

## DETERMINANTS OF COMPANY PROFITABILITY PERFORMANCE IN MALAYSIAN HEALTHCARE SECTOR

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**Abstract:** *Over the past few years, the healthcare sector has been growing exponentially due to rapid development in medical and pharmacy technology. It is very interesting to explore the factors that affect the success of healthcare companies, which can have a greater impact on their profitability than we previously thought. As a result, the main objective of this study is to examine the factors that affect the companies' profitability performance in the Malaysian healthcare sector over an eleven-year period (2010–2020). There are four publicly traded companies in Malaysia's healthcare sector that have been included in the sample. The companies are Top Glove Corporation Bhd, Duopharma Biotech Bhd, KPJ Healthcare Bhd, and Apex Healthcare Bhd. Considering that healthcare is an important component of the companies' competitiveness and profitability in the current situation, this study has been conducted to examine the internal factors that contributed to the profitability performance. This study used the Fixed Effects Model to analyse profitability performance in the healthcare sector. The independent variables involved in this study are asset turnover, current ratio, and leverage, while the dependent variable is profitability proxied by gross profit margin. The results have shown that asset turnover has a negative significant relationship with profitability, while leverage has a negative relationship but not significant towards profitability. However, the current ratio indicates a positive and significant relationship towards the profitability of the selected Malaysian healthcare companies. The findings provided in this study will provide some guidance for boosting profitability and enhancing the financial performance of the healthcare companies in Malaysia.*

**Keywords:** *Profitability; Asset Turnover; Current Ratio; Leverage*

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## Introduction

The global healthcare industry is constantly expanding and it is forecasted to continue growing in the future. This is due to demand drivers such as an ageing population and chronic diseases, as well as supply factors such as bioresearch expansion. However, in Malaysia, healthcare companies are struggling with long-standing issues of affordability, access, quality, and performance. The majority of healthcare companies understand the meaning and value of profitability, but they do not know how to improve it or identify what factors are affecting its profitability (Lim & Rokhim, 2020).

The main focus of the companies in any fierce competition is to remain sustainable and profitable. In order to do so, each company must develop, implement, and maintain strategies that will improve its performance. This can be accomplished by examining the internal and external factors that could have an effect on the company's performance. Thus, the ability of managers to determine the contributing factors will help to improve company profitability, quality, and performance. Generally, profitability is defined as a company's earnings derived from revenues after all expenditures are incurred within a given period. According to Alarussi & Alhaderi (2018), profitability is one of the most crucial indicators of managerial success, shareholder happiness, investor attraction, and the company's long-term viability.

Profitability acts as a most crucial component because it determines a company's ability to carry out its operations and to ensure it meets its objectives. A high level of profitability indicates that the company is efficient, whereas a low level of profitability indicates that the company is unsustainable and requires a new strategy to generate more profit. Organizations should develop new strategies in order to boost profitability and be vigilant with every business they run to avoid massive losses (Vrzina & Dimitrijevic, 2020). Nowadays, many competitors use deliberate strategies by improving their products and services to differentiate themselves from other competitors with the intention of boosting profits and meeting customer satisfaction.

Currently, Malaysian private healthcare companies are expected to make more profit due to increased demand for their services. Due to the coronavirus spike nowadays, other sectors such as agriculture and retailing had negatively impacted as most of the companies had to reduce their number of employees and limit their business' activities. Meanwhile, the healthcare sector is primarily supported by taxation and a few other sources of revenue to expand (Lim & Rokhim, 2020). Other than that, private healthcare insurance funds, patients' out-of-pocket expenses, and private and non-profit institutions also support the private healthcare sector. However, new healthcare companies might face some challenges to generating profits during the economic downturn as most of the nursing staff need to be transferred to government hospitals and are faced with high expenses. As a result, the biggest difficulty for Malaysian healthcare companies is determining how to achieve long-term viability and increased earnings. In order for a healthcare company to achieve this, it is crucial that every company need to have a thorough awareness of the particular internal factors that affect how profitability performance operates. Thus, the determinants of asset turnover (ATO), current ratio (CR), and leverage (LEV) for profitability performance in the healthcare sector are investigated in this study.

