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The Effects of Operational Efficiency, Liquidity, and Capital Structure on Firm Value: The Moderating Role of Firm Size (Evidence from Textile Industry Companies Listed on the Indonesia Stock Exchange 2020-2024)

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Abstract
The textile industry is one of Indonesia's mainstay sectors, as stated in the National Industrial Development Master Plan (RIPIN) 2015–2035 (Satya, t.t.). This study aims to analyze and investigate the effects of operational efficiency, liquidity, and capital structure on firm value, with firm size as a moderating variable. The population of this study consisted of textile companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. The sample was selected using a purposive sampling technique based on four criteria, resulting in 16 companies with 80 observations. This study employed multiple linear regression analysis using Moderated Regression Analysis (MRA) and balanced panel data regression. The results showed that capital structure had a significant effect on firm value, while operational efficiency and liquidity did not have a significant effect on firm value. Furthermore, firm size was able to moderate the effects of liquidity and capital structure on firm value but was unable to moderate the effect of operational efficiency on firm value.

INTRODUCTION

The textile industry is one of Indonesia's mainstay sectors, as stated in the National Industrial Development Master Plan (RIPIN) 2015–2035 (Satya, t.t.). Based on data from the Indonesian Ministry of Industry, the contribution of the textile industry to the manufacturing sector's GDP reached 5.84%, equivalent to USD 11.6 billion, with a trade surplus of USD 3.2 billion in the first quarter of 2024. This sector also absorbed more than 3.98 million workers and contributed 19.47% to the total manufacturing workforce in 2023.

However, during the 2020–2024 period, the Indonesian textile industry faced considerable pressure from both macroeconomic and microeconomic perspectives. At the macro level, these pressures included a slowdown in global demand and the impact of the Russia–Ukraine conflict on inflation and purchasing power. At the micro level, the industry experienced production efficiency pressures due to the transition from labor-intensive to capital-intensive industries. This condition is reflected in the case of PT Century Textile Industry Tbk (CNTX), which was suspended by the IDX in August 2024 and submitted a voluntary delisting request due to prolonged losses, as well as PT Sri Rejeki Isman Tbk (SRIL), which was declared bankrupt by the Semarang Commercial District Court in October 2024 after failing to repay debts to creditors (Madewi, 2024). Regarding liquidity, SRIL recorded an

average current ratio of 1.93%, a quick ratio of 1.03%, and a cash ratio of 0.16%, indicating weak financial performance (Firdaus et al., 2024).

Fluctuations in firm value, proxied by the Price-to-Book Value (PBV) ratio, also demonstrate diverse dynamics among textile companies during the 2020–2024 period. SRIL's PBV changed from a positive value of 0.55 in 2020 to a negative value of −0.54 in 2021. In contrast, the PBV of PT Golden Flower Tbk (POLU) increased significantly to 13.74 in 2024, while the PBV of PT Argo Pantes Tbk (ARGO) rose substantially from −4.73 in 2020 to 25.52 in 2024. These variations indicate that investors respond differently to each company's financial condition despite operating within the same sector. Therefore, firm value is suspected to be influenced not only by external industry factors but also by internal corporate capabilities in managing operational efficiency, liquidity, and capital structure.

Operational efficiency, measured using the ratio of Operating Expenses to Operating Income (Biaya Operasional terhadap Pendapatan Operasional or BOPO), reflects a company's ability to control operating costs to generate optimal revenue (Nadira Amalia & Adrie Putra, 2024). Liquidity, which theoretically provides an important signal for investors in assessing financial health, reflects a company's ability to meet short-term liabilities using current assets (Ainie Zaman & Utami Ady, 2024). Capital structure, as explained through trade-off theory, describes how companies balance the tax advantages of debt financing with the risk of financial distress and bankruptcy (Almomani et al., 2022). The effects of these three factors on firm value are expected to vary across companies, and such differences may be influenced by firm size, which has the potential to improve access to financing and strengthen risk-bearing capacity (Putra & Akhmadi, 2024; Ari Saputra & Sri Arta Jaya Kusuma, 2025).

