

Comparative Analysis of Profitability Before and After Using E-Commerce (Case Study: PT Mustika Ratu,Tbk)

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ABSTRACT

The rapid development of information technology affects changes in people's behavior, especially in shopping, thus encouraging companies to innovate and adapt to technological advances. PT. Mustika Ratu Tbk cooperates with the company *e-Commerce marketplace* Ralali.com to expand the sales distribution network of Mustika Ratu products and provide ease of the easy and safe buying *Online* through online channels owned by Ralali.com. This study aims to compare the significance of profitability before and after using e-commerce at PT. Mustika Ratu. This study analyzes financial statements profit including NPM, ROA, ROE. The financial data used are financial statements from 2018-2021 using PT Mustika ratu's financial statements using profitability ratios related to the company's net published on the www.mustika_ratu.co.id website

INTRODUCTION

The rapid development of information technology as it is today has a significant influence on every aspect of human life, where in carrying out daily activities almost always use information technology, which is all accessible via the internet. The business world is no exception, which is one of the sectors most affected by the transition to the current industrialization era which demands everything to be fast-paced, precise, and transparent. The existence of technological advances also affects changes in people's behavior in many ways, especially shopping, so that it can encourage every business sector to always innovate and adapt to changing needs that change very quickly.

One of the roles of technological advances is the emergence of information technology for electronic commerce, or better known as *e-Commerce*, is the most sophisticated and widely used form of trading system today as a result of advances in the development of information technology, namely the internet, so that through the internet network, electronic transactions become an attractive choice not only for individuals but also for organizations. The trend of buying and selling online or *e-Commerce* has changed the order of the business system a lot. Business that was previously only done with conventional systems, can now be done with other alternatives, namely *online* (internet media). Ease of access to information and rapid technological developments also play a role in creating a new phenomenon of shopping that is more practical, fast, and safe. Known from various sources, in Indonesia the growth of internet users continues to increase from year to year. This can be one of the driving factors for the increasing number of entrepreneurs to innovate in the field of online transactions so that more and more companies are emerging that implement *e-commerce*.

Slowly but surely, eventually many companies are switching to *e-Commerce*. Tak terkecuali PT. Mustika Ratu Tbk. who continues to innovate so that it can always *Update* With the development of technology and can continue to facilitate its customers by expanding its business to the sector *e-Commerce*. In 2020, PT. Mustika Ratu Tbk cooperates with the company *e-Commerce marketplace* Ralali.com to expand the sales distribution network of Mustika Ratu products and provide ease of the easy and safe buying and selling transaction process, wholesale prices, along with various promos, discounts, and attractive offers where the collaboration will make it easier for customers to obtain Mustika Ratu products *Online* through online channels owned by Ralali.com by opening *Official Store Marketplace B2C* channel. Then quoted from the news on Friday, March 25, 2022 from the site www.mustika-ratu.co.id states that PT. Mustika Ratu Tbk. again expands its reach and strengthens product distribution and marketing by *digital awareness* in the online world through cooperation carried out together [WarehouseAda](#) *One Business to Business (B2B) e-Commerce* The largest that connects all actors [MSMEs](#) through technological solutions. With this collaboration, PT. Mustika Ratu Tbk. which has a registered trademark and does marketing in *platform* [GudangAda](#) has the right to status *Official Store*.

[Mustika Ratu](#) can optimize [GudangAda](#)'s technology support which has connected more than 750,000 users, especially MSME players in more than 500 cities in Indonesia. This collaboration can make it easier for customers to get

Mustika Ratu products faster. Marketing through *online channels* at competitive and transparent prices can be obtained by consumers. With the technology owned by Gudang Ada, shopping for Mustika Ratu product needs becomes faster, safer, and easier. This also helps Small and Medium Enterprises (SMEs) and market needs for fulfillment in large quantities.

Motivated by the technological developments described above, along with economic growth in the era of rapid globalization, companies are required to carry out better business management and follow technological developments that continue to occur by working more effectively and efficiently in order to continue to excel by improving financial performance. The company must have a healthy and efficient financial performance to get the expected profit or profit by regulating its financial position as a benchmark for the company's financial performance in order to maintain the sustainability of the company to move forward. One factor that can show how the company's performance is good or not is by analyzing financial statements because the company's ability to run its business is financially shown in the financial statements. Financial statements are prepared and presented with the aim of providing quantitative information about the state of finance in a certain period.