The main objective of this study is to look into the internal factors that influence profitability performance in the Malaysian healthcare sector. The determinants of profitability performance are measured by asset turnover (ATO), current ratio (CR), and leverage (LEV). Hence, the objectives of the study are:

1. To determine the impact of asset turnover (ATO) on profitability performance in the Malaysian healthcare sector.
2. To examine the impact of current ratio (CR) on profitability performance in the Malaysian healthcare sector.
3. To investigate the impact of leverage (LEV) on profitability performance in the Malaysian healthcare sector.

### **Literature Review**

There are five points representing dependent and independent variables will be discussed in literature review.

#### **Profitability**

Profitability refers to a company's ability to gain revenue. A profit is what remains of a company's revenue after it pays all expenses incurred during a given period. According to Alarussi & Alhaderi (2018), profitability is one of the most crucial indicators of managerial success, shareholder happiness, investor attraction, and the company's long-term viability. There are numerous measurements that are frequently used to evaluate a company's profitability, such as return on assets (ROA), return on equity (ROE), gross profit margin (GPM), operating profit margin (OPM), and net profit margin (NPM). Previous studies have revealed the relationship between profitability and its many aspects through empirical evidence. First, a substantial and positive association between firm current ratio and profitability proxied by gross profit margin (GPM) was discovered during the analysis of firm liquidity (Widyastuti, 2019; Nanda & Panda, 2017; Jolly Cyril & Singla, 2020; Lim & Rokhim, 2020). Other studies, on the other hand, have found a positive, but not significant, link between a firm's current ratio and gross profit margin (GPM) (Alarussi & Alhaderi, 2018; Zainudin et al., 2017; Appraisal et al., 2019; Vrztina & Dimitrijevic, 2020). There was also other research that discovered a positive and significant relationship between asset turnover and profitability (Jana, 2018; Alarussi & Alhaderi, 2018; Vrztina & Dimitrijevic, 2020). Meanwhile, two studies conducted have found that asset turnover and profitability have a negative relationship and are not significant (Lim & Rokhim, 2020; Azad et al., 2018). This study employed gross profit margin (GPM) as a measurement of profitability, as well as a proxy and an indication of profitability because it reflects the company's actual position.

#### **Asset Turnover (ATO)**

The asset turnover ratio, which is part of the efficiency ratio, examines a company's ability to generate revenue or sales by utilising its assets. It compares the amount of its sales or revenues to the total value of its assets. The asset turnover ratio allows a firm to calculate its efficiency and decide whether or not it can generate profit from its assets. According to financial ratio rules of thumb, a greater asset turnover ratio indicates that a firm is more efficient in generating profit from its assets, whereas a lower asset turnover ratio indicates that a firm lacks the ability to manage its assets to generate profit. The asset turnover ratio will have an impact on the company's profitability, and as a result, the company will be motivated to improve its efficiency, which may lead to more investment for profitability improvement (Alarussi & Alhaderi, 2018). Investors and creditors are more likely to be attracted to a company with a high asset turnover ratio because it can generate more profit with fewer assets and incur less debt and equity. As a result, from an investor's view, this can reduce the amount of loss while increasing the return on investment. According to a study conducted by Sathishkumar and Balamurugan (2019), the asset turnover ratio is important because it can be used to predict and compare a company's earnings, and it may help investors and creditors decide whether or not to invest by evaluating

the company's strengths and weaknesses. Previous studies have discovered a positive and significant relationship between asset turnover and profitability (Jana, 2018; Alarussi & Alhaderi, 2018; Vrzina & Dimitrijevic, 2020). Meanwhile, two studies conducted have found that asset turnover and profitability have a negative relationship and are not significant (Lim & Rokhim, 2020; Azad et al., 2018). Therefore, the present study proposes the following hypothesis (H<sub>1</sub>):

H<sub>1</sub>: There is a significant relationship between asset turnover and the profitability performance of Malaysian healthcare companies.

### **Current Ratio (CR)**

A current ratio is a liquidity ratio that examines a company's ability to meet its short-term obligations. According to Amanda (2019), the current ratio cannot be too high or too low. A low current ratio signifies that there are liquidity issues. A low current ratio indicates the company's inability to meet its short-term obligations, which will increase the company's burden to meet its obligations. In contrast, a high current ratio clearly shows that there is an abundance of idle funds, which may reduce the company's net profit, whereas other few studies discovered that a higher current ratio indicates that the company has a high asset to liability ratio, which will increase the company's efficiency to pay off their short-term obligations (Amanda, 2019; Fayyaz & Nabi, 2016; Hantono, 2018). Moreover, a previous empirical study conducted by Hantono (2018) indicates that a high current ratio will influence investors' interest in investing in the organisation and boost the amount of current assets and the company's profit. Meanwhile, the relationship between current ratio and profitability was found to have a positive and significant relationship resulting from the study conducted by Amanda, 2019; Anwar, 2019; Fayyaz & Nabi, 2016; Lusy et al., 2018. Thus, the present study proposes the following second hypothesis (H<sub>2</sub>):

H<sub>2</sub>: There is a significant relationship between current ratio and the profitability performance of Malaysian healthcare companies.

