

Financial Performance Analysis of Transportation Industry Pre and During Covid 19 Pandemic: A Profitability Approach

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ABSTRACT

The Covid-19 pandemic has turned 2020 into a worldwide 'nightmare' including in Malaysia. Most sectors were unable to operate during the pandemic covid, especially the transportation industry. As a result, several companies had to shut down their businesses and stop operating as they failed to maintain their profits and suffered losses. This study aims to analyze financial performance through a profitability approach. To achieve the objective of the study, there are four (4) transportation companies listed in Bursa Malaysia were selected, and the data gathered from the year 2011 until 2020. The profitability level of the firms was evaluated using four different variables which are asset turnover, sales growth, current ratio, and leverage. To confirm the level of profitability performance, the study employed panel data analysis using STATA 14 software. The findings showed that the sales growth and current ratio have a positive relationship with profitability while asset turnover and leverage have a negative relationship with profitability. The study also found that asset turnover and current ratio have a statistically significant relationship with profitability while sales growth and leverage do not have a statistically significant relationship with profitability. Based on the results, it helps the transportation industry to boost its financial performance and benefits by strengthening the strategic plan of the company. Therefore, it can motivate the transportation industry to become more relevant in the future and sustain financial performance in the long-term period.

Keywords: Asset Turnover, Current Ratio, Leverage, Profitability, Sales Growth

INTRODUCTION

In recent years, most companies want to succeed in managing their organization by focusing on internal and external factors. According to Hong and Wang (2021), the internal factor is related to the inlying forces and present condition that affects the operation of the company. Meanwhile, external factor refers to the exogenous forces that might impact the performance of the organization. To fulfill the company's goals, each firm should emphasize several indicators to measure its financial performance in the organization. Financial indicators are commonly used to monitor the soundness, stability, and performance of various sectors of the economy. Besides, there are five (5) categories of financial ratios

that mostly help the firms to operate their business such as liquidity ratio, activity ratio, debt ratio, market ratio, and profitability ratio. Most firms are focusing on profitability performance as they are always hoping to gain profit and fully utilize their operation.

In other words, profitability becomes one of the main concerns of any firm and its manager. Profitability is commonly defined as a business's ability to produce a return on an investment based on its resources in comparison with an alternative investment. Based on Nanda and Panda (2018), a firm requires long-term survival only through maximization of its profit and looking further for its sustainability. Understanding profitability factors would require beyond conceptual, and it is the foundation of firm strategic planning and direction. It will be even more obvious during the time of crisis, a firm's attempts to preserve its financial status by undertaking measures without proper mitigation planning (Lim & Rokhim, 2020).

Over the years, companies all over want to be successful in their business. Most companies evaluate their stability by looking at their financial performance (Alarussi & Alhaderi, 2018). Besides, the financial performance identifies how well a company generates revenues and manages its assets, liabilities, and the financial interests of its stakeholders. The balance sheet is a snapshot of the financial balances of an organization. It provides an overview of how well the company manages its assets and liabilities. Generally, the financial statements of a company are used to define the financial performance of a firm.

Profitability is crucial for business because it affects the company whether it can secure financing from a bank, attract investors to fund its operations, and grow its business. Companies cannot survive in business without turning a profit (Rahayu & Saifi, 2019). A business owner must understand the importance of profitability in business management and develop strategies that give the company the best opportunity to gain profit. It will be a major challenge for a company to gain stability in the business, especially during the Covid-19 pandemic. Due to this reason, this study tends to explore how to manage the financial operations of the business to be more efficient and sustain greater financial performance in the future. To achieve the goal, the firm needs to have a better understanding of specific internal and external factors (Alarussi & Alhaderi, 2018).

In general, this study aims to analyze the relationship between the factors affecting the financial performance of a company through the profitability approach that is measured by asset turnover, sales growth, current ratio, and leverage. Therefore, the objectives of this research are:

1. To identify the most significant independent variable that influences the dependent variable of this profitability.
2. To examine and test any positive or negative relationship between independent variables (Asset Turnover, Sales Growth, Current Ratio, Leverage) and dependent variables (Profitability that is measured by gross margin).

