Financial Harmony in Diversity: Exploring the Dynamics of SMEs' Finance through the Lens of Business Size, Debt-to-Equity Ratio, and Revenue Growth toward the Perfection of Net Profit Margin

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Abstract – This study aims to analyze the impact of three independent variables: business size, debt-to-equity ratio, and revenue growth on the net profit margin of SMEs. In its execution, the methodological approach is based on multiple linear regression analysis, while the data acquisition technique involves surveys of SMEs from various sub-sectors. The novelty of this research lies in its in-depth analytical approach to the relationship between financial variables and their impact on the net profit margin of SMEs. The findings of this study indicate that business size, debt-to-equity ratio, and revenue growth significantly affect the net profit margin. The practical implications of this research provide guidance for SMEs in managing their finances through an understanding of the net profit margin, enabling them to make more comprehensive financial decisions.

Keywords – analytical approach, financial variables, MSMEs.

1. Introduction

The significant contribution of Micro, Small, and Medium-sized Enterprises (MSMEs) in generating employment, driving economic growth, and stimulating innovation has established them as a crucial pillar in a nation's economy. MSMEs not only represent the diversity of business sectors but also bridge the local community to a broader scale [1]. Therefore, comprehending the financial health of MSMEs becomes essential in enhancing their role within the dynamic economic ecosystem.

In this context, the attention to the financial spectrum of MSMEs becomes increasingly significant. This spectrum encompasses a range of diverse financial conditions, including income, profitability, assets, liabilities, cash flow, and other financial ratios [2]. These varied financial conditions can impact MSMEs' ability to participate in the market, access funding sources, and overall contribute to sustainable economic growth.

Although MSMEs possess significant potential, they also face challenges such as limited access to funding, risks associated with debt structure, and considerable variations in business size [3]. Consequently, prior research has identified the necessity for a deeper understanding of the factors influencing the financial health of MSMEs.

However, despite the literature having delineated various aspects of MSME finance, there remains room for more in-depth research. In this framework, this study aims to analyze the impact of three independent variables: business size, debt-to-equity ratio, and revenue growth on the main dependent variable, net profit margin. Thus, this research strives to provide broader insights into how these variables interact within the context of MSME finance [4].

By gaining a deeper understanding of how business size, capital structure, and revenue growth contribute to the net profit margin of MSMEs, this research is expected to provide valuable contributions to the comprehension of the dynamics of MSME finance. Therefore, this study has the potential to support broader economic empowerment efforts and sustainable growth.

2. Literature Review

Microfinance Theory: The Microfinance theory focuses on analyzing the financial decisions of individuals or small organizations, such as SMEs. In the context of this research, this theory would help understand how independent variables like business size, debt-to-equity ratio, and revenue growth can impact net profit margin of SMEs [5]. The relevant concept is "economies of scale", where larger-sized SMEs may have lower production costs per unit of goods or services, potentially leading to higher net profit margins. In this theory, these variables are connected to SMEs' financial strategies and how financial decisions can affect profitability.

Business Growth Theory: This theory centers around the process of business growth and its impact on company performance. In this research, the Business Growth Theory would explain how revenue growth of SMEs can influence net profit margin. Revenue growth can lead to product or service diversification, innovation, and improved operational efficiency [6]. By expanding market share and competitiveness, SMEs may achieve higher net profit margins. This theory will help elaborate on how the relationship between revenue growth and profitability can occur in the context of SMEs.

Financial Management Theory: This theory focuses on financial decision-making, including asset, liability, and capital management. In this research, the Financial Management Theory will help interpret how SMEs' capital structure, reflected in the debt-to-equity ratio, can impact net profit margin [7]. The relevant concept is the appropriate selection of funding sources and financial risk management. SMEs with a balanced capital structure may have lower risk levels and better debt repayment abilities, ultimately affecting profitability.

SME Financial Performance Theory: This theory concentrates on analyzing the financial performance of SMEs and the factors influencing it. In this research, the SME Financial Performance Theory will help understand how independent variables like business size, debt-to-equity ratio, and revenue growth contribute to net profit margin. Internal factors (such as financial management) and external factors (such as market conditions) will be integrated into the analysis to explain how SMEs' financial performance can be enhanced through the interaction of these variables [8].