### **Leverage (LEV)**

According to Cyril & Singla (2020), the use of debt is referred to as leverage. This is because the decision between debt and equity implies a trade-off between business and financial risk. Leverage is one component of a company's capital structure. Leverage is the use of debt (borrowed capital) to boost the returns on a project. Investors utilise leverage to boost their purchasing power in the market. When a company, an investment, or a piece of real estate is described as having high leverage, it means that the asset has more debt than equity. Companies might utilise debt to invest in business operations instead of issuing stock to raise capital in an attempt to boost shareholder value. The impact of leverage on a company's profitability has been investigated by many researchers, but the results have been mixed. Leverage has been shown to have a negative and significant influence on profitability based on research conducted by Alarussi & Alhaderi, 2018; Kwatiah & Asiamah, 2020; Cyril & Singla, 2020). This indicates that companies can generate more profit when the level of debt is reduced. Therefore, the present study proposes the following hypotheses (H<sub>3</sub>):

H<sub>3</sub>: There is a significant relationship between leverage and the profitability performance of Malaysian healthcare companies.

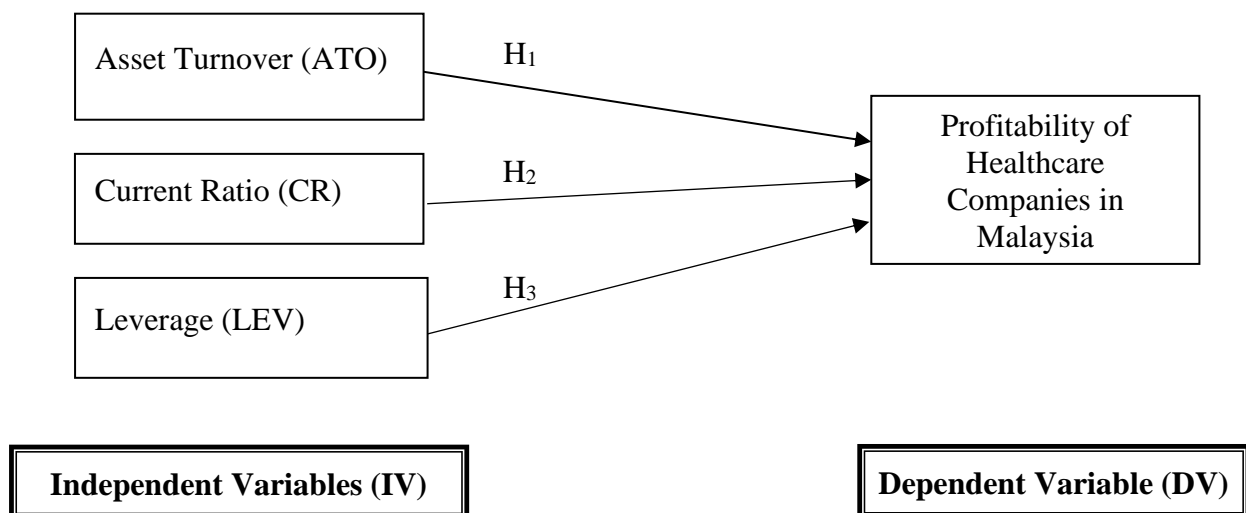
## Research Framework

### Dependent Variable

The dependent variable identifies the fundamental issue that the researcher uncovered for the study, with the researcher's objectives being to recognize, identify, and forecast its variability. Furthermore, the presence of the dependent variable might let the researcher measure and evaluate the dependent variable as well as any independent variables that influenced it. As a result, the profitability of the healthcare companies in Malaysia has been chosen as the dependent variable in this study.

### Independent Variable

The independent variables are the factors that cause the dependent variable to appear. An independent variable is one that has an effect on the dependent variable, either positively or negatively. The independent variable is also known as the cause. In this study, three independent variables were identified. The variables are Asset Turnover (ATO), Current Ratio (CR), and Leverage (LEV).