Empirical findings regarding the relationships among these variables remain inconsistent. Studies by Wildan and Yulianti (2021), Suzan and Ardiansyah (2023), and Agus Ari Widana et al. (2025) found that operational efficiency had a negative effect on firm value, whereas studies by Mahardhika (2025), Nadira Amalia and Adrie Putra (2024), and Muslim and Karyatun (t.t.) found no significant effect. Similarly, research on liquidity and capital structure has reported varying results, including positive, negative, and insignificant effects (Putra & Akhmadi, 2024; Putri & Wahyudi, 2025; Almomani et al., 2022; Yulianty, 2021). The moderating role of firm size also remains debated, with Putra and Akhmadi (2024) finding that firm size was unable to moderate the relationship, while Yuli Ermawati and Edo Tri Nahendra Agustino (2025) and Ari Saputra and Sri Arta Jaya Kusuma (2025) reported the opposite findings.

The novelty of this study lies in applying the BOPO proxy, which is commonly used in the banking sector, to measure operational efficiency in the textile industry. In addition, this study simultaneously examines firm size as a moderating variable in the relationship between operational efficiency, liquidity, and capital structure and firm value in Indonesian textile companies during the post-pandemic period of 2020–2024, which remains relatively limited in previous research. Based on this background, this study aims to analyze and investigate the effects of operational efficiency, liquidity, and capital structure on firm value, as well as to examine the role of firm size in strengthening or weakening these relationships among textile companies listed on the IDX during the 2020–2024 period.

METHOD

This study employed a quantitative design with a causal-comparative approach (explanatory research) to examine the effects of operational efficiency, liquidity, and capital structure on firm value, as well as the moderating role of firm size, among textile companies listed on the IDX during the 2020–2024 period. The study used panel data covering a five-year observation period.

Population and Sample

The research population is all textile companies listed on the IDX during 2020-2024, which is 27 companies. The sample was determined using purposive sampling techniques based on the criteria of companies that were recorded consistently during 2020-2024, published complete annual financial statements, and did not have an extreme value (outlier). The sampling process is presented in Table 1.

Table 1. Sampling Process

Yes	Criteria	Quantity
1	Textile companies that are consistently listed on the IDX during 2020-2024.	27
2	Companies that have not published financial statements in the 2020-2024 period.	(5)
3	Companies that do not fully publish financial statements during the 2020-2024 research period.	(3)
4	Companies that have extreme value (outlier removal) during 2020-2024.	(3)
	Number of Research Samples	16

Source: Data Processed, 2025.

Based on this process, there are 5 companies that are newly registered and have not published a complete annual report (ZATA, LIVE, BABY, TFCO, SBAT), 3 companies that have not published a report (CHEM, ACRO, PBRX), and 3 companies have extreme values detected through studentized residual values with absolute value criteria greater than 3 (MYTX, STAR, INOV). Thus, 16 companies were obtained with 80 observations of panel data during five years of observations, as presented in Table 2.

Table 2. Research Sample

Yes	Code	Company Name
1	SRIL	PT Sri Rejeki Isman Tbk
2	PLOUGH	PT Golden Flower Tbk
3	ESTI	PT Ever Shine Tex Tbk
4	ERTX	PT Eratex Djaja Tbk
5	CNTX	PT Century Textile Industry Tbk
6	INDR	PT Indo-Rama Synthetics Tbk
7	ARGO	PT Argo Pantes Tbk
8	ADMG	PT Polychem Indonesia Tbk
9	BELL	PT Trisula Textile Industries Tbk
10	SSTM	PT Sunson Textile Manufacturer Tbk
11	TRIS	PT Trisula International Tbk
12	POLY	PT Asia Pacific Fibers Tbk

Yes	Code	Company Name
13	ZONE	PT Mega Perintis Tbk
14	RICY	PT Ricky Putra Globalindo Tbk
15	UCID	PT Uni-Charm Indonesia Tbk
16	MAP	PT Map Aktif Adiperkasa Tbk

Source: Data Processed, 2025.

Data Collection Methods and Data Types

Data was collected through a documentary approach from the annual financial statements and stock closing prices published on the IDX official website (www.idx.co.id). The type of data used is quantitative data analyzed using the panel data regression technique, which is a combination of cross section and time series data, which allows the analysis of the dynamics of changes between companies and between times while controlling individual heterogeneity that is not observed.