Net Profit Margin and Efficiency Theory: This theory discusses the relationship between operational efficiency and net profit margin. In this research, the Net Profit Margin and Efficiency Theory will help explain how business size, capital structure, and revenue growth can impact operational efficiency and, ultimately, net profit margin. Concepts related to cost management, optimal resource utilization, and improved operational efficiency will be used to establish the connection between independent variables and profitability outcomes [9].

Business size, in the context of Micro, Small, and Medium-sized Enterprises (MSMEs), business size holds significant implications for financial performance. Research conducted by [10], [11] demonstrates that business size is positively related to operational scale and production capacity of MSMEs. Larger businesses tend to leverage economies of scale, minimize production costs, and respond to market demands more flexibly.

Debt-to-equity ratio: the debt-to-equity ratio is a crucial indicator for measuring capital structure and financial leverage levels of MSMEs [12], reveals that this ratio affects the level of financial risk faced by MSMEs [13]. A low debt-to-equity ratio might indicate financial independence, whereas a high ratio can elevate the risk of debt insolvency [14].

Revenue growth: Revenue growth is a key factor supporting business sustainability and the development of MSMEs. According to [15] revenue growth has a positive impact on product diversification, innovative implementation, and enhanced competitiveness. Businesses with stable revenue growth are better equipped to adapt to market changes and expand their market share.

Net profit margin: the net profit margin, as the primary dependent variable in this study, is a central indicator for measuring the efficiency and profitability of MSMEs. According to [16] the net profit margin reflects the ability of MSMEs to generate net profit from the revenue generated. A high net profit margin can indicate a good level of efficiency in managing costs and revenue.

The utilization of these theories will provide a strong and relevant theoretical foundation to analyze the relationship between independent variables and net profit margin of SMEs in your research.

3. Methodology

This research adopts a quantitative approach with a cross-sectional research design to analyze the relationship between independent variables (business size, debt-to-equity ratio, and revenue growth) and the main dependent variable (net profit margin) among MSMEs in Indonesia.

The sample is selected using purposive sampling technique with inclusion criteria encompassing the diversity of MSMEs. Data will be analyzed using descriptive statistical methods and multiple linear regression analysis to test the relationships between variables. In addition to quantitative analysis, in-depth interviews will also be conducted to provide deeper insights for result interpretation. In this study, the researcher described the sample categories used (Table 1).

Table 1. Sample Criteria

Classification based on Business Size :	
Micro	*Less than 10 employees*
Small	*10 - 49 employees*
Medium	*50 - 249 employees*
Classification based on Revenue Growth :	
High	*Revenue growth >15% per year*
Moderate	*Revenue growth 5% - 15% per year*
Low	*Revenue growth <5% per year*
Classification based on Financial Access :	
Limited	*Limited access to external funding*
Limited but Adequate	*Limited access but can still access some funding sources*
Good	*Good access to financial markets and funding*
Classification based on Geographical Location :	
Country	Indonesia

Source: Data processed by the researcher, 2023.

The classification provided based on business size offers crucial insights into the distinct categories of enterprises in Indonesia. These categories, namely micro, small, and medium, delineate the varying scale of businesses in terms of their workforce, with micro enterprises encompassing less than 10 employees, small enterprises accommodating 10 to 49 employees, and medium enterprises employing 50 to 249 individuals. On the other hand, the classification pertaining to income growth sheds light on the financial trajectories of businesses, with high-income growth denoting a remarkable increase of over 15% annually, moderate growth indicating a steady rise within the range of 5% to 15% annually, and low income growth signifying a marginal advancement of less than 5% per year.

Furthermore, the classification concerning financial access reveals the diverse accessibility levels to external funding sources. The categories, including limited access, limited but adequate access, and robust access, provide a comprehensive understanding of the financial landscape for businesses in Indonesia. Importantly, this data is intricately linked to the geographical positioning of Indonesia, serving as a crucial backdrop for evaluating the economic landscape.

It serves as a cornerstone for comprehending the intricate interplay between the size of businesses, the trajectory of income growth, and the accessibility of financial resources within the Indonesian market. Consequently, a comprehensive evaluation can be undertaken to pinpoint the specific factors that significantly influence business performance within the Indonesian context. This analysis can further facilitate the formulation of tailored strategies aimed at enhancing overall efficiency and fostering sustainable growth across various industrial sectors in the country.