**Figure 1: Research Framework Showing the Relationship Between Asset Turnover (ATO), Current Ratio (CR), and Leverage (LEV) with Profitability**

### Methodology

This study was carried out to gain a better understanding of the impact of independent variables such as asset turnover (ATO), current ratio (CR), and leverage (LEV) on the profitability performance of the four listed companies operating in Malaysian healthcare companies. The companies selected are Top Glove Corporation Bhd, Duopharma Biotech Bhd, KPJ Healthcare Bhd, and Apex Healthcare Bhd. The selection of the four selected companies is based on their top performance in the industry and also due to data availability. The gross profit margin (GPM) is the dependent variable since it is viewed as a reliable indicator of profitability. The yearly data for all variables within the period between 2010 and 2020 was gathered from the financial statements of the four selected companies, primarily in the Malaysian healthcare industry. All the data required has been collected from the Thomson Reuters Eikon online database and Datastream software. Furthermore, this study used STATA 14 Software to confirm the presence of the elements that contributed to the selected four healthcare companies. This study also used descriptive statistics, panel specification tests (F-Test, BP-LM Test, Hausman Test), diagnostic

tests (multicollinearity, serial correlation, heteroskedasticity), and panel regression to analyse the data.

As a research design, the quantitative method was utilized, and the data collection strategies used in this study included gathering, recording, and analysing secondary data from audited financial statements released in Malaysia based on the required years. The factors contributing to profitability performance included in this study have been chosen after careful consideration of the previous research and data availability. The researchers have employed a panel data technique, which includes cross-sectional data, to ensure that all the essential data has been acquired (Gil-García & Puron-Cid, 2014).

### Regression Model

To confirm the hypotheses of the study, the empirical analysis carried out was based on the regression model as shown in Equation (1).

$$GPM_{it} = \beta_0 + \beta_1 ATO_{it} + \beta_2 CR_{it} + \beta_3 LEV_{it} + \varepsilon_{it} \quad (1)$$

where,

$GPM_{it}$  = Gross Profit Margin

$ATO_{it}$  = Asset Turnover

$CR_{it}$  = Current Ratio

$LEV_{it}$  = Leverage

$B_i$  = Coefficients ( $i = 1,2,3$ )

$\varepsilon$  = Error Term Measurement of Variables

### Measurement of Variables

In terms of variable measurement, the study used profitability as the dependent variable. The three independent variables were asset turnover (ATO), current ratio (CR), and leverage (LEV). Table 1 shows the measurements and variables used in this study.

**Table 1: Variables Measurement**

Variables	Measurement
<i>Dependent Variable:</i>	
Profitability proxy by Gross Profit Margin (GPM)	$[(\text{Revenue} - \text{Cost of Goods Sold}) / \text{Revenue}] \times 100$
<i>Independent Variables:</i>	
Asset Turnover (ATO)	Sales / Total Asset
Current Ratio (CR)	$[\text{Current Assets} / \text{Current Liabilities}] \times 100$
Leverage (LEV)	Total Debt / Shareholder's Equity

### Findings

This part was dedicated to the findings and outcomes of the study regarding the profitability performance of Malaysian healthcare sector. The process of obtaining the results from the findings was followed by an explanation of the hypothesis. The hypothesis, which is based on the objectives, aims to find a significant relationship between the independent variables (asset turnover, current ratio, leverage) that may influence the dependent variable, which is

represented by the company's profitability. Multiple Regression and Pearson Correlation will be used to determine the most significant relationship.

### Descriptive Analysis

Table 2 summarises the descriptive analysis of the dependent and independent variables over the sample period for the four Malaysian healthcare companies selected. The overall sample consists of 40 observations in determining the profitability performance through three variables based on the mean, standard deviation, minimum and maximum values. The highest mean is the current ratio, which is 2.28925, followed by the lowest mean, 0.2942, which is the gross profit margin. As for the standard deviation, both the current ratio and gross profit margin are maintained at the highest and lowest figures, respectively, which are 1.186169 and 0.1008866. Table 2 also indicates the minimum and maximum values where the current ratio has a maximum value of 5.08 while gross profit margin has a minimum value of 0.114.

