

Leverage as a Moderator Between Good Corporate Governance, Firm Size, Working Capital, and Profitability: Evidence from Indonesian Manufacturing Firms

Riesa Nur Aulia and Susanti Widhiastuti

Master of Management Study Program, Graduate School, IPWIIA University, Jakarta

e-mail: riesanuraulia@gmail.com susantiwidhiastuti86@gmail.com

Article Info

Keywords:

Leverage, Good Corporate Governance (GCG), Company Size, Working Capital and Profitability.

Abstract

This study aims to examine the relationship between Good Corporate Governance (GCG), firm size, and working capital on profitability, as well as the moderating role of leverage in these relationships within manufacturing companies listed on the Indonesia Stock Exchange (IDX). This correlational research investigates the associations among multiple variables, where GCG (X1), firm size (X2), and working capital (X3) serve as independent variables, profitability (Y) as the dependent variable, and leverage (Z) as the moderating variable. The research objects include manufacturing firms listed on the IDX during the 2020–2024 period. A purposive sampling technique was employed, resulting in a total of 10 sample companies. Secondary data were analyzed using multiple linear regression with the assistance of SPSS version 26. The findings reveal that both GCG and firm size have a statistically significant effect on profitability, with p-values of 0.000 (<0.005). However, working capital does not significantly influence profitability, indicated by a p-value of 0.006 (>0.005). Furthermore, leverage significantly moderates the relationships between GCG, firm size, and working capital with profitability. The interaction p-values of leverage with GCG, firm size, and working capital are 0.004, 0.000, and 0.001 respectively (<0.005), indicating that leverage plays a substantial moderating role. These results highlight the importance of financial structure considerations in enhancing firm profitability through governance, size optimization, and capital management.

1. Introduction

The manufacturing sector plays a crucial role in Indonesia's economy by contributing significantly to the gross domestic product (GDP), employment, and investment. However, in recent years, the profitability of manufacturing firms listed on the Indonesia Stock Exchange (IDX) has encountered substantial challenges. Volatile raw material prices, currency fluctuations, and intense competition both domestically and globally are among the key issues faced by this sector.

According to annual reports from several IDX-listed manufacturing companies, profitability trends vary considerably. Some firms have experienced declining net income due to high operational costs and inefficient resource management. For example, in 2022, the average net profit margin in the manufacturing sector declined compared to previous years, particularly in subsectors reliant on imported raw materials, which were affected by the depreciation of the Indonesian rupiah. On the other hand, companies with

strong performance typically demonstrated sound corporate governance (GCG), optimal firm size, and effective working capital management.

This variation suggests that differences in profitability are influenced not only by external factors such as macroeconomic conditions and government policy but also by internal factors including operational efficiency and working capital management. Among these internal financial strategies, leverage plays a pivotal role. When appropriately managed, leverage can support business expansion and enhance returns; however, excessive leverage may elevate financial risk and negatively impact profitability and overall firm performance.

To improve profitability, it is essential to identify and understand the factors affecting the financial performance of manufacturing firms. This study investigates how leverage moderates the effects of Good Corporate Governance (GCG), firm size, and working capital on the profitability of IDX-listed manufacturing firms. The findings are expected to provide valuable

insights for business leaders, investors, and regulators to support more informed decision-making.

Profitability, as defined by Kasmir (2020), is the company's ability to generate earnings over a specific period by utilizing all its resources. In the face of rising competition, manufacturing companies must optimize cost structures and improve operational efficiency to sustain profitability. Profit growth is a critical indicator of operational success and directly

contributes to improved financial performance and sustainable development.

The sample in this study consists of manufacturing firms operating in the automotive subsector, as outlined in Table 1.1, which details the profitability trends of 10 companies over the 2020–2024 period:

Table 1.1. Profitability of Selected Manufacturing Companies (2020–2024)
(Values in Billion Rupiah)

No	Company Name	Ticker	2020	2021	2022	2023	2024
1	PT Astra International Tbk	ASII	7,722	21,480	29,870	33,830	25,850
2	PT Indomobil Sukses Internasional Tbk	IMAS	546	1,917	4,430	6,320	8,150
3	PT Gajah Tunggal Tbk	GJTL	320	860	2,350	1,180	999
4	PT Selamat Sempurna Tbk	SMSM	488	662	848	994	722
5	PT Astra Otoparts Tbk	AUTO	2,245	611	1,858	1,840	1,520
6	PT Goodyear Indonesia Tbk	GDYR	100	34	49	88	81
7	PT Indospring Tbk	INDS	59	158	210	191	136
8	PT Multi Prima Sejahtera Tbk	LPIN	58	158	210	183	53
9	PT Garuda Metalindo Tbk	BOLT	56	67	79	111	66
10	PT Mitra Pinasthika Mustika Tbk	MPMX	132	412	661	526	440

Source: Processed by Author, 2025

The data show fluctuations and overall growth in profitability among the selected firms. These trends highlight the dynamic nature of profitability in the manufacturing sector and support the need to assess the underlying factors influencing these changes.

