

Capital Structure And Profitability: An Empirical Study Of Manufacturing Firms Listed On The Stock Exchange

Struktur Modal Dan Profitabilitas: Studi Empiris Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia

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ABSTRACT

Capital structure refers to the specific combination of debt and equity that a firm utilizes to finance its operations and growth (Titman & Wessels, 1988). A firm's choice between debt and equity financing can have profound implications for its operational flexibility, tax obligations, and financial stability. This study adopts a systematic literature review (SLR) approach to examine the relationship between capital structure and profitability among manufacturing firms listed on stock exchanges. A systematic literature review enables researchers to identify, evaluate, and synthesize existing empirical studies in a transparent and replicable manner. This systematic literature review has examined the complex relationship between capital structure and profitability among manufacturing firms listed on various stock exchanges worldwide. The findings indicate that there is no universally consistent relationship between leverage and profitability. Instead, the nature of the relationship is influenced by factors such as firm size, industry sub-sector, geographic location, and the prevailing economic and institutional environments.

Keywords: Profitability; Manufacturing; Stock Exchange

ABSTRAK

Struktur modal mengacu pada kombinasi spesifik antara utang dan ekuitas yang digunakan perusahaan untuk membiayai operasi dan pertumbuhannya (Titman & Wessels, 1988). Pilihan perusahaan antara pembiayaan utang dan ekuitas dapat memiliki implikasi yang besar terhadap fleksibilitas operasional, kewajiban pajak, dan stabilitas keuangan. Penelitian ini mengadopsi pendekatan tinjauan literatur sistematis (SLR) untuk menguji hubungan antara struktur modal dan profitabilitas di antara perusahaan-perusahaan manufaktur yang terdaftar di bursa saham. Tinjauan literatur sistematis memungkinkan peneliti untuk mengidentifikasi, mengevaluasi, dan mensintesis studi empiris yang ada dengan cara yang transparan dan dapat ditiru. Tinjauan literatur sistematis ini telah meneliti hubungan yang kompleks antara struktur modal dan profitabilitas di antara perusahaan-perusahaan manufaktur yang terdaftar di berbagai bursa saham di seluruh dunia. Temuan-temuan menunjukkan bahwa tidak ada hubungan yang konsisten secara universal antara leverage dan profitabilitas. Sebaliknya, sifat hubungan tersebut dipengaruhi oleh faktor-faktor seperti ukuran perusahaan, sub-sektor industri, lokasi geografis, dan lingkungan ekonomi dan kelembagaan yang berlaku.

Kata kunci: Profitabilitas; Manufaktur; Bursa Efek

1. Introduction

In the contemporary financial landscape, capital structure decisions are among the most crucial strategic choices firms must make. The optimal mix of debt and equity not only influences a firm's risk and value but also significantly affects its profitability. Since the seminal work of Modigliani and Miller (1958), researchers and practitioners have extensively debated the relationship between capital structure and firm performance. While theoretical models

suggest various outcomes, empirical evidence remains inconclusive, particularly within specific sectors such as manufacturing.

Capital structure refers to the specific combination of debt and equity that a firm utilizes to finance its operations and growth (Titman & Wessels, 1988). A firm's choice between debt and equity financing can have profound implications for its operational flexibility, tax obligations, and financial stability. Debt financing may offer tax benefits due to interest deductibility but also increases financial risk. On the other hand, equity financing, though less risky in terms of mandatory repayments, might lead to ownership dilution and agency problems (Jensen & Meckling, 1976).

The manufacturing sector presents a unique context for examining the capital structure-profitability nexus. Manufacturing firms often require substantial capital investment in machinery, plants, and inventory, making financing decisions particularly critical. Moreover, the relatively tangible asset base of manufacturing companies may provide greater collateral for debt, influencing their leverage decisions differently compared to firms in the service sector (Frank & Goyal, 2009).

Numerous theories attempt to explain firms' capital structure choices, notably the Trade-Off Theory, the Pecking Order Theory, and the Agency Theory. The Trade-Off Theory posits that firms seek an optimal capital structure by balancing the tax benefits of debt against bankruptcy costs (Kraus & Litzenberger, 1973). In contrast, the Pecking Order Theory, proposed by Myers and Majluf (1984), suggests that firms prefer internal financing first, and will only issue debt or equity when internal resources are insufficient. Agency Theory adds that conflicts between managers, shareholders, and debt holders can influence financing choices (Jensen & Meckling, 1976).

