt, A. ve Maksimovic, V. (1998). Law, Finance, and Firm Growth. *The Journal of Finance*, 53(6), 2107-2137.
- Dilmaç, M. ve Korkmaz, Ö. (2018). Firma Piyasa Değerini Etkileyen Finansal Faktörler: Banka ve Sigorta İşletmeleri Üzerine Bir Uygulama. *Journal of Management and Economics Research*, 16(2), 179-201.
- Dirganpratiwi, P. ve Yuniati, T. (2021). Pengaruh Profitabilitas, Leverage Dan Likuiditas Terhadap Nilai Perusahaan Pada Perusahaan Food and Beverage Yang. *Jurnal Ilmu Dan Riset Manajemen*, 10(4), 1–17.
- Düzer, M. (2008). Finansal Analizde Kullanılan Oranlar ve Firma Değeri İlişkisi İMKB'de Bir Uygulama, (Yayımlanmamış Yüksek Lisans Tezi), Sakarya Üniversitesi, Sakarya.
- Fama, E. F. ve French, K. R. (2002). Testing Trade-Off and Pecking Order Predictions About Dividends and Debt. *The Review of Financial Studies*, 15(1), 1-33. <https://doi.org/10.1093/rfs/15.1.1>.
- Frank, M. Z. ve Goyal, V. K. (2009). Capital Structure Decisions: Which Factors are Reliably Important? *Financial Management*, 38(1), 1-37. <https://doi.org/10.1111/j.1755-053X.2009.01026.x>.
- Graham, J. R. ve Harvey, C. R. (2001). The Theory and Practice of Corporate Finance: Evidence from the Field. *Journal of Financial Economics*, 60(2-3), 187-243. [https://doi.org/10.1016/S0304-405X\(01\)00044-7](https://doi.org/10.1016/S0304-405X(01)00044-7).
- Güvercin, A. ve Demir, Y. (2015). Kazanç Açıklamalarının Şirket Değeri Üzerindeki Etkileri: Bist 100 Üzerine Bir Uygulama. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 20(2), 267-285.
- Hapsari, I. (2018). The Effect of Competitive Advantage toward Financial Performance with Good Information Technology Governance as Moderating Variable (An Empirical Study on Commercial Banking Listed in Indonesia Stock Exchange). *Kompartemen: Jurnal Ilmiah Akuntansi*, XVII(2), 1–9. <http://jurnalnasional.ump.ac.id/index.php/kompartemen/>.

- Hartono, J. (2005). *Information Systems Analysis and Design*. Yogyakarta: Andi Publishers.
- Hou, Y., Leng, X., Peng, L. ve Zhou, Y. (2024). Panel Quantile Regression for Extreme Risk. *Journal of Econometrics*, 240(1), 105674.
- Ibnussoim, M. ve Suyanto, S. (2023). Analysis of Leverage, Profitability and Interest Rate Ratio on Company Value With Size as an Intervening Variable. *Kontigensi: Jurnal Ilmiah Manajemen*, 11(2), 717-733.
- Jensen, M. C. ve Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X).
- Jensen, M. ve William M. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3: 305–360.
- Kato, K., Galvao Jr, A. F. ve Montes-Rojas, G. V. (2012). Asymptotics for Panel Quantile Regression Models with Individual Effects. *Journal of Econometrics*, 170(1), 76-91.
- Kraus, A. ve Litzenberger, R. H. (1973). A State-Preference Model of Optimal Financial Leverage. *The Journal of Finance*, 28(4), 911-922. <https://doi.org/10.1111/j.1540-6261.1973.tb01415.x>.
- Koenker, R. (2004). Quantile Regression for Longitudinal Data. *Journal of Multivariate Analysis*, 91,74–89.
- Koenker, R. ve Bassett Jr, G. (1978). Regression Quantiles. *Econometrica: Journal of the Econometric Society*, 33-50.
- Kurtaran, A., Kurtaran, A. T., Çelik, M. K. ve Temizer, Z. (2015). Finansal Oranlar ile Firma Değeri İlişkisi: BIST’te Bir Uygulama. *Global Journal of Economics and Business Studies*, 4(8), 35-45.
- Lemmon, M. L. ve Zender, J. F. (2010). Debt Capacity and Tests of Capital Structure Theories. *Journal of financial and quantitative analysis*, 45(5), 1161-1187.
- Lestari, N. ve Sapitri, R. C. (2016). The Influence of Intellectual Capital on Company Value. *Journal of Accounting, Economics and Business Management*, 4(1), 28–33. <https://jurnal.polibata tam.ac.id/index.php/JAEMB/article/view/81>.
- Maharani, Y. A. ve Mawardhi, W. (2022). Pengaruh Profitabilitas, Firm Size, Dan Growth Terhadap Nilai Perusahaan Dengan Struktur Modal Sebagai Variabel Intervening (Studi Kasus Pada Perusahaan Food And Beverage Yang Terdaftar Pada Bursa Efek Indonesia Tahun 2015-2020). *Diponegoro Journal of Management*, 11(2).
- Modigliani, F. ve Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, 48(3), 261-297.
- Modigliani, F. ve Miller, M. H. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. *The American Economic Review*, 53(3), 433-443.
- Myers, S. C. ve Majluf, N. S. (1984). Corporate Financing and Investment Decisions when Firms have Information that Investors do not have. *Journal of Financial Economics*, 13(2), 187-221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0).
- Myers, S. C. (2001). Capital Structure. *The Journal of Economic Perspectives*, 15(2), 81-102. <https://doi.org/10.1257/jep.15.2.81>.
- Nesta, K. A. ve Amir, A. (2023). The Effect of Capital Structure, Profitability, Leverage and Company Size on Company Value. *Ratio: Reviu Akuntansi Kontemporer Indonesia*, 4(2), 139-148.