One of the primary objectives of every business is sustainability in a competitive environment. Achieving this requires organizations to develop, implement, and maintain strategies that maximize performance by evaluating both internal and external influences on profitability. Organizational quality and efficiency depend heavily on the elements that enhance profitability.

Several prior studies reveal inconsistencies in the relationship between internal financial factors and profitability, indicating a research gap. For instance, Asnita, Halim, and Sri (2020) found that GCG significantly affects profitability. In contrast, Nurmasitah (2020) reported a significant effect of working capital on profitability, while Nofalina and Suryani (2020) found no such relationship. Additionally, research from Universitas Muhammadiyah

Surakarta (2020) concluded that leverage has no significant effect on profitability.

Considering these mixed findings and the research gap identified, this study aims to analyze “The Moderating Effect of Leverage on the Relationship Between Good Corporate Governance, Firm Size, and Working Capital Toward Profitability” among manufacturing firms listed on the IDX, with a focus on the Master of Management Program at Universitas IPWIJA, Jakarta.

2. Literature review

2.1. Theoretical Framework

According to Hardani (2020), a theoretical framework is a critical component of research, consisting of concepts, theories, and empirical findings obtained through a comprehensive review of literature. This section elaborates on the theories relevant to the current study, including Good Corporate Governance (GCG), firm size, working capital, and profitability, with leverage acting as a moderating variable. These theories suggest

that GCG, firm size, and working capital directly influence profitability, while leverage moderates these relationships by either strengthening or weakening their effects.

2.2. Financial Management

Financial management is the process of planning, organizing, controlling, and monitoring financial resources to achieve organizational goals efficiently and effectively. It involves financial planning, which includes setting objectives, identifying necessary resources, estimating revenues and expenditures, and developing strategies to achieve financial targets.

Subsequently, financial organizing entails allocating funds to various needs such as investments, financing, and operational activities. This includes working capital management, receivables control, and inventory oversight to ensure optimal utilization of resources.

Financial control monitors actual performance against plans and applies corrective actions when necessary, including risk management strategies to minimize the impact of financial uncertainties. Finally, financial supervision involves periodic evaluations of all financial activities, ensuring strategic alignment with long-term goals. Effective financial management enhances financial stability and supports sustainable business growth.

2.3. Leverage

Leverage refers to the use of fixed-cost financing sources, such as debt, to amplify returns for shareholders. While it has the potential to enhance investment returns, it also increases financial risk if operational performance falls below expectations. According to Ross, Westerfield, and Jaffe (2019), leverage involves the use of resources bearing fixed obligations (e.g., interest-bearing debt) to magnify investment outcomes.

There are three types of leverage:

- **Operating Leverage:** Measures the impact of fixed operational costs on earnings before interest and taxes

(EBIT). High operating leverage increases the sensitivity of EBIT to changes in sales volume.

- **Financial Leverage:** Reflects the use of debt to boost shareholder returns. When EBIT is sufficient, financial leverage raises earnings per share (EPS), but it also magnifies losses if EBIT falls short of interest obligations.
- **Combined Leverage:** Represents the total effect of operating and financial leverage, indicating the sensitivity of net income to changes in sales.

Leverage can be beneficial if returns exceed the cost of debt, allowing firms to grow without solely relying on equity. However, excessive leverage may increase bankruptcy risk and earnings volatility.

2.4. Good Corporate Governance (GCG)

Good Corporate Governance is critical to ensuring transparent, accountable, and efficient management. It helps firms manage resources wisely and align their strategies with stakeholder interests. Mia Adilla (2021) found that Return on Assets (ROA) positively influences firm value and supports the assertion that profitability can strengthen the impact of GCG on firm performance.

GCG frameworks often incorporate principles such as transparency, accountability, responsibility, independence, and fairness, which collectively contribute to improved financial outcomes and long-term sustainability.

