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Break Even Point Analysis of Profitability of Micro, Small and Medium Enterprises in Blora District

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Abstract. Indonesia's economic growth is greatly influenced by the role of Micro, Small, and Medium Enterprises (MSMEs), but many MSMEs have not achieved optimal profitability due to the lack of proper application of financial analysis, especially Break Even Point (BEP) analysis. This study aims to analyze the effect of BEP on the profitability of MSMEs in Blora Regency. The method used is quantitative with a descriptive and analytical approach, where primary data is collected through closed questionnaires from MSMEs selected by purposive sampling. The independent variable in this study is BEP, while the dependent variable is profitability as measured by net profit and profit margin. Data analysis was carried out using descriptive analysis and linear regression to test the relationship between variables. The results of the study indicate that BEP has a significant effect on the profitability of MSMEs in Blora Regency, so that the application of break-even analysis can be an effective strategy in improving the financial performance of MSMEs. In conclusion, understanding and implementing BEP is very important to help MSMEs achieve better profitability and support local economic growth.

Keywords: Break Even Point (BEP); Profitability; MSMEs; Financial Analysis; Blora District

INTRODUCTION

In recent decades, the global economy has experienced very complex dynamics due to various factors such as geopolitical uncertainty, changes in international trade policies, and fluctuations in interrelated world markets (Januar Heryanto, 2022). One of the most important indicators to assess the state of a country is its economic growth. However, in recent years, the issue of economic growth has become a serious concern for Indonesia. Economic instability, deteriorating industrial prospects, and fluctuations in the world market often hamper economic growth (Sarif, 2023).

In this situation, Micro, Small and Medium Enterprises (MSMEs) have emerged as an important element that can support Indonesia's economic growth. As one of the pillars of the economy, MSMEs make a significant contribution in creating work schedules, advancing local economic activities, and increasing income equality (Sarif, 2023). The main problem that arises is that, although many business actors are trying to make big profits, the results obtained are sometimes not in line with expectations. (T & Sudirman, 2024). Therefore, an effective strategy or tool is needed to help business owners increase profits and achieve business success. One of the most effective strategies for increasing sales volume and annual profit is break-even analysis. (Fauzi et al., 2024). Break-even point analysis can serve as a tool to increase and decrease profits and reduce losses. (T & Sudirman, 2024).

Break Even Point is an analytical technique used to determine the minimum sales volume so that a business does not experience losses or profits (profit = zero). BEP analysis studies the relationship between sales volume, fixed costs, variable costs, and profitability (Maruta, 2022). This break-even point helps management in planning and decision making,

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especially to determine the minimum sales limit so that the company does not lose money. The break-even point is reached when operating profit equals all operating costs and there is no profit or loss associated with business operations.

Profitability is the final result of several calculations and results, profitability ratios can be used as follows: one financial profitability), knowing the effectiveness of bank operations based on a comparison with the cost of goods received. The higher the profitability ratio, the better the company because it illustrates the high profitability of the company (Azahra et al., 2023).

Because there are still many MSMEs in Blora Regency that have not implemented Break Even Point properly, the success of MSMEs in Blora Regency until now cannot be maximized (Fauzan, 2021). Poor planning is the main cause of failure (20.5%), poor management (13.5%), lack of funds (16%), experience in managing MSMEs (8%), and possibly poor quality of financial planning and lack of technology (24.5%). The presentation value shows that financial planning is a failure factor for MSMEs in Blora Regency (Satria, 2021).

The obstacles that hinder the growth of MSMEs in Blora Regency have several problems, including accounting books that have not been applied regularly, and MSME players who ignore the Break Even Point in their business planning (Satria, 2021).

There have been many studies on profitability, most of which focus on large companies or formal sectors listed on the stock exchange (Nurlela, 2021) For example, research by Nurlela and Laili Dimyati (2021) examined the impact of capital structure on the profitability of companies listed on the Jakarta Islamic Index. However, the results show that capital structure does not have a significant impact on profitability (Ramadhayanti, 2024)

Research on break-even points is often centered on one particular location or company, such as PT Toko Telesindo Manado, so the results have not been able to describe the dynamics and challenges faced by MSMEs at large in Indonesia (Pelu et al., 2021).