Definition and Operationalization of Variables

The dependent variable of this study is the company value (PBV). Independent variables include operational efficiency (BOPO), liquidity (CR), and capital structure (DER), with company size (SIZE) as the moderation variable measured through the natural logarithm of total assets. The operationalization of the variables is presented in Table 3.

Table 3. Variable Operationalization

Yes	Variable	Scale	Formula	Main References
1	Company Values	Ratio	PBV = Equity Market Value / Book Value Equity	Ainie Zaman & Utami Ady (2024); Wildan & Yulianti (2021); Rahmansyah et al. (2025); et al.
2	Operational Efficiency	Ratio	BOPO = Operating Expenses / Operating Income	Nadira Amalia & Adrie Putra (2024); Suzan & Ardiansyah (2023); Agus Ari Widana et al. (2025)
3	Liquidity	Ratio	CR = Current Assets / Current Debt	Ainie Zaman & Utami Ady (2024); Putra & Akhmadi (2024); Ari Saputra & Sri Arta Jaya Kusuma (2025)
4	Capital Structure	Ratio	DER = Total Liability / Total Equity	Maulani & Prajawati (2025); Almomani et al. (2022); Putri & Wahyudi (2025)
5	Company Size	Ratio	SIZE = Ln (Total Asset)	Mahardhika (2025); Putra & Akhmadi (2024); Rahmansyah et al. (2025)

Source: Data Processed, 2025.

Data Analysis Methods

The data were analyzed using multiple linear regression with Moderated Regression Analysis (MRA) on balanced panel data with the help of the Eviews 12 software. The regression model tested was as follows:

$$\text{Model 1: } PBV = \beta 0 + \beta 1BOPO + \beta 2CR + \beta 3DER + \beta 4SIZE + \varepsilon$$

$$\text{Model 2: } PBV = \beta 0 + \beta 1BOPO + \beta 2CR + \beta 3DER + \beta 4SIZE + \beta 5(BOPO \times SIZE) + \beta 6(CR \times SIZE) + \beta 7(DER \times SIZE) + \varepsilon$$

The selection of the best estimation model between Common Effect Model (CE), Fixed Effect Model (FE), and Random Effect Model (RE) was carried out through the Chow test, Hausman test, and Lagrange Multiplier (LM) test. Classical assumption tests in the form of

multicollinearity tests (with criteria for correlation coefficients between independent variables below 0.8) and heteroscedasticity tests were also carried out to ensure that the model met the BLUE (Best Linear Unbiased Estimator) requirements (Riswan & Dunan, 2019). Hypothesis testing was carried out through a t-test with the criterion H0 rejected if the probability value was less than the significance level of 0.05. The classification of moderation variables refers to Ghozali (2018) as presented in Table 5, which distinguishes quasi-moderators (interacting with independent variables while having a direct effect on dependent variables) from pure moderators (interacting with independent variables without direct influence on dependent variables). Furthermore, the determination coefficient (Adjusted R^2) is used to measure the model's ability to explain the variation in the company's values, and the F test is used to test the simultaneous influence of independent variables on dependent variables.

Table 4. Types of Moderation Variables

	Relating to Variables Y and/or X	**Not Related to Variables Y and/or X**
Doesn't interact with variable X	Intervening, exogenous, antecedent, predictor	Moderator (Homologizer)
Interact with variable X	Moderator (Quasi Moderator)	Moderator (Pure Moderator)

Source: Ghozali (2018).

RESULTS AND DISCUSSION

Description of Research Data

The target population of the study consisted of 27 textile manufacturing companies listed on the IDX for the 2020-2024 period. Through purposive sampling, 80 observations from 16 companies were obtained during the five-year observation period, as presented in Table 3.

Descriptive Statistics

Table 5. Descriptive Statistics

	PBV	**BOPO**	**CR**	**THE ER**	**SIZE**
Red	2,429250	3,023250	1,479750	0,493125	28,12837
Median	0,635000	2,010000	1,455000	0,745000	27,79000
Maximum	25,52000	22,89000	5,540000	8,820000	30,91000
Minimum	-4,730000	0,130000	0,040000	-18,08000	25,97000
Std. Dev.	5,638578	3,527326	0,922164	3,143528	1,258336
Observations	80	80	80	80	80

Source: Data processed from Eviews 12, 2025.