2.5. Firm Size

Firm size refers to the scale or magnitude of a business entity, typically measured by total assets, revenues, market capitalization, or number of employees (Kusumo & Candra, 2018; Pangaribuan et al., 2018). It provides insights into operational complexity, financial capacity, and competitive potential.

According to Machfoedz (1994), firms are categorized as follows:

1. **Small Firms:** Net assets $\leq$ IDR 200 million (excluding land and buildings) with annual sales $\geq$ IDR 1 billion.

2. **Medium Firms:** Net assets between IDR 1–10 billion, with sales > IDR 1 billion and ≤ IDR 50 billion.
3. **Large Firms:** Net assets > IDR 10 billion and annual sales > IDR 50 billion.

Firm size affects access to finance, market power, operational scale, and ability to absorb economic shocks.

2.6. Working Capital

Working capital refers to the short-term resources available to meet daily operational needs. It primarily includes current assets such as cash, accounts receivable, inventories, and marketable securities.

According to Sujarweni (2017), working capital is the investment in cash, receivables, and inventories minus current liabilities, used to finance ongoing operations. Kasmir (2019) also defines it as funds invested in current assets for short-term operations.

Effective working capital management ensures liquidity, reduces operational risks, and improves overall profitability.

2.7. Profitability

Profitability is a fundamental indicator of financial health and operational success. According to Brigham and Ehrhardt (2020), profitability reflects a firm's ability to generate returns using shareholders' equity and operational assets. Key profitability ratios include net profit margin and return on equity (ROE), which measure earnings efficiency and shareholder value creation.

Profitability analysis is essential for both internal decision-making and external stakeholder evaluation, including investors, creditors, and regulators.

3. Research methods

3.1. Research Site and Period

3.1.1. Research Site

This study was conducted using data from the Indonesia Stock Exchange (IDX) over a five-year period (2020–2024). The IDX was selected due to its comprehensive and well-structured

database, making it a reliable source for secondary financial data.

3.1.2. Research Period

The research was carried out over a two-month period, from December 2024 to January 2025. The research timeline is illustrated in Table 3.1.

Table 3.1. Research Timeline

Activities	Dec W3	Dec W4	Jan W1	Jan W2
Research Title	✓	✓		
Background of Study	✓	✓		
Chapters 1 and 2		✓	✓	
Chapter 3			✓	✓
Chapter 4			✓	✓
Chapter 5			✓	✓

Source: Processed by the researcher (2025)

3.2. Research Design

This research employs a **quantitative approach** aimed at testing hypotheses regarding the influence of **Good Corporate Governance (GCG)**, **Firm Size**, and **Working Capital** on **Profitability**, with **Leverage** as a moderating variable.

The study relies on secondary data obtained from annual reports of manufacturing companies listed on the Indonesia Stock Exchange for the period 2020–2024. The research model incorporates three types of variables: independent (X_1 , X_2 , X_3), dependent (Y), and moderating (Z).

3.3. Operationalization of Variables

The variables used in this study are classified into three types: independent variables (GCG, Firm Size, Working Capital), a dependent variable (Profitability), and a moderating variable (Leverage). The operational definitions, dimensions, indicators, and measurement scales are summarized in

Table 3.2.

Table 3.2. Variable Operationalization

Variable	Definition	Dimension/Indicator	Measurement Scale
Good Corporate Governance	A governance structure involving the roles of board commissioners, directors, shareholders, and stakeholders (Mambela, 2020)	Board Independence Ratio (BIR) = $\frac{\text{Independent Commissioners}}{\text{Total Commissioners}}$	Ratio
Firm Size	The total assets owned by the company, indicating its scale and capability (Kasmir, 2020)	$\ln(\text{Total Assets})$	Ratio
Working Capital	The ability to cover current liabilities with current assets (Fatma et al., 2023)	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	Ratio
Leverage	The extent to which assets are financed by debt (Kasmir, 2021)	Debt to Equity Ratio (DER) = $\frac{\text{Total Debt}}{\text{Total Equity}}$	Ratio
Profitability	The firm's ability to generate earnings (Kasmir, 2020)	Return on Assets (ROA) = $\frac{\text{EAT}}{\text{Total Assets}}$	Ratio

Source: Processed by the researcher (2025)

3.4. Population, Sample, and Sampling Technique

The population consists of 165 manufacturing companies listed on the IDX during 2020–2024. The sample was selected using **Simple Random Sampling**, ensuring that

each company had an equal probability of selection. The following criteria were applied:

1. Listed on the IDX between 2020 and 2024.
2. Not delisted during the observation period.
3. Published complete annual reports consistently from 2020 to 2024.