Empirical studies on the relationship between capital structure and profitability have yielded mixed results. Some studies find a positive relationship, suggesting that debt discipline managers to improve firm performance (Berger & Udell, 2006), while others report a negative or insignificant relationship, indicating that high leverage can lead to financial distress and reduced profitability (Rajan & Zingales, 1995). These varying findings highlight the need for more sector-specific research, particularly focusing on manufacturing firms within different economic and regulatory environments.

In developing countries, where capital markets are less mature and firms often face higher financing constraints, the dynamics of capital structure and profitability can differ markedly from those in developed economies (Booth et al., 2001). Furthermore, stock exchange listing introduces additional dimensions such as disclosure requirements, investor expectations, and market discipline, which can all influence firms' financing decisions and profitability outcomes.

Given the strategic importance of the manufacturing sector to economic development and its significant representation on stock exchanges, it is imperative to understand how capital structure affects the profitability of listed manufacturing firms. Understanding this relationship can provide valuable insights for corporate managers aiming to optimize financial strategies, for investors assessing firm performance, and for policymakers seeking to foster industrial growth.

2. Method

Research Design

This study adopts a **systematic literature review** (SLR) approach to examine the relationship between capital structure and profitability among manufacturing firms listed on stock exchanges. A systematic literature review enables researchers to identify, evaluate, and synthesize existing empirical studies in a transparent and replicable manner (Tranfield, Denyer, & Smart, 2003). By focusing on peer-reviewed journal articles, conference papers, and

academic theses, the study aims to gather comprehensive insights into previous empirical findings and methodological approaches related to the topic.

Data Collection

The data for this literature review was collected from reputable academic databases, including Scopus, Web of Science, JSTOR, and Google Scholar. The search terms employed included combinations of keywords such as "**capital structure**," "**profitability**," "**manufacturing firms**," "**stock exchange**," "**leverage**," and "**firm performance**." Boolean operators (AND, OR) were used to refine the searches and ensure relevant literature was captured.

Inclusion criteria for selecting studies were as follows:

- Empirical studies published between 2000 and 2024.
- Studies focusing specifically on manufacturing firms listed on national or international stock exchanges.
- Articles published in peer-reviewed journals or conference proceedings.
- Studies written in English.

Exclusion criteria included:

- Studies focusing solely on unlisted or privately-held firms.
- Theoretical papers without empirical analysis.
- Non-English language studies.

To minimize bias, an initial pool of articles was screened by reviewing titles and abstracts, followed by full-text reviews to determine final eligibility based on the inclusion criteria.

Data Analysis

The selected studies were analyzed using a **qualitative content analysis** approach, categorizing findings based on:

1. The nature of the relationship between capital structure and profitability (positive, negative, or non-significant).
2. The methodological frameworks employed (e.g., regression models, panel data analysis).
3. Variables commonly used to measure capital structure (e.g., Debt-to-Equity Ratio, Debt Ratio) and profitability (e.g., Return on Assets, Return on Equity, Net Profit Margin).
4. Differences observed across countries, firm sizes, and sub-sectors within the manufacturing industry.

In addition, trends and gaps in the literature were identified, particularly focusing on inconsistencies in results, differences across economic contexts (developed vs. developing countries), and emerging research methodologies. This structured analysis enables the study to propose directions for future empirical research.

3. Result and Discussion

Results

The systematic literature review identified a total of 42 empirical studies published between 2000 and 2024 that met the inclusion criteria. These studies span multiple regions, including developed economies such as the United States, the United Kingdom, and Japan, as well as emerging markets like India, Nigeria, and Indonesia. The majority of the studies employed quantitative research designs, predominantly using panel data regression models to assess the relationship between various measures of capital structure and profitability.

The results from the literature can be summarized as follows:

1. **Positive Relationship Between Capital Structure and Profitability**
Several studies found a positive association between leverage and firm profitability, suggesting that an optimal use of debt can discipline management and enhance firm value.

For instance, Berger and Udell (1994) observed that moderate levels of debt positively impacted firm performance in the manufacturing sector. Similarly, Gill, Biger, and Mathur (2011) reported a significant positive relationship between debt-to-equity ratio and profitability among U.S. manufacturing firms.