Table 5 shows that the average PBV of textile companies is 2.43 times book value, with a minimum value of -4.73 in PT Argo Pantes Tbk (ARGO) in 2020 and a maximum value of 25.52 in the same company in 2024. The average BOPO is 3.02, with a minimum value of 0.13 in ARGO in 2021 which reflects high efficiency, and a high value of 22.89 in PT Map Aktif Adiperkasa Tbk (MAPA) in 2020. The average CR is 1.48 times, with a minimum value of 0.04 in PT Asia Pacific Fibers Tbk (POLY) in 2024 which indicates weak liquidity, and a maximum value of 5.54 in PT Golden Flower Tbk (POLU) in 2021. The average DER is 0.49 times, with a low value of -18.08 for PT Ricky Putra Globalindo Tbk (RICY) in 2024 which reflects negative equity and high financial risk, as well as a high value of 8.82 for the same

company in 2023. The average SIZE is 28.13, with a low value of 25.97 in POLU in 2023 and a high value of 30.91 in PT Sri Rejeki Isman Tbk (SRIL) in 2020.

Classical Assumption Test

Table 6. Multicollinearity Test

	BOPO	CR	THE ER	SIZE
BOPO	1,000000	-0,031769	0,052468	-0,079699
CR	-0,031769	1,000000	0,179611	0,020634
THE ER	0,052468	0,179611	1,000000	-0,054835
SIZE	-0,079699	0,020634	-0,054835	1,000000

Source: Data processed from Eviews 12, 2025.

The results of the multicollinearity test in Table 6 show that all correlation coefficients between independent variables are below 0.8, so it is concluded that the model does not experience multicollinearity. Furthermore, the heteroscedasticity test is carried out through the observation of residual graphs as presented in Figure 2.

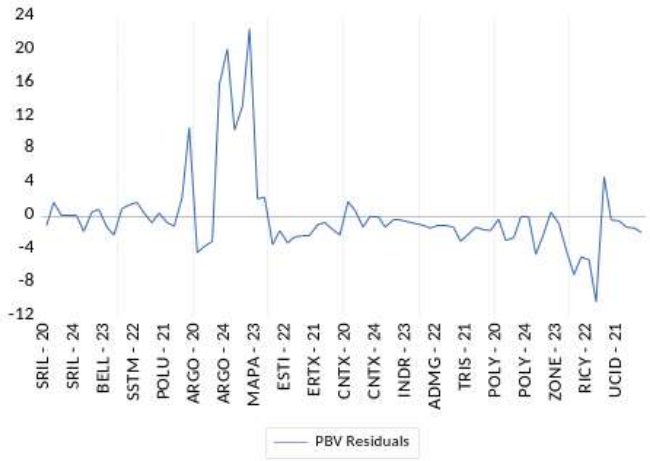


Figure 1. Residual Graph

Figure 1 shows a residual value not exceeding the ±500 limit, which indicates that the residual variance is constant so that the model is declared to have passed the heteroscedasticity test.

Model Specification Test Results

The model specification test was conducted to determine the best estimation model between Common Effect (CE), Fixed Effect (FE), and Random Effect (RE) through the Chow test, Hausman test, and Lagrange Multiplier (LM) test. A summary of the test results for Model 1 (before moderation) and Model 2 (after moderation) is presented in Table 7.

Table 7. Model Specification Test Summary

Testing	Model 1 (Statistics; Prob.)	Model 2 (Statistics; Prob.)	Verdict
Chow Test (Cross-section F)	3,479052; 0,0003	3,625481; 0,0002	FE is more accurate than CE

Testing	Model 1 (Statistics; Prob.)	Model 2 (Statistics; Prob.)	Verdict
Uji Hausman (Chi-Sq.)	3,901010; 0,4196	10,022884; 0,1873	RE is more accurate than FE
Lagrange Multiplier Test (Breusch-Pagan)	13,09508; 0,0003	8,077667; 0,0045	RE is more accurate than CE
Selected Models	Random Effect Model	Random Effect Model	-

Source: Data processed from Eviews 12, 2025.