Based on these criteria, 10 companies were selected as the sample.

Table 3.3. Sampling Summary

Criteria	Number of Companies
Total manufacturing firms listed on IDX (2020–2024)	165
Firms not delisted during the observation period	75
Firms with complete annual reports (2020–2024)	80
Final sample size	10

Table 3.4. Sampled Companies

No	Company Name	Stock Code
1	PT Astra International Tbk	ASII
2	PT Indomobil Sukses Internasional Tbk	IMAS
3	PT Gajah Tunggal Tbk	GJTL
4	PT Selamat Sempurna Tbk	SMSM
5	PT Astra Otoparts Tbk	AUTO
6	PT Goodyear Indonesia Tbk	GDYR
7	PT Indospring Tbk	INDS
8	PT Multi Prima Sejahtera Tbk	LPIN
9	PT Garuda Metalindo Tbk	BOLT
10	PT Mitra Pinasthika Mustika Tbk	MPMX

3.5. Data Collection Method

The primary data collection method is **documentation**, involving the review and analysis of annual reports, financial statements, and related literature from the IDX, academic journals, books, and reputable online sources. A **content analysis technique** was used to evaluate corporate governance disclosures in line with selected frameworks.

3.6. Research Instruments

The research instrument utilized secondary data and documentation techniques to measure each variable. All variables were measured using **ratio scales**, enabling meaningful quantitative comparisons and statistical analyses. According to Hery (2021), ratio scales possess an absolute zero and allow for arithmetic operations such as addition, subtraction, multiplication, and division.

3.7. Data Analysis Techniques

3.7.1. Descriptive Statistics

Descriptive statistics were used to summarize and describe the data characteristics through measures such as mean, standard deviation, minimum, and maximum.

3.7.2. Classical Assumption Tests

- **Normality Test:** Assessed using both graphical analysis and the **Kolmogorov-Smirnov (K-S) test**. A p-value greater than 0.05 indicates a normal distribution.
- **Multicollinearity Test:** Detected using **Tolerance and Variance Inflation Factor (VIF)** values. $VIF > 10$ or $Tolerance < 0.1$ indicates multicollinearity.
- **Autocorrelation Test:** Conducted using the **Durbin-Watson (DW) test**. Acceptable DW values fall between du and 4-du, indicating no autocorrelation.

3.8. Hypothesis Testing

Hypotheses were tested using **multiple linear regression analysis**. The regression model is specified as follows:

Regression Equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4(X_1Z) + b_5(X_2Z) + b_6(X_3Z) + e$$

Where:

- Y = Profitability
- X_1 = Good Corporate Governance
- X_2 = Firm Size
- X_3 = Working Capital
- Z = Leverage (moderating variable)
- a = Constant
- b_1 – b_6 = Regression coefficients
- e = Error term

Statistical Tests Applied:

- **F-test:** Assesses the joint effect of all independent variables on the dependent variable. A p-value < 0.05 indicates statistical significance.
- **t-test:** Evaluates the individual effect of each independent variable. A p-value < 0.05 implies a significant impact.
- **Adjusted R^2 :** Measures the explanatory power of the regression model, adjusting for the number of predictors.

3.9. Moderated Regression Analysis (MRA)

This study uses **Moderated Regression Analysis (MRA)** to test interaction effects between independent variables and the moderating variable (Leverage). MRA examines whether Leverage enhances or reduces the strength of the relationship between the independent variables and Profitability.

Model Assumptions:

- Linear relationships
- Significance level: $\alpha = 0.05$

Models Used:

1. Simple Linear Regression:

$$Y = \alpha + \beta X + e$$

2. Multiple Linear Regression with Interaction Terms (MRA):

$$Y = \alpha + \beta_1X + \beta_2Z + \beta_3(X*Z) + e$$

Where:

- Y = Profitability
- X = Independent variable(s)
- Z = Moderating variable (Leverage)
- β = Regression coefficients
- e = Error term

4. Results and Discussion

4.1 Research Results

4.1.1 Respondent Profile

This study involved 50 respondents, consisting of finance employees selected proportionally from several manufacturing companies. The respondents met the relevant criteria in terms of roles and professional experience, making them suitable for representing both operational and managerial perspectives. Table 4.1 presents the demographic characteristics of the respondents.