**Table 2: Descriptive Analysis for four (4) Healthcare Companies in Malaysia**

Variable	Obs	Mean	Standard Deviation	Min	Max
GPM	40	.2942	.1008866	.114	.478
ATO	40	1.003	.3215603	.4	1.53
CR	40	2.28925	1.186169	.56	5.08
LEV	40	1.73	.5659528	1.13	3.16

GPM: Gross Profit Margin, ATO: Asset Turnover, CR: Current Ratio, LEV: Leverage

### Panel Specification Test

In Table 3, the panel specification test is used to determine the best model for this study. The three types of testing measured are the F-Test, the Breusch and Pagan Lagrangian Multiplier Test (BP-LM), and the Hausman Test. Based on the panel specification test, the results suggest that the Fixed Effect (FE) model is the most appropriate model estimator in order to determine the profitability performance of healthcare companies in Malaysia. Firstly, the F-Test is used to determine the relevance of Pooled Ordinary Least Square (POLS) and Fixed Effect (FE). Based on the table, the results show that the p-value of the F-Test is significant because the p-value is less than 0.05, which indicates by 0.0004 and proves that the suitable model for the F-Test is Fixed Effect (FE). Next, the BP-LM test is conducted to test the significance between Pooled Ordinary Least Square (POLS) and Random Effect (RE). The result of the BP-LM test is 1.0000, which is more than 0.05. Thus, it is proved that POLS is the suitable model to choose. Lastly, the Hausman test is performed to determine the significance between POLS and FE. The result indicates 0.0017, which is less than 0.05. Hence, Fixed Effect (FE) appears to be the best model for the Hausman Test.

**Table 3: Panel Specification Test for four (4) Healthcare Companies in Malaysia**

Model	F-Test	BP-LM Test	Hausman Test	Technique
Model 1	0.0004	1.000	0.0017	Choose Fixed Effect (FE)
	Choose FE	Choose POLS	Choose FE	

### Diagnostic Test

The purpose of the diagnostic test is to check if the problem occurred while conducting the study. There are three tests that will be used. The tests are multicollinearity, heteroscedasticity, and serial correlation. Multicollinearity is verified when there is a highly correlated relationship between independent variables. The p-value must be smaller than 10 to avoid the problem of

multicollinearity. As shown in Table 4, the calculated value of the Variance Inflation Factor (VIF) is 3.61, which is less than 10. It means that multicollinearity does not appear to be a severe problem in this study. Next, a Heteroscedasticity test is conducted to check the consistency of the data, and the result of this test is 0.0000, which indicates that the variance of this study is not constant as there is a heteroskedasticity problem. Lastly, the Serial Correlation Test is performed to verify autocorrelation and from this test. The result shows that this study does not have the serial correlation problem as the result of this test is more than 0.05, which is 0.8223. As an outcome of the overall findings, the suggestion for resolving the problem of heteroscedasticity is to use Fixed Effect with the cluster option.

**Table 4: Diagnostic Test for four (4) Healthcare Companies in Malaysia**

Model	Multicollinearity	Heteroscedasticity	Serial Correlation	Strategy To Rectify
Model 1	3.61	0.0000	0.8223	Fixed Effects regression with cluster option
	No Multicollinearity Problem	Heteroskedasticity Problem	No Serial Correlation Problem	

### Correlation Analysis

Table 5 shows the correlation analysis between each of the variables used. The current ratio shows the highest positive correlation, which is 0.3720, followed by leverage and asset turnover, which are 0.0178 and -0.7866, respectively. It can be inferred that all of the variables have a positive link with the company's profitability performance. Furthermore, the current ratio is revealed as the most important factor in assessing a company's profitability level. The greater the amount of liquidity available, the more efficient companies can generate and make a profit.

**Table 5: Correlation Analysis for four (4) Healthcare Companies in Malaysia**

VARIABLES	GPM	ATO	CR	LEV
GPM	1.000			
ATO	-0.7866	1.0000		
CR	0.3720	0.0755	1.0000	
LEV	0.0178	-0.4706	-0.7946	1.0000

### Estimation Result

Table 6 shows the regression result using Fixed Effect regression with cluster option for the three independent variables used on the profitability performance of healthcare companies in Malaysia, which is accompanied by the regression model for the variables. The regression result suggests that the model fitted the data well at a one percent level. The adjusted  $R^2$  indicates that 86.88% of the independent variables used in the model can explain the variation in profitability performance for healthcare companies, while other variables not evaluated can be explained by the remaining 13.12%. Asset turnover (ATO) and current ratio (CR) show statistically significant relationships with gross profit margin, while leverage (LEV) has a negative insignificant relationship with profitability, which the result is -0.0206. This means that for every one unit increase in leverage, there will be a 0.0206 decrease in profitability. ATO has a negative and significant relationship with profitability performance at the 1% level of significance. The profitability will grow by 0.2721 for every one unit decreases in ATO. In addition, CR has a positive and significant relationship with profitability at a one percent level of significance. This suggests that one unit increasing in CR will increase profitability by 0.0294.