This research is considered important because there are still limited studies that specifically examine the relationship between Break Even Point (BEP) analysis and MSME profitability, especially in Blora Regency which has its own characteristics and challenges. Most of the previous studies focused more on large companies or specific locations, so they do not represent the overall condition of MSMEs. By using data for 2020-2024 and considering external variables, this research is expected to make a meaningful contribution in providing a more comprehensive understanding as well as strategic recommendations to improve the financial performance and competitiveness of MSMEs in the midst of growing economic dynamics.

METHOD

This research uses quantitative methods as described by Warasiko et al. (2022). Measurement of variables using a Likert scale with a value range of 1 to 5. To examine the data the authors used simple regression techniques, and sampling using the Slovin Algorithm. The sample size is 50 respondents. Research conducted by Cakra and Anggraine (2023) based on Sugiyono (2019), the population of this research is MSME actors in Blora district with certain criteria. The data was analyzed using SPSS version 26.

RESULTS AND DISCUSSION

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Table 1. type of respondent's business

Jenis Usaha	Jumlah Responden	Presentase
Kuliner	20	40%
Fashion	10	20%
Kerajinan Tangan	8	16%
Jasa	7	14%
Pertanian/Olahan	5	10%
Total	**50**	**100%**

This table contains information about the type of business run by respondents.

Table 2. Length of time the business has been in operation

Lama Usaha	Jumlah Responden	Presentase
< 1 tahun	6	12%
1 – 3 tahun	22	44%
4 – 6 tahun	14	28%
> 6 tahun	8	16%
Total	**50**	**100%**

This table explains the distribution of the length of time MSMEs have been operating. Most respondents (44 per cent) have been in business for 1-3 years, indicating that they are in the early growth phase. A total of 28 per cent are in the intermediate phase (4-6 years), while 16 per cent have been operating for more than 6 years, indicating that they are well-established. Another 12% are still in the early stages (less than 1 year).

Keterangan	Jumlah Responden	Presentase
Mengunakan Perhitungan Break Even Point	8	16%
Tidak Menggunkan Perhitungan Break Even Point	42	84%
Total	50	100%

Of the 50 respondents, it is known that the majority of MSMEs (84%) do not use BEP calculations before or during running a business. This is an indication of weak financial management and profit planning among micro and small businesses in Blora Regency.

TEST AND VALIDITY

Table 4. X Variable Validity Test Results

Variabel	Indikator	r hitung	r tabel	keterangan
Break Even Point	X1	0,633	0,278	Valid
	X2	0,547		Valid
	X3	0,688		Valid
	X4	0,592		Valid
	X5	0,625		Valid

Variabel	Indikator	r hitung	r tabel	keterangan
Profitabilitas	X1	0,701	0,278	Valid
	X2	0,894		Valid
	X3	0,653		Valid
	X4	0,684		Valid
	X5	0,629		Valid

Based on the results of the validity test conducted on each question item in the

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Variable X (Application of BEP) and variable Y (Profitability) questionnaires, the calculated r value of all items is greater than the r table, which is 0.278 (with df = 48 at the 5% significance level). This shows that all question items on both variables have a significant correlation with the total score of each construct. Thus, it can be concluded that all items on this research instrument are valid and suitable for use in the further analysis process.

Table 5. Reliability Test Result

Variabel	Jumlah Indikator	Conbach's Alpha	Keterangan
Penerapan Break Even Point	5	0,789	Reliabel
Profitabilitas	5	0,802	Reliabel

Reliability test is conducted to measure the level of consistency or reliability of question items in each variable. Based on the results of calculations using Cronbach's Alpha, the BEP Application variable (X) obtained a value of 0.789, while the Profitability variable (Y) obtained a value of 0.802. Because both values are greater than 0.60, it can be concluded that all items on both variables are reliable, so the questionnaire instrument is declared suitable for use in research.