- Nur, T. ve Korkmaz, T. (2022). Asimetrik Bilgi ve Firma Değeri İlişkisinde Finansal Kaldırıcın Düzenleyici Rolü: BİST Üzerine Bir Uygulama. *Business and Economics Research Journal*, 13(3), 449-463.
- Poretti, C. ve Heo, C. Y. (2022). COVID-19 and Firm Value Drivers in the Tourism Industry, *Annals of Tourism Research*, Volume 95, 2022, 103433, ISSN 0160-7383, <https://doi.org/10.1016/j.annals.2022.103433>.
- Pouraghajan, A., Malekian, E., Emamgholipour, M., Lotfollahpour, V. ve Bagheri, M. M. (2012). The Relationship Between Capital Structure and Firm Performance Evaluation Measures: Evidence from the Tehran Stock Exchange. *International Journal of Business and Commerce*, 1(9), 166-181.
- Prihanta, S. M., Hapsari, I., Santoso, S. B. ve Wibowo, H. (2023). Effect of Profitability, Leverage, and Liquidity on Company Value With Dividend Policy as a Moderation Variable (In IDX High Dividend Companies 20 Period 2017–2021). *Formosa Journal of Applied Sciences*, 2(1), 1-24.
- Putri, I. R. A., Ulupui, I. G. K. A. ve Kahirunnisa, H. (2024). The Influence of Company Growth, Profitability, Leverage, and Inflation on the Value of Energy Sector Companies. *Journal of Business Innovation and Accounting Research*, 1(2), 122-132.
- Rahmadinar, F. D. ve Khuzaini, K. (2019). The Effect of Profitability, Leverage and Company Size on Company Value. *Journal of Management Science and Research*, 8 numbers 2(19), 1–18.
- Rajan, R. G. ve Zingales, L. (1995). What do We Know about Capital Structure? Some Evidence From International Data. *The Journal of Finance*, 50(5), 1421-1460.
- Ross, S. A. (1977). The Determination of Financial Structure: The Incentive-Signalling Approach. *The Bell Journal of Economics*, 8(1), 23-40. <https://doi.org/10.2307/3003485>.
- Santoso, I. A. (2023). Pengaruh Profitabilitas, Leverage, Dan Ukuran Perusahaan Terhadap Nilai Perusahaan (Studi Empiris Perusahaan Properti Dan Real Estate Yang Terdaftar Di BEI).
- Savsar, A. (2012). Finansal Oranlarla Firma Değeri Arasındaki İlişki ve İstanbul Menkul Kıymetler Borsası'nda Bir Uygulama, (Yayımlanmamış Yüksek Lisans Tezi), Gaziosmanpaşa Üniversitesi Sosyal Bilimler Enstitüsü, Tokat.
- Setiyowati, H. (2018). Pengaruh Ukuran Perusahaan, Profitabilitas Dan Leverage Terhadap Nilai Perusahaan (Studi Pada Perusahaan yang Listing di Jakarta Islamic Index Tahun 2013-2016). Skripsi.
- Titman, S. ve Wessels, R. (1988). The Determinants of Capital Structure Choice. *The Journal of Finance*, 43(1), 1-19.
- Titman, S. ve Tsyplov, S. (2007). A Dynamic Model of Optimal Capital Structure. *Review of Finance*, 11(3), 401-451. <https://doi.org/10.1093/rof/rfm013>.
- Topbaş, F. ve Unat, E. (2018). Gelir ve Tüketim İlişkisinin İstikrarı: Harcama Gruplarına ve Zamana Göre Kantil Regresyon Modelden Kanıtlar. *Izmir Democracy University Social Sciences Journal*, 1(2), 103-126.
- Uyar, U. ve Gökçe, A. (2017). Gelişmekte Olan Piyasalarda Enerji Tüketimi ve Büyüme İlişkisinin Panel Kantil Regresyon ile İncelenmesi: VISTA Ülkeleri Örneği. *Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (27), 364-373.
- Welch, I. (2004). Capital Structure and Stock Returns. *The Journal of Political Economy*, 112(1), 106-131. <https://doi.org/10.1086/379933>.

- Xue, W. ve Zhang, L. (2019). Revisiting the Asymmetric Effects of Bank Credit on the Business Cycle: A Panel Quantile Regression Approach. *The Journal of Economic Asymmetries*, 20, e00122.
- Yener, E. ve Karkuş, R. (2012). Sermaye Yapısı ve Firma Değeri İlişkisinin Farklı Aktif Büyüklüklerde Karşılaştırılmalı İncelenmesi: İMKB 100 Firmaları Üzerine Bir Uygulama. *Gazi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 14(2), 75-98.