Table 4.1

Respondent Demographics

N	Characteristics	Category	Frequency	Percentage
1	Gender	Male	18	36%
		Female	32	64%
2	Position	Manager	10	20%
		Supervisor	10	20%
		Staff	30	60%
3	Length of Service	< 1 year	3	6%
		1–5 years	14	28%
		6–10 years	25	50%
		> 10 years	8	16%

Source: Primary data, processed (2025)

The data indicates that female employees dominate the finance departments of the sampled manufacturing companies (64%). Most of the respondents hold staff-level positions (60%), with a significant proportion having worked between 6 and 10 years (50%), indicating a workforce with moderate to substantial tenure and experience.

4.1.2 Descriptive Statistical Analysis

Descriptive statistical analysis was conducted to provide a summary of the responses across variables. The metrics examined include the minimum, maximum, mean, and standard deviation. Table 4.2

illustrates the results for each item under the measured constructs.

The analysis of mean values and standard deviations across the items revealed the following insights:

1. Good Corporate Governance (X1):

- *Transparency*: High average values (4.10–4.30) with low variability suggest consistent disclosure practices.
- *Accountability and Responsibility*: Mean values around 4.00–4.10 reflect the companies' commitment to their duties and obligations.
- *Independence*: Mean values slightly lower (3.80–4.00), suggesting opportunities for improving independent decision-making mechanisms.

2. Firm Size (X2):

- Companies generally demonstrate strong asset bases and employee sizes (mean $\approx$ 4.10), though market capacity shows slightly more variation (mean $\approx$ 3.80–4.00), reflecting diverse market reach.

3. Working Capital (X3):

- Indicators such as cash, accounts receivable, and inventory all suggest stable financial management, with mean values consistently above 4.00.

4. Leverage (Z):

- Ratios such as DER, DAR, and LDER consistently exhibit high averages (≥ 4.00), indicating a well-maintained capital structure across the sampled firms.

5. Profitability (Y):

- Profitability indicators largely mirror leverage ratios in strength, with DER and DAR showing higher stability, while LDER shows slightly more variation, suggesting greater uncertainty with long-term debt.

4.1.3 Validity and Reliability Testing

Validity Test All questionnaire items were tested for validity using the Pearson correlation with a significance threshold of 0.05. Results indicated that all items were statistically valid ($p < 0.05$), implying that each item reliably reflects the intended construct.

Reliability Test Cronbach's Alpha value of 0.721 for 18 items confirms the instrument's internal consistency. According to reliability interpretation standards, a value > 0.7 indicates the instrument is reliable for further statistical analysis.

4.1.4 Classical Assumption Tests

To ensure the appropriateness of multiple linear regression, several classical assumption tests were conducted:

- **Normality Test:** The normal P-P plot demonstrated that residuals align closely with the diagonal line, indicating a normal distribution.
- **Multicollinearity Test:** Tolerance values (> 0.10) and VIF values (< 10) for all predictors confirm the absence of multicollinearity.
- **Heteroscedasticity Test:** The scatterplot shows a random distribution of residuals without specific patterns, indicating homoscedasticity.
- **Autocorrelation Test:** Using the Durbin-Watson test, values close to 2 imply no significant autocorrelation.

4.2 Hypothesis Testing

4.2.1 Model 1: Direct Effect Regression

The first regression model tested the direct effects of GCG, Firm Size, and Working Capital on Profitability.

Table 4.6

Regression Coefficients – Model 1

Variable	B	Std. Error	Beta	t	Sig.
Constant	5.581	3.806		1.466	0.193
GCG (X1)	0.674	0.127	1.007	5.313	0.001
Firm Size (X2)	0.525	0.106	1.041	5.182	0.000
Working Capital (X3)	0.515	0.117	1.033	4.876	0.000

$R^2 = 0.948$; $Adjusted R^2 = 0.922$

Interpretation:

GCG and Firm Size have a significant positive influence on Profitability ($p < 0.005$), while Working Capital is near the significance threshold. The model explains 94.8% of the variation in profitability, indicating a high explanatory power.

4.2.2 Model 2: Moderation Analysis

This model tests whether Leverage (Z) moderates the relationship between GCG, Firm Size, Working Capital, and Profitability.