LITERATURE REVIEW

Profitability

In general, profitability can be defined as the earnings of a company that are generated from revenue after deducting all expenses incurred during a given period (Alarussi & Alhaderi, 2018). According to Rahayu & Saifi, (2019) profitability is one of the determining factors in company leverage. Weston and Brigham (1994) documented that profitability can be considered as one of the factors that might enhance the capital structure and positively affect the capital structure. A similar study by Ramzy et al., (2017) stated that profitability positively influences the capital structure, and improves the corporate capital structure. It has been proven that a business will not survive if it is not profitable, and

a highly profitable business has the ability to reward its owners with high returns on their investment (Alarussi & Alhaderi, 2018). Thus, companies that want to achieve stable profitability need to manage their debt effectively and efficiently. Several indicators commonly used to measure profitability variables are such as Return on Investment (ROI), Return on Equity (ROE), Net Profit Margin (NPM), and Gross Profit Margin (GPM).

Asset Turnover

There is no doubt that the asset turnover ratio is the cornerstone to achieving higher profits. Asset Turnover (ATO) as a sign of an indicator's productivity, is measured by dividing revenue over total average assets. Another study done by Warrad and Al Omari (2015) investigated that the total asset turnover ratio has a significant impact on the ROA of firms in the Jordanian industrial sector from 2008 until 2011. Meanwhile, Innocent et al., (2013) pertained that there is an insignificant relationship between profitability and total assets turnover ratio. Fairfield and Yohn (2001) studied the proxy of OPM and the total asset turnover ratio. Correlation is statistically significant but negatively correlated. Alarussi and Alhaderi (2018) found that company efficiency (assets turnover ratio) has a strong positive relationship with profitability. Since the previous studies have various and inconsistent results, this study will examine the relationship between company efficiency and with total asset turnover ratio as a proxy for profitability. Therefore, the present study proposes the following hypothesis (H_1):

H_1 : There is a significant relationship between asset turnover and the profitability of the company.

Sales Growth

It is strongly believed that firm sales growth and profit rates are related to each other as discussed in a previous study (Coad, 2009). As mentioned by Coad (2007), it was found that firms with more profitability will continue to grow whilst firms with less profitability will lose their market share. Goddard et al. (2005) carried out the first empirical study about the dynamic relationship between the growth of a firm and profitability. The result demonstrated that the current profit rate acts as a positive aspect behind the rate of escalation of a given corporate size in the subsequent phase, and the current growth rate for a given corporate size negatively affects the profit rate in the subsequent phase in a statistical and significant manner. Furthermore, Lee (2014) also found that a firm's growth affects profitability positively but not the other way around and it is concluded that this only occurs in the case of old firms, not young ones. Meanwhile, Jang and Park (2011) used sales growth as a firm's growth proxy in the restaurant industry and found that the prior year's profitability had a positive impact on the growth rate of the current year, but the prior year's growth rates have a negative impact on current year's profitability. Thus, this study focuses on sales growth as the other proxy to determine the factors that affect the profitability of a firm. Thus, the present study proposes the following second hypothesis (H_2):

H_2 : There is a significant relationship between sales growth and the profitability of the company.

Liquidity (Current Ratio)

Liquidity can be defined as the ability of a firm to convert an asset to cash quickly and it is important to run the business properly (Alarussi & Alhaderi, 2018). Liquidity is measured by several ratios such as current ratio, quick ratio, and cash ratio. A previous study done by Lartey et al. (2013) found that there is a positive relationship between liquidity and profitability. Likewise, Mohd Zaid et al. (2014) investigated the factors affecting the profitability of construction companies in Malaysia. They found that liquidity and size have a significant and positive relationship with profitability. Besides, Eljelly (2004) did a study on companies listed on the stock market in Saudi Arabia and he examined

the relationship between profitability and liquidity measured by the current ratio and cash conversion cycle. He found there is a negative relationship between profitability and liquidity indicators. Alarussi and Alhaderi (2018) studied that liquidity (current ratio) has no significant relationship based on the period from 2012-2014 of 120 listed companies in Bursa Malaysia. Despite the results of the previous studies which were inconsistent, this study uses the current ratio as the indicator to find the relationship between liquidity and profitability. Therefore, the present study proposes the following hypotheses:

H₃: There is a significant relationship between liquidity and profitability of the company

Leverage

Leverage is another component of the capital structure of a company that affects the profitability of a firm. Pecking order theory and trade-off theory explain the relationship between leverage and profitability in two different dimensions. Additionally, Eriotis et al. (2011) investigated the relationship between debt-to-equity ratio and profitability. They concluded that financing investments using retained profits are more profitable than using borrowed funds. Another study conducted by Boadi et al. (2013) examined the factors affecting profitability for the insurance companies in Ghana and revealed a positive and significant relationship between leverage, liquidity, and profitability. A similar study by Charumathi (2012) examined the determinants of profitability for Indian life insurance companies. He found that leverage has a negative and significant impact on profitability. The finding by Al-Jafari and Samman (2015) empirically confirmed the presence of an inverse relationship between the leverage ratio and profitability. Based on the previous studies, it can be concluded that there are many proxies to measure profitability and it produced inconsistent results among the researchers. Despite all that, this study uses debt to equity ratio as a proxy to find out the relationship between leverage and profitability. Therefore, the present study proposes the following hypotheses:

H₄: There is a significant relationship between leverage and the profitability of the company.