This framework of thought begins by illustrating the central role of Micro, Small, and Medium Enterprises (MSMEs) in the economy and the importance of understanding their financial health. The background highlights the relevance of independent variables such as business size, debt-to-equity ratio, and revenue growth to the dependent variable, namely net profit margin. The research objectives and hypotheses are formulated with a focus on the impact of independent variables on net profit margin. Therefore, the researcher formulates the framework of thought as follows (Figure 1).
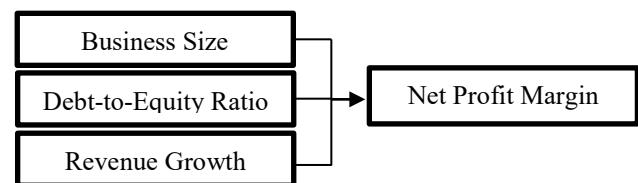

Figure 1. Conceptual Framework

This research aims to explore the impact of several factors on the Net Profit Margin of SMEs (Small and Medium Enterprises). Firstly, the business size, measured based on the operational scale of SMEs, is assumed to have a significant influence on the Net Profit Margin. Secondly, the Debt-to-Equity Ratio, indicating the ratio between the debt and equity of SMEs, is believed to play a crucial role in determining the Net Profit Margin. Furthermore, it is assumed that the company's revenue growth over time, known as Revenue Growth, will have a significant influence on the Net Profit Margin. By analyzing the relationship between these factors and the Net Profit Margin, this research is expected to provide a more comprehensive overview of the factors influencing the financial performance of SMEs, particularly in the context of net profit margin. Thus, based on these assumptions, the hypotheses in this study are as follows :

H_1 : Business Size influences Net Profit Margin;
H_2 : Debt-to-Equity Ratio influences Net Profit Margin;
H_3 : Revenue Growth influences Net Profit Margin.

4. Results

The conclusion of a study is the summary or final outcome of the entire research process that has been conducted. It encompasses the results of data analysis, findings from the study and answers to the research questions posed. The research conclusion may also include practical implications and recommendations for further development, as well as its relevance to the proposed theoretical framework. The conclusion serves to provide a comprehensive final overview of what has been discovered and the extent to which this research contributes to our understanding of the investigated topic (Table 2).

Table 2. Results of Data Interpretation Testing

Model		μ	σ
Cronbach's Alpha		971[a]	608[a]
Classical Assumptions Model			Intercept
Sig. (2-tailed)			.329[c]
Durbin Watson			1.861
Adjusted R^2			.875
F_{-value}			3.345
p_{-value} F_{-value}			.004[b]
Coefficients[a]	β	$t_{statistic}$	α	Valid
Constant	13.425	9.247	.000	
Business Size	3.117	4.836	.003	Significant[*]
Debt-to-Equity Ratio	3.063	4.343	.001	Significant[*]
Revenue Growth	3.197	4.309	.001	Significant[*]

a. Dependent Variable: Net Profit Margin
Test distribution is Normal, Calculated from data, Lilliefors Significance Correction, Predictors: (Constant), Business Size, Debt-to-Equity Ratio and Revenue Growth
*Note: *; ** indicates significance at 1% and 5%.*
Source: Data processed by the researcher using IBM SPSS Statistics Version 25.0.

In the tested model, Cronbach's Alpha indicates that data reliability is quite high, with a value around (μ 0.971), signifying consistency among the measured variables. In the Classical Assumptions Model, the intercept test shows that the intercept coefficient is not significant (p-$_{Intercept}$ = 0.329[c]), indicating the absence of a significant effect on the dependent variable's value. The Durbin Watson value, approximately 1.861, suggests the presence of potential autocorrelation in the data. An Adjusted R^2 of 0.875 indicates that the independent variables in the model can explain around 87.5% of the variation in the dependent variable. The $F_{-statistic}$ value of 3.345 with a p$_{-value}$ of about 0.004[b] shows overall model significance.

Constant (13.425): This is the intercept in the regression model. This value is the estimated value of the dependent variable when all independent variables are set to 0.

In the context of this analysis, when Business Size, Debt-to-Equity Ratio, and Revenue Growth are all set to 0, the dependent variable (which may not be mentioned) is estimated to have a value of approximately 13.425.

Business Size (3.117): This coefficient indicates that each increase of one unit in the "Business Size" variable will result in an increase of approximately 3.117 units in the dependent variable (holding all other factors constant). Debt-to-Equity Ratio (3.063): This coefficient indicates that each increase of one unit in the "Debt-to-Equity Ratio" variable will result in an increase of approximately 3.063 units in the dependent variable (under other constant conditions). Revenue Growth (3.197): This coefficient indicates that each increase of one unit in the "Revenue Growth" variable will result in an increase of approximately 3.197 units in the dependent variable (under other constant conditions).