In Model 1, the Chow test yielded a cross-section probability of F of 0.0003 (< 0.05) so that FE was more accurate than CE. The Hausman test then produced a Chi-square probability of 0.4196 (> 0.05), so that RE was more accurate than FE, and was confirmed by the LM test with a probability of 0.0003 (< 0.05). In Model 2, the same test pattern also led to the selection of the Random Effect Model, with the probability of the Chow test being 0.0002, the Hausman test 0.1873, and the LM test 0.0045. Thus, the Random Effect Model was chosen as the best estimation model for both regression models in this study.

Hypothesis Testing

Table 8. Random Effect Regression Results Model 1 (Before Moderation)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7,111481	21,77462	0,326595	0,7449
BOPO	0,431029	0,164167	2,625543	0,0105
CR	0,285940	0,786257	0,363673	0,7171
THE ER	0,548374	0,169470	3,235812	0,0018
SIZE	-0,237443	0,771722	-0,307679	0,7592

Dependent Variable: PBV. Source: Data processed from Eviews 12, 2025.

Table 9. Random Effect Regression Results Model 2 (After Moderation)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	59,93850	35,72727	1,677668	0,0977
BOPO	-5,171775	4,972289	-1,040119	0,3018
CR	-26,29853	14,95126	-1,758951	0,0828
THE ER	24,16689	10,01354	2,413421	0,0183
SIZE	-2,143832	1,276131	-1,679946	0,0973
BOPO_SIZE	0,195580	0,173773	1,125491	0,2641
CR_SIZE	0,970248	0,541708	1,791090	0,0775
DER_SIZE	-0,844574	0,357904	-2,359781	0,0210

Dependent Variable: PBV. Source: Data processed from Eviews 12, 2025.

The results of the Random Effect Model regression for Model 1 (Table 8) resulted in the PBV equation = 7.111481 + 0.431029 BOPO + 0.285940 CR + 0.548374 DER – 0.237443 SIZE. The BOPO probability value of 0.0105 (< 0.05) with a positive coefficient of 0.431029 indicates that operational efficiency has a significant positive effect on the company's value. The probability value of CR of 0.7171 (> 0.05) indicates that liquidity has no significant effect. The probability value of DER of 0.0018 (< 0.05) with a coefficient of 0.548374 indicates that the capital structure has a significant positive effect on the company's value.

The regression results of Model 2 (Table 9) that have involved moderation interactions produce the equation: PBV = 59.93850 – 5.171775 BOPO – 26.29853 CR + 24.16689 DER – 2.143832 SIZE + 0.195580 (BOPO×SIZE) + 0.970248 (CR×SIZE) – 0.844574 (DER×SIZE). The BOPO variable produces a probability of 0.3018 (> 0.05) so it has no significant effect. The CR variable produces a probability of 0.0828 (> 0.05) so it also has no significant effect. The DER variable produces a probability of 0.0183 (< 0.05) with a positive coefficient of 24.16689 so that it has a significant effect on the company's value.

For the moderation interaction, the BOPO×SIZE variable produces a probability of 0.2641 (> 0.05), so that the size of the company is not proven to moderate the effect of operational efficiency. The CR×SIZE variable produces a probability of 0.0775, significant at the level of 10%, with a positive coefficient of 0.970248, so that the size of the company is proven to strengthen the influence of liquidity on the company's value. The DER×SIZE variable produces a probability of 0.0210 (< 0.05) with a negative coefficient of -0.844574, so that the size of the company is proven to moderate (weaken) the influence of capital structure on the company's value.

Coefficient of Determination and F Test

Table 10. Model 1 and Model 2 Determination Coefficients

Size	Model 1	Model 2
R-squared	0,201967	0,265647
Adjusted R-squared	0,159406	0,194251
F-statistic	4,745277	3,720779
Prob(F-statistic)	0,001815	0,001722

Source: Data processed from Eviews 12, 2025.