METHODOLOGY

Research Framework

Figure 1 shows the research framework used to examine the factors influencing profitability (asset turnover, sales growth, current ratio, and leverage). Based on the framework, four (4) hypotheses have been proposed and they would be examined in the study.

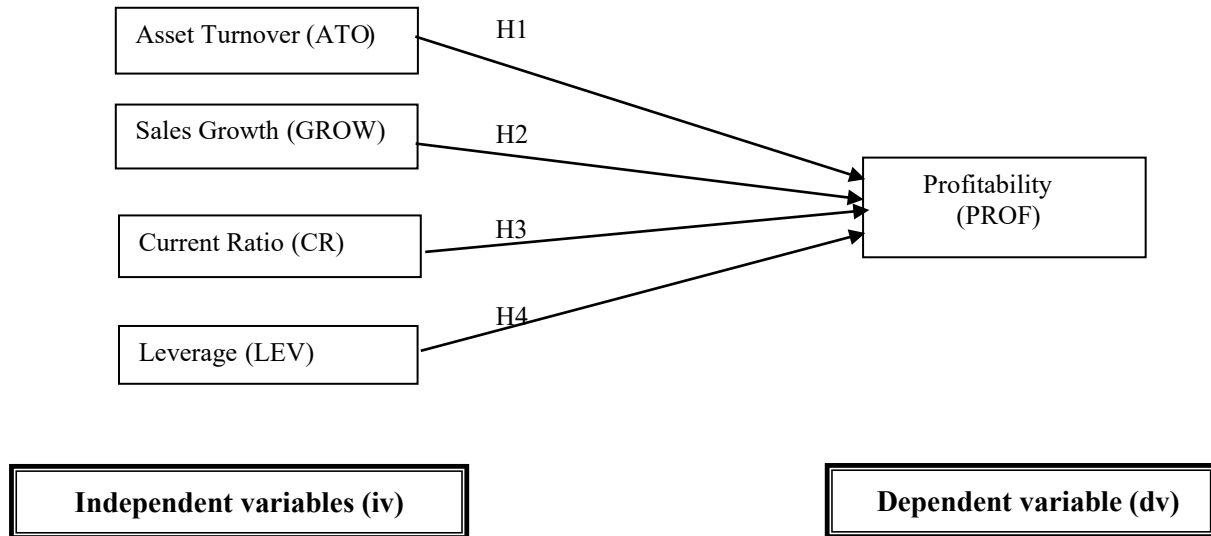


Figure 1: Framework shows the relationship between profitability, asset turnover, sales growth, current ratio, and leverage

Regression Model

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

$$PROF_{it} = \beta_0 + \beta_1 ATO_{it} + \beta_2 GROW_{it} + \beta_3 CR_{it} + \beta_4 LEV_{it} + \varepsilon_{it} \quad (1)$$

where,

$PROF_{it}$	= Profitability
ATO_{it}	= Asset Turnover
$GROW_{it}$	= Sales Growth
CR_{it}	= Current Ratio
LEV_{it}	= Leverage
β_i	= Coefficients ($i = 1,2,3,4$)
ε	= Error Term

Measurement Of Variables

As for the measurement of variables, the study employed gross margin as a proxy of profitability, which was the dependent variable. The four independent variables were asset turnover, sales growth, current ratio, and leverage. Table 1 displays the measurement and variables for the study.

Table 1: Variables and their measurement

Variables	Measurement
<i>Dependent variable:</i>	
Profitability	Gross Margin (GPM) $= (\text{Total Revenue} - \text{Cost of Goods Sold}) / \text{Total Revenue}$
<i>Independent variables:</i>	
Asset Turnover	Revenue / Total Average Asset
Sales Growth	$(\text{Present Net Sales} - \text{Past Net Sales}) / \text{Past Net Sales}$
Current Ratio	Current Asset / Current Liabilities
Leverage	Debt to Equity Ratio (DTER) $= \text{Total Debt} / \text{Shareholder's Equity}$

Data And Sampling Method

This study has collected the data from Thomson Reuters Eikon online database which focuses on the transportation industry. Furthermore, this study employed STATA 14 Software to confirm the presence of the factors that contributed to the profitability of four transportation companies and their performance within a ten-year period (2011-2020). The study has conducted a panel data analysis, which included the following test: descriptive statistics, panel specification test (*F*-Test, BP-LM Test, Hausman Test), diagnostic test (multicollinearity, serial correlation, heteroskedasticity), and panel regression.