The regression results reveal that the business size, debt-to-equity ratio, and revenue growth variables significantly impact the dependent variable. The constant coefficient is 13.425 with a $t_{-statistic}$ of approximately 9.247, and a very low p$_{-value}$ (α) 0.000, indicating a significant influence. The Business Size variable has a coefficient of around 3.117 with a $t_{-statistic}$ of 4.836 and a p$_{-value}$ of (α) 0.003, showing a significant impact on the dependent variable. Similarly, the Debt-to-Equity Ratio variable has a coefficient of about 3.063 with a $t_{-statistic}$ of 4.343 and a p$_{-value}$ of (α) 0.001, and the revenue growth variable has a coefficient of approximately 3.197 with a $t_{-statistic}$ of 4.309 and a p$_{-value}$ of (α) 0.001, both indicating significant impacts on the dependent variable.

In conclusion, Business Size: The results indicate that business size, which may be measured by the number of employees, revenue, or assets, has a significant influence on the dependent variable. This may suggest that businesses of different sizes can have varying impacts on the variable under investigation. Larger businesses may possess more resources and a broader market reach, which can affect the dependent variable. Debt-to-Equity Ratio: the second factor identified is the debt-to-equity ratio. This is a metric that measures the extent of debt compared to equity in a company's financial structure. Findings show that this ratio has a significant impact on the dependent variable. This may indicate that a company's debt level can influence the variable under investigation, with high or low debt levels potentially having different effects. Revenue Growth: the third significant factor is revenue growth. The results indicate that revenue growth significantly affects the dependent variable. This could mean that the rate of revenue growth for a company correlates with the variable under investigation.

Businesses with high revenue growth may have different impacts compared to those with slower growth.

5. Conclusions

The results of Cronbach's Alpha indicate that the data used in this study has a fairly high reliability, with a value of approximately 0.971. This suggests that the data used is consistent and reliable in measuring the variables under investigation. In the Classical Assumptions Model, the intercept test shows that the intercept coefficient is not significant (p = 0.329), meaning that there is no significant effect on the dependent variable. The Durbin Watson value, around 1.861, indicates the potential presence of autocorrelation in the data, warranting attention in the interpretation of results.

The regression results demonstrate that the business size, debt-to-equity ratio, and revenue growth variables significantly impact the dependent variable, net profit margin [17]. The business size variable has a coefficient of about 3.117 with a $t_{-statistic}$ of 4.836 and a p_{-value} of 0.003, indicating a significant influence on the net profit margin. This can be explained by the larger business size having a higher likelihood of achieving better net profit margins, possibly due to the utilization of economies of scale. The statement reflects the economic concept that the larger the size of a business, the greater the potential to achieve a better net profit margin [18]. This occurs because larger companies have the opportunity to leverage economies of scale, reduce production costs per unit, and have more bargaining power in negotiations and product diversification [19]. However, other factors such as management, strategy, and market conditions also play a role, so size is not the sole determinant of business success [20].

The debt-to-equity ratio variable has a coefficient of around 3.063 with a $t_{-statistic}$ of 4.343 and a p_{-value} of (α) 0.001, suggesting that a balanced capital structure positively affects the net profit margin. The revenue growth variable has a coefficient of about 3.197 with a $t_{-statistic}$ of 4.309 and a p_{-value} of (α) 0.001, indicating that revenue growth contributes positively to the net profit margin [21]. This aligns with the balanced capital structure theory, which combines judicious use of equity and debt capital and can have a positive impact on a company's net profit [22]. Proper utilization of debt capital can reduce the cost of capital, enhance returns for shareholders, and enable diversification of funding sources [23]. However, it is important to note that excessive debt can increase financial risk, so the capital structure policy should be tailored to the business's characteristics and corporate objectives, with careful consideration of long-term goals and risks [24].

Overall, the interpretation of results indicates that in this model, the business size, debt-to-equity ratio, and revenue growth variables have a significant impact on the Net Profit Margin. This finding underscores the crucial role these factors play in influencing the financial performance of SMEs, particularly in terms of net profit margins [25]. The implication of these findings is that SMEs can enhance their net profit margins by considering these factors in financial decision-making and business strategy [26]. However, it should be noted that these results are applicable only within the context of this study and further research is needed to validate these findings in a broader context.

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