$$GPM_{it} = 0.5355 - 0.2721 ATO_{it} + 0.0294 CR_{it} - 0.0206 LEV_{it} + eit$$

**Table 6: Multiple Regression Analysis**

Fixed Effect Regression with Cluster Option	
ATO	-0.2721*** (-6.33)
CR	0.0294*** (2.64)
LEV	-0.0206 (-0.99)
Constant	0.5355*** (6.06)
N	40.0000
r <sup>2</sup>	0.8890
r <sup>2</sup> <sub>a</sub>	0.8688
r <sup>2</sup> <sub>w</sub>	0.2876
r <sup>2</sup> <sub>b</sub>	0.9463
r <sup>2</sup> <sub>o</sub>	0.8086
F	5.94
p	0.0000
chi <sup>2</sup>	59.2394

Notes: t statistics in parentheses \*significant at 10% level, \*\*significant at 5% level\*\*\*significant at 1% level

### Discussion

Based on findings, asset turnover has shown a negative significant relationship with profitability performance. Thus, H<sub>1</sub> is accepted. This finding is also supported by Lim & Rokhim (2020) and Azad et al., (2018). Some of the companies use the assets they own to manage their liquidity position by selling the assets. For that reason, the company was unable to manage their assets efficiently to generate sales. When sales are declining, the profitability performance of the company will be affected. Besides that, the current ratio indicated a positive, significant relationship with profitability and also acted as the major contributor that influenced the company's profitability performance due to the highest correlation value. Several previous studies have discovered a significant and positive relationship between current ratio and profitability (Widyastuti, 2019; Nanda & Panda, 2017; Jolly Cyril & Singla, 2020; Lim & Rokhim, 2020). Thus, H<sub>2</sub> was also accepted in this study. Companies which have performed well in terms of liquidity with the highest value of current ratio have an indication that the company has enough margin of safety. The higher current ratio also gives some advantages to the companies in order to boost their profit because the company will have enough assets to pay for the debt. By reducing their debt, companies are able to gain more profit.

### Conclusion and Recommendation

As a conclusion, the main objective of this study is to determine the factors that influenced company profitability performance in the healthcare sector for the last eleven-year period starting from 2010 to 2020. From the findings, it is suggested that the study had achieved its objective, which is supported by the literature review. Besides, a significant correlation between the dependent and independent variables is seen to be acute and measured. Based on the findings, asset turnover and current ratio have a significant relationship with a company's profitability performance in the healthcare sector. Asset turnover and leverage have a negative

relationship with company profitability, while the current ratio indicates a positive and significant association with a company's profitability performance in the Malaysian healthcare sector.

There are several recommendations that may be implemented in order to produce additional ideas and findings for future researchers who can help the healthcare sector enhance their financial performance and profitability. Future researchers may expand this study by including more variables that are strongly associated with profitability performance, such as company size, capital, and ownership structure. Instead of that, researchers are also encouraged to add external factors such as inflation rate, money supply, and gross domestic product as independent variables instead of internal factors only. Moreover, the researchers might also compare the company's profitability performance before and after the COVID-19 endemic to see the impact on the sustainability of profitability performance in the long term.

Finally, for the improvement of companies in the healthcare sector, the company should clearly identify the factors that lead to company profitability. For example, a healthcare company, such as a hospital, must increase patient satisfaction by providing excellent customer service. Patients who are satisfied with every aspect of their healthcare experience are more likely to return to the hospital that provided them with exceptional care in the future. When a patient is pleased with the hospitality services, they will become a loyal patient, and this can help in terms of increasing sales. Besides that, it is suggested that the company develop a good financial plan that focuses on long-term stability and sustainability. Great financial planning is crucial to companies in the event of an economic downturn. Companies can forecast their financial performance by analysing their existing financial performance and identifying both internal and external financial resources. As a result, the company will have an efficient and stable source of financial resources to face the economic downturn, preventing the company from being forced to close and, at the same time, boosting their revenue to generate more profit.

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