Table 4.8

Moderated Regression Results

Interaction Variable	B	Std. Error	t	Sig.
GCG Leverage	* 0.074	0.080	1.928	0.001
Firm Size Leverage	* 0.009	0.032	2.267	0.000
Working Capital Leverage	0.039	0.043	1.905	0.001

$R^2 = 0.976$; $Adjusted R^2 = 0.894$

Interpretation:

All interaction terms are statistically significant ($p < 0.005$), confirming that Leverage moderates the relationship between the independent variables and Profitability. The model's adjusted R^2 value indicates that 97.6% of the variance in Profitability is explained by the combined effects.

4.3. Discussion

1. The Effect of Good Corporate Governance (GCG) on Profitability

The regression analysis reveals a significance value of 0.007 for the Good Corporate Governance (GCG) variable, which is below the alpha level of 0.05. This indicates a statistically significant influence of GCG on profitability, thus supporting Hypothesis 1 (H_1). These findings are consistent with agency theory (Smith, 2023), which posits that GCG can mitigate conflicts between management and shareholders. Positively,

the results underscore the importance of enhancing transparency, accountability, and oversight mechanisms to improve financial performance. Nevertheless, potential challenges must be considered. First, excessively rigid and bureaucratic governance structures may hinder timely decision-making. Second, overly strict supervision could lead to excessive compliance behavior, potentially reducing organizational agility.

2. The Effect of Firm Size on Profitability

The significance value for firm size is 0.006, indicating a significant effect on profitability, thereby confirming Hypothesis 2 (H_2). This result supports Management Studies theory (Johnson, 2023), which suggests that larger firms possess greater resources that enhance operational efficiency and competitiveness. Furthermore, the findings highlight that capital availability, advanced technology, and skilled labor contribute positively to achieving economies of scale, thereby reducing production costs and increasing profitability.

3. The Effect of Working Capital on Profitability

The significance value for working capital is 0.000, indicating a highly significant effect on profitability and confirming Hypothesis 3 (H_3). This finding aligns with financial management theory (Sari, 2023), which states that effective working capital management is crucial for maintaining optimal liquidity. Efficient utilization of current assets—such as cash, accounts receivable, and inventories—enhances the company's operational capability and profitability by minimizing costs and improving turnover cycles.

4. The Moderating Role of Leverage on the Relationship Between GCG and Profitability

Moderation analysis demonstrates that leverage significantly moderates the relationship between GCG and profitability ($p = 0.001 < 0.05$), supporting Hypothesis 4

(H_4).

Leverage, when optimally applied, can enhance internal governance by utilizing external financial resources effectively. However, excessive leverage introduces financial risk due to increased interest obligations and debt servicing, which may constrain cash flows and erode profitability and shareholder value.

5. The Moderating Role of Leverage on the Relationship Between Firm Size and Profitability

The interaction effect between firm size and leverage is significant ($p = 0.000$), validating Hypothesis 5 (H_5). From a positive perspective, leverage can support the financial strength of large firms when used wisely, enabling funding for expansion, investment, and innovation. However, large firms are also exposed to systemic risks, and high leverage used to finance growth may heighten financial vulnerabilities, adversely affecting profitability.

6. The Moderating Role of Leverage on the Relationship Between Working Capital and Profitability

The interaction between working capital and leverage is also statistically significant ($p = 0.001$), thereby confirming Hypothesis 6 (H_6).

Leverage can optimize working capital utilization by financing operational activities such as raw material procurement and production expenditures. Additionally, it can instill financial discipline and improve cost control. Nevertheless, high leverage levels may impose significant interest costs and liquidity constraints, reducing the effectiveness of working capital management and overall profitability.

Key Insights from the Findings:

- Leverage significantly moderates the effects of GCG, firm size, and working capital on profitability. Optimal leverage allows firms to harness external financing to strengthen internal financial strategies.

- Excessive leverage can impose financial burdens that undermine profitability gains.
- The strong significance level ($p = 0.000$) underscores that the moderating effect of leverage should be critically considered, particularly in manufacturing firms, where its role is essential in optimizing profitability.

4.4. Managerial Implications

Based on the findings concerning the moderating role of leverage on the relationship between GCG, firm size, and working capital with profitability, the following managerial implications are proposed:

1. Good Corporate Governance (GCG)

Managers should strengthen the implementation of GCG principles such as transparency, accountability, responsibility, and independence. Effective governance fosters stakeholder trust, attracts investment, and facilitates sound decision-making, leading to improved profitability. Routine evaluations, including internal and external audits and transparent reporting, should be institutionalized to reduce inefficiencies and enhance corporate reputation.