Financial statements are used to analyze financial performance related to company profitability to see management's ability to generate profits, the measuring tool used is the profitability ratio including NPM (Net Profit Margin), ROA (Return On Assets), ROE (Return On Equity). Financial statements used for the quarter of 2018 – 2021 financial data published on the website of PT. Mustika Ratu(Persero)tbk,. Quarterly financial statements 2018 (Quarter 1,2,4), Year 2019 (Quarter 1,2,3,4), Year 2020 (Quarter 2 &4), Year 2021 (Quarter 1,2,3,4). Financial statements before using e-commerce in 2018, 2019 and financial statements after using E-commerce in 2020, 2021. With several concrete actions that have been taken by PT. Mustika Ratu Tbk. as an anticipatory step to maintain the company's financial performance through the use of e-Commerce *as a form of action to follow current business trends in order to maintain the sustainability of the company's life for the better, we are interested in conducting research with the title "Comparative Analysis of Profitability Before and After Using E-Commerce (Case Study: PT. Mustika Ratu,Tbk)*. The purpose of this study is to see the performance of the company, especially profitability, including:

1. Comparing the company's financial performance, net profit margin before and after implementing E-Commerce.
2. Comparing the company's financial performance, Return on assets before and after implementing E-Commerce
3. Comparing company performance, Return on equity before and after implementing E-Commerce.

LITERATURE REVIEW

1. Financial Statements

Financial statements are written records that convey the activities and financial condition of a business or entity and consist of four main components. Financial statements are simply information about financial activities in the company that can be used to see and assess a company's condition and assess the company's performance in a certain period (Darmawan 2022).

2. Financial Statement Analysis

Financial statement analysis is the process of analyzing a company's financial statements for decision-making purposes and to understand the overall health of the organization. Financial statements record financial data, which must be evaluated through financial statement analysis to be more useful to investors, shareholders, managers, and other interested parties (Hidayat 2018). Financial statement analysis is an evaluative method for determining a company's past, current, and projected performance. Some techniques commonly used as part of financial statement analysis include horizontal analysis, which compares two or more years of financial data in dollar and percentage terms; vertical analysis, in which each category of accounts on the balance sheet is displayed as a percentage of the total accounts; and ratio analysis, which calculates statistical relationships between data

3. The profitability ratio is the company's ability to earn profits through all existing company activities, sales, cash, assets, and capital (Harahap 2015). Several types of profitability ratios can be formulated as follows:

a. Net Profit Margin (NPM)

Is a ratio used to measure last net profit after tax compared to sales volume (Sujarweni 2017). The calculation of Net Profit Margin is calculated by the formula:

$$\text{Net Profit Margin (NPM)} = \frac{\text{Profit After Tax}}{\text{Net seller}} \dots\dots\dots 3.a$$

H1 = There is a difference in NPM (Net Profit Margin) before and after using e-commerce.

b. Return on Assets (ROA)

How much net profit is generated from each rupiah of funds embedded in total assets (Sujarweni 2017). The calculation of Return on Assets is calculated by the formula:

$$\text{Return on Assets (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}} \dots\dots\dots 3.b$$

H2 : There is a difference in ROA (Return On Asset) before and after using e-commerce

c. Return on Equity (ROE)

ROE is a ratio used to measure the ability of own capital to generate profits for all shareholders, both common stock and preferred stock (Sujarweni 2017). The calculation of Return on Equity is calculated by the formula:

$$\text{Return on Equity (ROE)} = \frac{\text{Profit After Tax}}{\text{Capital}} \dots\dots\dots 3.c$$

H3: There is a difference in ROE (Return On Equity) before and after using e-commerce.

The analysis carried out in this study is horizontal analysis, which is a comparison of financial statements in two or several years to get an idea of changes over the past few years whether there has been an increase or decrease.