The sample of the study comprised four (4) selected transportation companies in Malaysia which were Bintulu Port Holdings Berhad, Harbour-Link Group Berhad, EA Technique (M) Berhad, and Suria Capital Holdings Berhad. The selected transportation companies have been chosen as the sample for this study because they showed good profitability performance trends and were listed as top-ranked in the transportation industry. Specifically, the study is concerned with the analysis of financial performance through the profitability approach.

RESULTS AND DISCUSSION

The results of this study were obtained from different modes of analysis carried out, namely the descriptive analysis to determine minimum, maximum, mean, and standard deviation, the diagnostic test, the panel specification test to decide the final model, and the panel regression analysis.

Descriptive Analysis

Table 2 discussed the descriptive analysis of four (4) transportation companies in Malaysia. The table shows that there is 40 sample observation used in this sector. The highest mean is LEV which is 2.3765 followed by CR which indicates 2.09475. In addition, the mean value for PROF and ATO is 0.347 and 0.462 respectively. The lowest mean is GROW which indicates 0.009 as compared to other variables. For standard deviation, CR shows the highest figure which is 1.240754 followed by LEV which indicates 1.035113. It means that CR has a greater spread of data from the mean compared with others. In addition, the lowest standard deviation is GROW which shows only 0.2095025. Therefore, it means GROW has a lower spread of data from the mean. This is followed by PROF and ATO which indicate 0.2516836 and 0.3129365 respectively. For minimum and maximum values, LEV shows the higher figure which is 1.24 and 5.9 respectively. The lowest maximum value is GROW which shows only 0.6 compared to others and the lowest minimum value is also GROW which shows only -0.59. Apart from that, PROF shows -0.34 for minimum value and 0.86 for maximum value. Other than that, ATO shows 0 and 1.07 for minimum and maximum values respectively. The minimum value for CR is 0.09 and the maximum value is 4.43.

Table 2: Descriptive analysis for four (4) transportation companies in Malaysia

Variables	Obs	Mean	Standard Deviation	Min	Max
PROFITABILITY	40	.347	.2516836	-.34	.86
ATO	40	.462	.3129365	0	1.07
GROW	40	.00	.2095025	-.59	.6
CR	40	2.09475	1.240754	.09	4.43
LEV	40	2.3765	1.035113	1.24	5.9

Panel Specification Test

Table 3: Panel specification test for four (4) transportation companies in Malaysia

Model	F-Test	BP-LM Test	Hausman Test	Technique
Model 1	0.0056	1.000	0.0000	Fixed Effect (FE)
	Choose FE	Choose POLS	Choose FE	

Panel Specification Tests were used to decide the most appropriate model to be used in this study. There were three (3) tests conducted namely F-Test, Breusch and Pagan Lagrangian Multiplier Test (BP-LM), and Hausman Test. **Table 3** shows that the p-value of the F-test is significant which is p-value is less than 0.05 which indicates 0.0056. It indicates that the Fixed Effect model is more appropriate than POLS. Next, BP-LM Test shows the p-value is more than 0.05 which is 1.0000. This shows that the Pooled Ordinary Least Square (POLS) model is more appropriate than the Random Effect model. Besides, Hausman Test was conducted to compare the Fixed Effect model and the Random Effect model. Based on the results, the p-value is less than 0.05 which is 0.0000. Therefore, the most appropriate model is the Fixed Effect (FE) model. Based on the overall test, the results suggest that the Fixed Effect model is the most appropriate model estimator for profitability and the company's financial performance.

Diagnostic Test

Diagnostic Test was conducted to check the problem that exists in this study by using three different tests. The tests stated are Multicollinearity, Heteroskedasticity, and Serial Correlation. Multicollinearity was conducted to examine the correlated relationship between independent variables. Based on **Table 4**, the calculated mean value of Variance Inflation Factors (VIF) is 1.67 which shows a value of less than 10. It means that multicollinearity does not appear to be a severe problem in this study. Next is Heteroskedasticity, which was conducted to check the consistency of data. The results show that the p-value is less than 0.05 which is 0.0000. This means that the variances are not constant or there is a heteroskedasticity problem. Lastly, Serial Correlation was conducted to verify the autocorrelation problem. The result shows that the p-value is less than 0.05 which is 0.0103. It means that there is a serial correlation problem exists in this study. To rectify the problem that exists in heteroskedasticity and serial correlation, it is suggested to conduct Random Effects GLS regression with the cluster option.