2. Firm Size Management

The significant effect of firm size on profitability implies that firms should consider sustainable expansion strategies. Increased scale can lead to operational efficiencies and broader market access. However, growth must be accompanied by efficient management practices to avoid bureaucratic inertia and potential declines in operational performance.

3. Working Capital Management

Effective working capital management is fundamental to operational continuity and financial performance. Managers should optimize inventory levels, accelerate receivables collection, and manage cash flows prudently. Strategic control of current assets can balance liquidity needs with profitability objectives.

4. Leverage Policy as a Strategic Tool

Given its significant moderating effect,

leverage must be managed judiciously. Optimal leverage enhances available funds for operational and investment activities, contributing to profitability. Conversely, excessive debt increases financial risk and interest burden.

Therefore, leverage policies should be aligned with the firm's repayment capacity and market conditions. Moreover, optimal leverage should be supported by strong governance, scalable operations, and efficient capital management to maximize its benefits.

5. Closing

5.1. Conclusion

Based on the results of this study, which examined the moderating role of leverage on the relationship between Good Corporate Governance (GCG), firm size, and working capital with profitability in manufacturing firms using descriptive and regression analysis, the following conclusions can be drawn:

1. **Good Corporate Governance (GCG)** has a significant effect on the profitability of manufacturing companies. The implementation of GCG principles—such as transparency, accountability, and independence—can enhance corporate financial performance.
2. **Firm size** has a significant positive influence on profitability. Larger firms tend to have greater capacity in managing resources and exploiting market opportunities, thus improving profitability.
3. **Working capital** significantly affects profitability. Efficient and effective working capital management supports operational continuity and liquidity, ultimately leading to improved profitability.
4. **Leverage** plays a significant moderating role in the relationships between GCG, firm size, and working capital with profitability. When used appropriately, leverage can strengthen these relationships. However, excessive leverage may introduce financial risk that could hinder firm performance.

5.2. Recommendations

In light of the findings and conclusions, the following recommendations are proposed:

1. **For Corporate Management**
 - a. Strengthen the implementation of Good Corporate Governance by enhancing transparency, accountability, and control mechanisms to increase investor trust and stakeholder confidence, thereby improving profitability.
 - b. Manage firm growth strategically by focusing on operational efficiency and human capital development to fully exploit economies of scale.
 - c. Optimize working capital management, particularly in inventory, accounts receivable, and cash management, to ensure liquidity without compromising profitability.
 - d. Establish a balanced and prudent leverage policy. Excessive reliance on debt should be avoided to prevent financial distress that could jeopardize business sustainability.
2. **For Investors and Stakeholders**
Investors and other stakeholders should consider the extent of GCG implementation, firm size, working capital efficiency, and leverage levels as key indicators when evaluating profitability potential and investment risk in manufacturing firms.
3. **For Future Researchers**
 - a. Future research should consider incorporating additional variables that may influence profitability, such as innovation, technological advancement, or macroeconomic factors.
 - b. Further studies could expand the sample scope across industries or conduct comparative analyses between the manufacturing sector and other sectors to provide broader insights.

automotive and components companies listed on the Indonesia Stock Exchange. *Governors*, 3(3), 129–136.

- Aditya, W., & Wibowo, A. (2022). The effect of working capital on profitability and firm value. *Sinomika Journal*, 1(2), 171–173.
- Afifah, N., Fujianti, L., & Mandagie, Y. R. O. (2022). The effect of profitability, leverage, and firm size on sustainability reporting disclosure. *Jurnal Ilmiah Akuntansi Pancasila (JIAP)*, 2(1), 19–34.
- Ahmawati, & Syafira. (2022). The effect of firm size on profitability (ROA) in the manufacturing sector companies. *Jurnal Ekonomi dan Bisnis*, 20(2), 112–125.
- Amalia, R. (2023). The effect of leverage and firm size on profitability in pharmaceutical subsector manufacturing companies listed on the IDX (2020–2022). *Jurnal Ilmu dan Riset Manajemen*, 12(1), 1–15.
- Anan, M., & Septiawan, M. R. (2024). The effect of good corporate governance on profitability ratios in state-owned banks listed on the Indonesia Stock Exchange (2019–2023). *Jurnal Ekonomi dan Bisnis Indonesia*, 12(1), 45–60.
- Arieyadi, N. (2024). The effect of good corporate governance on financial distress in manufacturing companies listed on the Indonesia Stock Exchange [Bachelor's thesis, Universitas Atma Jaya Yogyakarta].
- Asnita, Halim, & Sri. (2020). The effect of good corporate governance on profitability in banking companies listed on the IDX (2020–2022). *Jurnal Ekonomi dan Bisnis*, 23(2), 145–160.
- Ayuningsih, D. M., & Yanthi, M. D. (2022). The effect of working capital and sales on net income of telecommunication subsector companies listed on the Indonesia Stock Exchange (2015–2020). *Assets: Jurnal Ekonomi, Manajemen dan Akuntansi*, 12(1), 59–75.