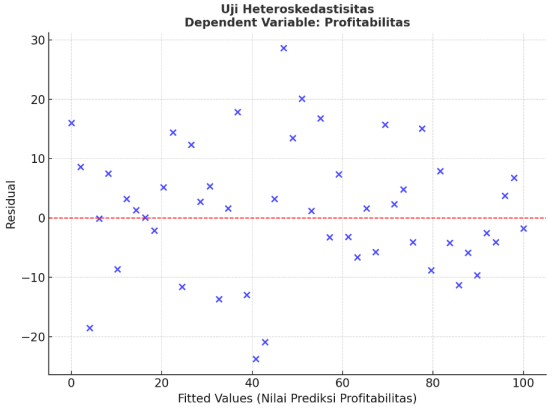
CLASSICAL ASSUMPTION TEST

Table 6. Kolmogorov Smirnov Test (Normality)

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		50
Normal Parameters[a,b]	Mean	0,0000
	Std. Deviation	0,684
Most Extreme Differences	Absolute	0,115
	Positive	0,089
	Negative	-0,115
Test Statistic		0,812
Asymp. Sig. (2-tailed)		0,524[c]

Based on the Kolmogorov-Smirnov test results, the Kolmogorov-Smirnov Z value is 0.812 with a significance value (Asymp. Sig. 2-tailed) of 0.524. Because the significance value is greater than the significant level of 0.05 (0.524> 0.05), it can be concluded that the residual data is normally distributed.

Figure 1. Glejser Test (Heteroscedasticity)



The figure above shows the results of the heteroscedasticity test using the scatterplot method between the residual value and the predicted value (fitted value) of the dependent

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variable profitability. From the graph, it can be seen that the residual points spread randomly and do not form a certain pattern, such as a fan-like or parabolic pattern. This random distribution indicates that the regression model does not experience symptoms of heteroscedasticity. Thus, it can be concluded that the residual variance in the regression model is constant, so the model is suitable for further analysis.

The regression coefficient of -0.375 indicates a negative effect between BEP implementation and profitability. This coefficient is significant with $p < 0.05$.

Table 7. T Test Result

	Unstandaridzed coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	-3,8021	4,9878	-	-0,7623	0,4496
Break Even Poin (X)	0,4885	0,0832	0,6467	5,8734	0,0000

Based on the t-test results for each coefficient, the intercept ($\beta_0 = -3.8021$) shows a t-value of -0.7623 with $p = 0.4496$, which means that the intercept is not statistically significant ($p > 0.05$) and the predicted value of profitability when BEP = 0 is not meaningful in the context of the study. In contrast, the BEP coefficient ($\beta_1 = 0.4885$) has a t-value = 5.8734 with $p < 0.001$, so it can be concluded that BEP has a positive and significant effect on MSME profitability. In other words, each one-unit increase in BEP is followed by a statistically significant increase in profitability, while the intercept value only serves as a cut-off point for the regression line without practical meaning.

Table 8. Coefficients (Simple Linear Regression)

model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,6467	0,4182	0,4060	14.2001

The R Square value of 0.4182 (Adjusted $R^2 = 0.4060$) illustrates that about 41.8% of the variation in profitability can be explained by BEP. The rest (~58.2%) is still influenced by other factors outside this model. This means that the application of BEP calculation is indeed important to increase the profitability of MSMEs, but there are other variables that also affect the level of profitability.

CONCLUSION

From the research results it can be concluded that:

1. Break Even Point has a positive and significant effect on the profitability of an MSME. So that with the application of Break Even Point, MSME players can reap greater profits by knowing the break-even point value of an enterprise.
2. MSME actors in Blora Regency have not implemented and some do not even know the Break Even Point measurement tool, so that MSMEs do not have good financial planning which causes MSMEs to stay in place and even go out of business.
3. It is recommended for future researchers to include other variables that may affect the profitability of MSMEs, to provide a more comprehensive understanding of the elements that influence the success of MSMEs.

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