Table 4: Diagnostic test for five (5) hotels in Malaysia

Model	Multicollinearity	Heteroscedasticity	Serial Correlation	Strategy to rectify
Model 1	1.67	0.0000	0.0103	Random Effect GLS regression with cluster option

Estimation Result

Regression Model

$$PROFit = 0.2299 - 0.2840 ATOit + 0.0932 GROWit + 0.0999 CRit + 0.0160 LEVit + eit$$

Table 5 shows the regression result using Random-effects GLS regression with a cluster option for four independent variables toward profitability. The results indicated that the adjusted R² is 44.65%. The results of the regression also suggest that ATO and CR have a statistically significant relationship with PRO. However, the results of the regression show that GROW and LEV have no significant relationship with PROF. From these results, it is apparent that any increases in ATO, GROW, CR, and LEV will increase the PROF. In addition to that, CR seems to have the greatest influence on the level of PROF, which is explained by the highest z-statistics of 1.65.

Table 5: Regression Analysis

	Random Effects GLS regression with cluster option
ATO	-0.2840**
	(-2.18)
GROW	0.0932
	(0.52)
CR	0.0999*
	(1.65)
LEV	0.0160
	(0.18)
Constant	0.2299
	(0.78)
N	40.0000

r2	
r2_a	
r2_w	0.0579
r2_b	0.6865
r2_o	0.4465
F	
P	
chi2	

(Notes: *t* statistics in parentheses; *significant at 10% level, **significant at 5% level, ***significant at 1% level)

Discussion

Based on the empirical findings, only the Current Ratio shows a positive and significant relationship with the profitability of a company. This result is in line with Boadi et al. (2013) which shows the higher the current ratio, the more profit the companies earned. This can be proven that the current ratio can be considered as the main indicator for the investors to see how the ability of the company in maximizing the current assets to satisfy its current debt. Thus, it can generate more profits and sustain greater financial performance in the future. Besides, ATO also shows a negative and significant relationship with profitability. The lower ATO, the higher profit can be gained for the firms. This is also supported by Israa, Kamel, and Alashi (2021) who state that the selected transportation companies used minimum assets to generate sales since the nature of the business itself offered services rather than sales of a product.

Nevertheless, the results of this study show that GROW has no significant relationship with PROF. This result shows consistency with the findings of other studies (Ghasemi et al., 2017; Al-Jafari & Al Samman, 2015). The findings indicate that growth rates are very unpredictable and the link between growth and profitability is not always evident. Hence, transportation companies need to maintain an appropriate level of profits since profits can lead to growth (Jang & Park, 2011). Meanwhile, LEV also shows no significant relationship. This finding is in line with the study by Pachori and Totala (2012) which indicates that there is no significant influence of financial leverage which is associated with profitability since other non-quantitative variables, including recession, car industry saturation, competition, and government regulation, may cancel the influence of financial leverage on profitability.

CONCLUSION

In summary, the purpose of this study is to analyze the financial performance of a company through the profitability approach for four (4) selected companies under the same sector which is transportation and services (transportation industry). The data collection was from 2011 until 2020 within a ten (10) year period and is considered the covid 19 crisis period. The ten (10) years period has been chosen due to the objective of the study is to see the effect of prior and during the covid 19 pandemic on the firm's profitability. Based on the results, ATO and CR are the most influenced indicators that contributed to determining the level of profitability for transportation companies. Meanwhile, there are no significant factors between LEV and GROW towards PROF because growth rates are unpredictable with the changes in the other non-quantitative variables such as recession, competition, and government regulation. Last but not least, future researchers may extend this model with more variables which closely related to the profitability performance such as structure ownership, size of firms, and debt management, and test the companies from different sectors such as the food industry and others. In addition, the study also can be a view for the post covid 19 crisis and the period can be lengthened to see the impact in the long-term period. Finally, researchers also may compare data from other industries to see how financial leverage affects financial success.

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AUTHORS' CONTRIBUTION

The experiment and data preparation was carried out by Abu Hassan, M. F. A. Besides that, Abdull Rahman, N. L. was in charge of writing the manuscript. Badri Shah, N. S. contributed constructive feedback on the analysis and paper.

CONFLICT OF INTEREST DECLARATION

We guarantee that the paper is the original work of the authors and co-authors. This study has never been published before, in full or in part. We confirm that all authors made substantial contributions to the study, authenticity, and legitimacy of the data, as well as their interpretation for submission to Jurnal Intelek.

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