Table 10 shows the Adjusted R-squared Model 1 by 0.159406 (15.94%), which means that BOPO, CR, and DER were able to explain 15.94% of PBV variations, while the remaining 84.06% were explained by other variables outside the model. The Adjusted R-squared Model 2 increased to 0.194251 (19.43%) after involving company size moderation, which means the model contribution increased by 3.49 percentage points.

The results of the F test in Model 1 were obtained by F calculated 4.745277 > F table 2.72 (df1=3; df2=76; α=0.05) with p 0.001815 < 0.05, so that BOPO, CR, and DER simultaneously had a significant effect on the company's value. In Model 2, F calculated 3.720779 > F table 2.23 (df1=6; df2=73; α=0.05) with p 0.001722 < 0.05, so that BOPO, CR, DER, and their interaction with SIZE simultaneously also had a significant effect on the company's value. Thus, both regression models were declared feasible to be used to explain the value of textile companies listed on the IDX during the study period.

The Effect of Operational Efficiency on Company Value

The test results showed that the BOPO in Model 2 produced a coefficient of -5.171775 with a probability of 0.3018 (> 0.05), so that H0 was accepted and operational efficiency did not have a significant effect on the value of textile companies for the 2020-2024 period. The negative direction shows a tendency that the increase in BOPO is followed by a decrease in PBV, but statistically insignificant. This condition can be explained by the high variation in BOPO data between companies (range 0.13 to 22.89) as well as the complex cost

characteristics of the textile industry, where the increase in operating expenses can come from the purchase of raw materials, energy costs, or the modernization of productive machinery, not just waste. During the post-pandemic period, the increase in BOPO was also triggered by external pressures experienced by almost all textile companies, so that investors did not always respond through changes in stock prices. These results are in line with (Mahardhika, 2025), (Nadira Amalia & Adrie Putra, 2024), and (Muslim & Karyatun, t.t.), but different from (Wildan & Yulianti, 2021), (Suzan & Ardiansyah, 2023), (Agus Ari Widana et al., 2025), and (Bhullar, 2017) which found significant negative influences, possibly due to differences in sectors (banking/consumption) which have a more homogeneous cost structure than textiles.

The Effect of Liquidity on Company Value

The CR variable produces a coefficient of -26.29853 with a probability of 0.0828 (> 0.05), so liquidity does not have a significant effect on the company's value. The large variation in CR between companies (0.04 to 5.54) indicates very diverse liquidity conditions, so that both CRs that are too low (an indication of default risk) and too high (an indication of idle fund) can both be responded to poorly by the market, making the CR-PBV relationship non-linear. These results are consistent with (Ainie Zaman & Utami Ady, 2024), (Putra & Akhmadi, 2024), (Maulani & Prajawati, 2025), and (Yuli Ermawati & Edo Tri Nahendra Agustino, 2025), but different from (Firdaus et al., 2024), (Ari Saputra & Sri Arta Jaya Kusuma, 2025), (Pamungkas et al., 2024), and (Alshakhanbeh et al., 2025) who found positive influences, as well as (Agus Ari Widana et al., 2025), (Muslim & Karyatun, t.t.), and (Rahmansyah et al., 2025) who found negative influences. The difference is allegedly influenced by the characteristics of the sector, where textile companies' current assets are largely embedded in inventories and receivables that do not necessarily reflect the ability to generate cash.

The Influence of Capital Structure on Company Value

The DER variable produced a positive coefficient of 24.16689 with a probability of 0.0183 (< 0.05), so that the capital structure had a significant positive effect on the company's value. This result supports the trade-off theory, where the use of well-managed debt provides tax shield benefits and supports the financing of productive activities such as the purchase of raw materials and machine modernization, so that it is responded positively by investors as long as the benefits still exceed interest costs and bankruptcy risks. These results are in line with (Amanda et al., t.t.) and (Ari Saputra & Sri Arta Jaya Kusuma, 2025), but different from (Putri & Wahyudi, 2025) which found negative effects, as well as (Maulani & Prajawati, 2025), (Muslim & Karyatun, t.t.), (Yuli Ermawati & Edo Tri Nahendra Agustino, 2025), (Almomani et al., 2022), and (Yulianty, 2021) which did not find a significant influence, which was allegedly influenced by differences in the company's ability to manage loan funds and the position of the capital structure at its optimal level.