E-Commerce

The rapid development of the internet in Indonesia is currently one of the driving factors for the development of e-commerce. The ease of transactions and the global network that connects computer networks around the world allows the establishment of communication and interaction between one company and consumers (Anggraini et al. 2022). With so many e-commerce companies operating, the more manpower they need, thus opening up new jobs for the wider community

Conceptual Framework

PT. Mustika Ratu, Tbk innovated by launching E-Commerce in 2020 by cooperating with E-Commerce companies Ralali.com to expand distribution and sales networks to increase company profitability. This study conducts a comparative test of company profitability before and after implementing e-commerce using profitability ratios related to the company's ability to net profit, namely Net Profit Margin, Return On Assets, Return On Equity, then the thinking framework can be described as follows:

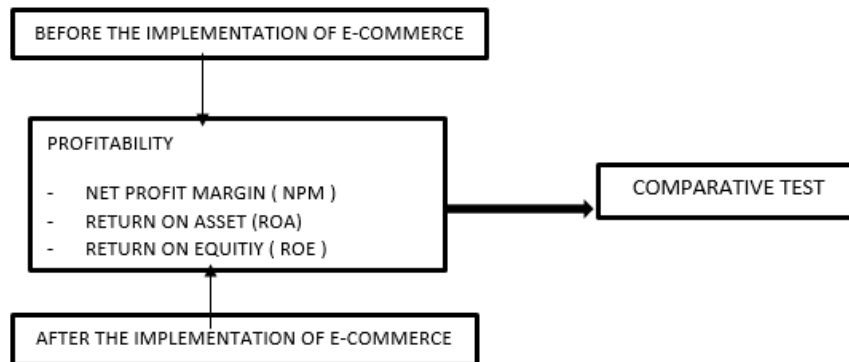


Figure 1. Conceptual Framework

METHODOLOGY

1. Variables and measurements

The variable used in this study is to measure the company's financial performance, especially the profitability of PT. Mustika Ratu (Persero) Tbk, before implementing E-Commerce and after implementing E-Commerce. Measurement of company profitability using NPM (Net Profit Margin), ROA (Return On Assets), ROE (Return On Equity). This research uses only one object, according to the research theme.

2. Research Methods

The method used in this study is quantitative descriptive, by analyzing the company's financial condition before the implementation of E-Commerce and after the implementation of E-Commerce at PT. Mustika Ratu (Persero) Tbk, using the financial statements for 2018 - 2021. Data obtained from the official website of PT. Mustika Ratu (Persero) Tbk. In this study, researchers measured financial performance using profitability ratios. The research methods used in this study with data collection methods are as follows:

a. Data collection techniques

Data collection used secondary data is the collection of literature data to obtain data or information of a scientific or theoretical nature related to the object of research by reading, studying books and papers.

b. Data Processing Techniques

- Quantitative

Processing of quantitative data in the form of financial statements of PT. Mustika Ratu before the implementation of E-Commerce and after the implementation of E-Commerce

- Qualitative

Processing of qualitative data obtained both from internal companies and external in the form of books, reference journals and other supports to complete this research.

3. Analysis Methods

a. Descriptive Analysis

Descriptive statistics are statistics used to analyze data by describing or describing the collected data as it is without the intention of making generalized conclusions or generalizations (Sugiyono 2020). Descriptive statistics presents data through tables, graphs, pie charts, pictograms, mode calculations, medians, mean (central tendency measurements), decile calculations, percentiles, data spread calculations, through average and standard deviation calculations, percentage calculations.

b. Data Normality Test

The data normality test is carried out to find out whether the data tested is normally distributed or not. Tests carried out with the Komogorov-Smornov Test method, normally distributed data are tested using parametric statistics and if the tested data is not normally distributed, testing is carried out using non-parametric statistics.

c. Comparative Hypothesis Test

The comparative hypothesis test is used to describe the same variable but the population or sample is different or this state occurs at different times, this study uses the initial hypothesis that there are differences in the variables before and after. The comparative hypothesis test is divided into two: 1) parametric statistical test for normally distributed data (t-test), 2) non-parametric statistical test if the data is not normally distributed (wilcoxon sign test).