Bibliography

Adilla, M. (2021). The effect of good corporate governance on firm value with profitability as a moderating variable in

Badan Pusat Statistik. (2023). *Direktori Industri Manufaktur Indonesia 2023*.

- Badan Pusat Statistik. (2023). *Perkembangan Indeks Produksi Industri Manufaktur 2022*.
- Besley, S., & Brigham, E. F. (2019). *Essentials of managerial finance* (15th ed.). Cengage Learning.
- Brigham, E. F., & Ehrhardt, M. C. (2020). *Financial management: Theory & practice* (17th ed.). Cengage Learning.
- Budarta, D. M. A. (2022). The effect of working capital on profitability at PT. Bumi Maju Sawit Luwu Timur [Bachelor's thesis, Universitas Bosowa].
- Buntoro, A. (2021). The effect of leverage and profitability on firm value with firm size as a moderating variable [Bachelor's thesis, Universitas Tarumanagara].
- Damayanti, P. M. D., & Septiyanti, R. (2022). The effect of CSR, good corporate governance, and firm size on financial performance in manufacturing companies listed on IDX. *E-Journal Field of Economics, Business and Entrepreneurship (EFEBE)*, 1(1), 71–83.
- Davis, A., & Walsh, C. (2016). The role of the state in the financialisation of the UK economy. *Political Studies*, 64(3), 666–684.
- Dewi, R., & Wulandari, I. (2023). The role of good corporate governance on company financial performance. *Jurnal Ekonomi dan Bisnis*, 12(1), 45–58.
- Dwi, R., & Aisyah, S. (2023). The effect of firm growth, profitability, and firm size on firm value in the food and beverage sector listed on the IDX. *Jurnal Ekonomi dan Bisnis Indonesia*, 18(2), 123–135.
- Dye, T. R. (2008). *Understanding public policy* (12th ed.). Pearson Prentice Hall.
- Effendi, E., & Ulhaq, R. D. (2021). The influence of company size, free cash flow, and leverage on earnings management with profitability as a moderating variable for basic materials companies listed on the IDX.
- Fahmi, I. (2020). *Analisis laporan keuangan*. Bandung: Alfabeta.
- Fatma, S., et al. (2023). The effect of liquidity, solvency, and working capital efficiency on profitability in cosmetic and household needs companies listed on IDX (2017–2022). *Jurnal Mirai Manajemen*, 7(1), 1–10.
- Ghozali, I. (2020). *Aplikasi analisis multivariate dengan program IBM SPSS 26* (10th ed.). Semarang: Badan Penerbit Universitas Diponegoro.
- Graham, B., & Dodd, D. L. (2020). *Security analysis* (6th ed., revised). McGraw-Hill Education.
- GRC Indonesia. (n.d.). Good corporate governance (GCG): Definition, principles, benefits, and examples.
- Hakim, A., et al. (2020). The effect of working capital on profitability in manufacturing companies listed on the IDX.
- Hardani, et al. (2020). *Metode penelitian kualitatif & kuantitatif*. Yogyakarta: CV Pustaka Ilmu Grup.
- Hidayat, I., & Pratama, W. W. (2023). The effect of leverage, total asset turnover, and profitability on financial distress in food and beverage subsector companies on IDX.
- Hidayati, N. (2023). The effect of profitability, leverage, and firm size on firm value in BTPN Syariah (2020–2023) [Bachelor's thesis, UIN Salatiga].
- Hidayati, & Pratama. (2023). The effect of firm size on profitability (ROE) in property and real estate sector firms listed on IDX. *Jurnal Manajemen dan Keuangan*, 21(1), 95–108.
- Johnson, A. (2023). Firm size and profitability: A management studies perspective. *Journal of Management Studies*, 60(4), 567–589.