The Effect of Operational Efficiency on Company Value with Company Size as a Moderator

The BOPO×SIZE interaction yielded a coefficient of 0.195580 with a probability of 0.2641 (> 0.05), so H4 was rejected and the size of the company was not proven to moderate the effect of operational efficiency on the company's value. These results indicate that the size of the total assets does not guarantee that the company is able to convert operational efficiency into an increase in market value, as large companies can face more complex cost structures while small companies can be more flexible in controlling their costs. These findings are in

line with (Putra & Akhmadi, 2024), but in contrast to (Yuli Ermawati & Edo Tri Nahendra Agustino, 2025) and (Ari Saputra & Sri Arta Jaya Kusuma, 2025) which found the role of company size moderation on other financial variables.

The Effect of Liquidity on Company Value with Company Size as a Moderator

The CR×SIZE interaction resulted in a positive coefficient of 0.970248 with a probability of 0.0775, significant at the level of 10%, so that H5 was accepted. The size of the company is classified as a quasi-moderator because SIZE also has a direct effect on PBV (probability of 0.0973). These results show that in large companies, high liquidity is more trusted by the market as a signal of the ability to manage cash and short-term liabilities without sacrificing investment opportunities, while in small companies, high liquidity tends to be read as the inability to utilize funds productively. These results are in line with (Ari Saputra & Sri Arta Jaya Kusuma, 2025) and (Yuli Ermawati & Edo Tri Nahendra Agustino, 2025), but in contrast to (Putra & Akhmadi, 2024) which found that company size was unable to moderate the influence of liquidity, likely due to differences in industry characteristics (shipping vs textiles).

The Influence of Capital Structure on the Company's Value with the Company's Size as a Moderator

The DER×SIZE interaction resulted in a negative coefficient of -0.844574 with a probability of 0.0210 (< 0.05), so H6 was accepted. Because SIZE had no significant direct effect on PBV (probability 0.0973 > 0.05) but the interaction with DER was significant, the size of the company was considered a pure moderator which weakened the influence of the capital structure on the company's value. In small companies, additional debt tends to be a signal of creditor confidence and strong growth opportunities due to more limited access to funding, while in large companies that already have stronger internal funding sources, additional debt can actually raise concerns about the quality of cash flow. These results are in line with (Ari Saputra & Sri Arta Jaya Kusuma, 2025) in terms of the role of moderation, although it is in a different direction, and different from (Yuli Ermawati & Edo Tri Nahendra Agustino, 2025) which does not find the role of moderation.

CONCLUSION

This study concluded that operational efficiency and liquidity did not have a significant effect on the firm value of textile companies listed on the IDX during the 2020–2024 period, while capital structure had a significant positive effect on firm value. Firm size was unable to moderate the effect of operational efficiency but was proven to moderate the effects of liquidity (strengthening the relationship as a quasi-moderator) and capital structure (weakening the relationship as a pure moderator) on firm value. These findings indicate that the market valuation of textile companies was more influenced by funding policies and business scale than by cost efficiency alone, considering the complexity of cost structures and external pressures faced by the textile industry during the post-pandemic period. This study was limited because it only included 16 textile companies listed on the IDX and examined four main variables (BOPO, CR, DER, and SIZE) without considering external factors such as government policies, exchange rates, and imported product competition. Consequently, the model's ability to explain variations in firm value (Adjusted R^2 of 15.94%–19.43%) remained relatively low. Therefore, textile company management is recommended to improve operational efficiency through machine modernization, business process digitalization, and raw material

optimization, while maintaining liquidity and capital structure at optimal levels according to business scale. Investors are advised not to evaluate textile companies solely based on BOPO, CR, DER, and firm size but also to consider sales growth, profitability, cash flow, and industry risks. The government is expected to provide support through industrial modernization policies and fiscal incentives to enhance the competitiveness of the national textile industry. Future researchers are encouraged to incorporate additional variables, such as profitability, operating cash flow, and Good Corporate Governance practices, while expanding the sectoral scope and research period.

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