RESULTS AND DISCUSSION
Hypothesis Testing Results

Table 1. Descriptive Statistics

	N	Mean	Difference
Npm before e-commerce	6	-0,0022	0,0053
Npm sesudah e-commerce	5	0,0031	
Roa Before e-commerce	6	0,0003	-0,0010
Roa after e-commerce	5	-0,0007	
Roe before e-commerce	6	0,0004	-0,0016
Roe after e-commerce	5	-0,0011	
Valid N (listwise)	5		

(Source : Data Processed with IBM SPSS Statistics)

- There was an increase in NPM (Net Profit Margin) after the implementation of e-commerce by 0.053%
- There was a decrease in ROA (Return On Assets) after the implementation of e-commerce by 0.01%
- There was a decrease in ROE (Return On Equity) after the implementation of e-commerce by 0.016%

Table 2. Data Normality Test

	Kolmogorof-Smirnov		
	Statistics	df	itself.
Npm before e-commerce	0,260	5	,200*
Npm sesudah e-commerce	0,250	5	,200*
Roa Before e-commerce	0,246	5	,200*
Roa after e-commerce	0,378	5	0,019
Roe before e-commerce	0,245	5	,200*
Roe after e-commerce	0,378	5	0,019

(Source : Data Processed with IBM SPSS Statistics)

- The significant value of NPM (Net Profit Margin) ≥ 0.05 then the data is normally distributed
- The significant value of ROA (Return On Assets) ≥ 0.05 while the significant value after implementing e-commerce ≤ 0.05 , the data is not normally distributed

- The significant value of ROE (Return On Equity) ≥ 0.05 while the significant value after implementing e-commerce ≤ 0.05 , the data is not normally distributed.

Table 3. Comparative Hypothesis Test

Paired Sample Test	
Paired Differences	
	sig. (2-tailed)
NPM before e-commerce NPM after e-commerce	0,717

(Source : Data Processed with IBM SPSS Statistics)

Table 4. Statistics

Test Statistics		
	Roa after e-commerce - Roa Before e-commerce	Roe after e-commerce - Roe before e-commerce
With	-,135b	-,135b
Asymp. Sig. (2-tailed)	0,893	0,893
a Wilcoxon Signed Ranks Test		
b Based on positive ranks.		

(Source : Data Processed with IBM SPSS Statistics)

- The significance value of NPM before and after e-commerce is $0.717 \geq 0.05$ then the difference is not significant
- The significance value of ROA before and after e-commerce is $0.893 \geq 0.05$ then the difference is not significant
- The significance value of ROE before and after e-commerce is $0.893 \geq 0.05$ then the difference is not significant

CONCLUSION AND RECOMMENDATIONS

From testing the data that has been carried out on the profitability ratio consisting of NPM, ROA and ROE, it can be concluded that there is no significant difference. NPM seen from the descriptive statistical test increased by 0.0053 or 0.053%. Judging from the results of the NPM comparative hypothesis test, the significance value is 0.717, the value is greater than 0.05. From the results of the analysis, it is explained that its net sales have not shown a significant difference.

Judging from the results of the analysis above, ROA does not describe a significant difference, the results of descriptive statistical tests decreased by 0.0010 or 0.01%. Judging from the results of the comparative hypothesis test, ROA significance value is 0.893, the value is greater than 0.05. From the results

of the analysis, it is explained that the company's management in managing its assets has not shown a significant difference.

Judging from the results of the analysis above, ROE does not describe a significant difference, the results of descriptive statistical tests decreased by 0.0016 or 0.016%. Judging from the results of the comparative hypothesis test, ROE significance value is 0.893, the value is greater than 0.05. From the results of the analysis, it is explained that the company's ability to provide profits has not shown a significant difference.

Net Profit Margin (NPM) there is a significant change before and after the implementation of e-commerce, it can be seen from the calculation of profitability, the ratio of profit per sales before the implementation of e-commerce 0.80%, there is an increase of 2.24% after the implementation of e-commerce.

Return On Asset (ROA) there was a significant increase before and after the implementation of e-commerce, it can be seen from the calculation of profitability, lab comparison per asset before the implementation of e-commerce 0.47%, there was an increase of 1.27% after the implementation of e-commerce.

Return On Equity (ROE) there was a significant increase before and after the implementation of e-commerce, it can be seen from the calculation of profitability, the ratio of profit per capital before the implementation of e-commerce 0.66%, there was an increase of 2.08% after the implementation of e-commerce.

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