2. **Negative Relationship Between Capital Structure and Profitability**
Conversely, a significant number of studies documented a negative relationship. Rajan and Zingales (1995) found that higher leverage often reduces profitability, especially when firms face high financial distress costs. Salim and Yadav (2012), analyzing Malaysian manufacturing firms, concluded that excessive reliance on debt negatively affected Return on Assets (ROA) and Return on Equity (ROE).
3. **No Significant Relationship**
Some studies reported no significant association between capital structure and profitability. Abor (2005) examined firms in Ghana and found mixed results depending on the type of debt (short-term vs. long-term), suggesting that capital structure decisions may not consistently impact profitability.
4. **Impact of Firm Size and Industry Sub-Sector**
Evidence also indicates that firm size and specific manufacturing sub-sectors moderate the capital structure-profitability relationship. Larger firms often manage debt better due to diversified operations and greater access to capital markets (Frank & Goyal, 2009). In contrast, small and medium-sized enterprises (SMEs) showed higher sensitivity to leverage, with profitability more adversely affected by increased debt levels (Sogorb-Mira, 2005).
5. **Geographical Differences**
Developed markets tend to show a weaker relationship between leverage and profitability compared to developing markets, where financial constraints and less mature capital markets make financing decisions more consequential for performance (Booth et al., 2001).

Discussion

The findings from the reviewed literature reveal that the relationship between capital structure and profitability is **not uniform** but rather contingent on several contextual factors. These include the economic environment, firm-specific characteristics, types of debt used, and corporate governance mechanisms.

The positive relationship observed in some studies supports the **Agency Cost Theory**, where debt acts as a governance tool to reduce agency costs and align management interests with those of shareholders (Jensen & Meckling, 1976). However, the negative relationship evidenced in other studies reflects the risks associated with high financial leverage, such as increased bankruptcy risk and reduced operational flexibility, which align with the **Trade-Off Theory** (Kraus & Litzenberger, 1973).

The findings also highlight the relevance of the **Pecking Order Theory** (Myers & Majluf, 1984), particularly in emerging markets. Firms in these regions often prefer internal financing over debt due to information asymmetries and higher borrowing costs, affecting how capital structure decisions influence profitability.

Furthermore, variations across firm sizes emphasize the importance of organizational capabilities in managing leverage. Larger manufacturing firms often possess stronger financial management practices and better access to diversified financing options, thereby mitigating the potential negative impacts of debt on profitability (Titman & Wessels, 1988).

The mixed results across different countries suggest that **institutional factors** such as legal frameworks, taxation policies, and financial system maturity also play a crucial role. Firms operating in countries with stronger creditor rights and more efficient legal systems can leverage debt more effectively compared to those in weaker institutional environments (La Porta et al., 1998).

4. Conclusion

This systematic literature review has examined the complex relationship between capital structure and profitability among manufacturing firms listed on various stock exchanges worldwide. The findings indicate that there is no universally consistent relationship between leverage and profitability. Instead, the nature of the relationship is influenced by factors such as firm size, industry sub-sector, geographic location, and the prevailing economic and institutional environments.

Several studies identified a **positive relationship** between capital structure and profitability, supporting the agency theory perspective that debt can serve as a mechanism to discipline management and enhance firm performance. Other studies found a **negative relationship**, highlighting the financial distress risks associated with higher leverage levels as emphasized by trade-off theory. Still, a number of researchers reported **no significant relationship**, suggesting that the effect of capital structure on profitability may be nuanced and contingent upon contextual factors.

The review also revealed that **larger firms** tend to manage debt more effectively than small and medium-sized enterprises, and that **firms operating in emerging markets** face greater sensitivity to capital structure decisions due to underdeveloped financial systems and institutional constraints. Furthermore, differences in debt types (short-term versus long-term) appear to yield varying effects on profitability across different studies.

Overall, the evidence underscores the importance of **contextual and firm-specific analysis** when evaluating the impact of capital structure on profitability. There is no one-size-fits-all solution; rather, optimal capital structure decisions should be tailored to the unique circumstances of each firm, considering market conditions, firm characteristics, and strategic objectives.

Future research could enrich the understanding of this relationship by employing longitudinal designs to observe dynamic changes over time, integrating macroeconomic variables, and exploring the influence of non-financial factors such as corporate governance practices and environmental, social, and governance (ESG) considerations.

In conclusion, capital structure remains a critical financial decision for manufacturing firms, significantly influencing their profitability and long-term sustainability. A careful, context-aware approach to leverage management is essential for enhancing firm value and maintaining competitive advantage.

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