The Impact of Covid-19 on Financial Performance: Evidence from Logistics Firms in ASEAN

Niki Moktika Dwi Megawati[1], Ita Wjiayanti[2], Adi Irawan Setiyanto[3]

[1, 2, 3] Departement of Business Management, Politeknik Negeri Batam, Jl. Ahmad Yani Batam Kota, Kota Batam, Batam 29461, Indonesia
nikimoktika00@gmail.com

Abstract. The objective of this study is to examine the correlation between the financial performance of logistics companies operating in ASEAN countries and the impact of the global pandemic caused by the Sars-CoV-2 virus. In order to analyze the hypotheses formulated in this study, financial data pertaining to logistics companies in ASEAN countries was retrieved from the Osiris Database. To ascertain the impact of the pandemic on financial performance, annual financial data was collected from 2019, prior to the pandemic, and 2021, during the pandemic. The study sample comprised a total of 270 logistics companies. Purposive sampling was employed as the sampling technique. This study employs a descriptive research design with a quantitative approach, utilizing Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS) as proxies for financial performance. The results demonstrated that the impact of the pandemic on financial performance was not statistically significant. The conclusion is reinforced by the probability values obtained from the T-test, which are as follows: 0.6936 for ROA, 0.9502 for ROE, and 0.3093 for EPS. Additionally, the coefficient value indicated that the pandemic did not exert a positive influence on financial performance, with values of 0.4572 for ROA, 0.008178 for ROE, and 0.069629 for EPS.

Keywords: Quantitative, Financial Performance, Covid-19, Logistics Firms, ASEAN First Section

1 Introduction

Logistics has an important role in business processes because of its activities that cannot be separated from the movement of goods starting from the point of origin to the final consumer. Along with the times with increasingly complex problems, the role of logistics has also evolved, not only supporting key functions such as distribution but it has expanded to cover warehousing, transportation, purchasing, inventory management, packaging and customer service (Chapman et al., 2003). The integrated, effective and efficient logistics system is known as the concept of Supply Chain Management (SCM). SCM is a group of activities involving certain entities and facilities in the process of distributing raw materials to finished goods to the final hands of consumers (Turban Efraim, 2004).

F. Arif Rahman et al. (eds.), *Proceedings of the Sixth International Conference on Applied Economics and Social Science (ICAESS 2024)*, Advances in Economics, Business and Management Research 312,
https://doi.org/10.2991/978-94-6463-640-6_17

The global spread of the Covid-19 virus, has resulted in a severe outbreak that has affected people across the globe. Based on data from the World Health Organization (WHO) as of December 2023, the world's COVID positive confirmed cases have reached 737 million cases spread across 232 countries. In an effort to reduce the rate of spread of the virus, 160 out of 184 countries impose lockdowns, physical distancing, to travel bans or restrictions (Yasuyuki TODO et al., 2021). Based on the calculations of the International Monetary Fund (IMF), the level of global economic losses reaches US$12.5 trillion predicted until 2024 (IMF, 2020).

The Association of Southeast Asian Nations (ASEAN) is an economic and geopolitical organization of Southeast Asian states consisting of Indonesia, Malaysia, Singapore, Thailand, the Philippines, Brunei, Vietnam, Laos, Myanmar, Cambodia and Timor-Leste agreed to join and integrate with each other to encourage trade flows among ASEAN member countries, improve international trade logistics, reduce aggregate costs, and encourage increased investment flows in the region (ASEAN Secretariat and the World Bank, 2015). This makes ASEAN became the third strongest economy in Asia and the fifth strongest in the world (The ASEAN Secretariat, 2021).

The logistics sector is an important pawn in ASEAN Gross Domestic Product (GDP) and its sector absorbs more than 17 million workers (Mordor Intelligence). In 2019, before the Covid-19 pandemic, ASEAN had contributed a total GDP of 4.7% of world GDP, while in 2020, during the Covid-19 pandemic, ASEAN GDP contracted by -3.3% of world GDP, which has become the lowest ASEAN GDP in the last 10 years (The ASEAN Secretariat, 2023). Based on ASEAN Key Figures 2023, the logistics sector contributes almost 24% of the total service sector GDP (The ASEAN Secretariat, 2023).

The pandemic had a significant and far-reaching impact on the financial performances, which has caused a decline in financial performance in businesses across various sector, making it difficult for companies to generate profits (Sunitha Devi et al., 2020). Quoted from Economic Research Institute for ASEAN and East Asia (ERIA), more than 1800 local and foreign transportation companies in ASEAN in 2021 have experienced a 44% drop of demand. The supply chain connectivity of ASEAN's external partner countries also impacted by this pandemic. Many companies faced challenges such as economic contraction which leads to decreased production efficiency, restrictions of employee travel activities, increased transportation costs, and difficult to arrange delivery which causes obstruction of export and import activities (Japan External Trade Organization, 2020). This makes the company's performance and profitability decrease, and this decline in revenue has forced the company to carry out mass layoffs (Listiarti et al., 2022). The Covid-19 impact was pronounced for companies with low Cumulative abnormal return (CAR) and weaker financial performance, and firm with strong financial were generally more resilient during crisis (Xiong et al., 2020). Covid-19 also has significantly disrupted consumption behavior to supply chain obstacles (Sheth, 2020).

The profitability ratio is an essential tool for measuring a company's operational performance and is widely utilized by investors. One of the profitability ratios is the

Return on Equity (ROE), Return on Assets (ROA), Earnings per Share (EPS). ROE is used to see how much profit the company generates for the owner based on the amount of share ownership in the company (Brooks R., 2016). Brigham & Houston (2019) mention that ROA is used to measure how far the company generates profits through the utilization of its assets. EPS is used as a tool to find out how much profit is generated for each outstanding share.

This study replicates previous research by (Atayah et al.,2021) in a quantitative study analyzing the effect of Covid-19 on the financial performance of logistics companies in G-20 countries. In this study, the sample to be used is logistics sector companies in ASEAN recorded in the Osiris Database, it is known that ASEAN has the fifth strongest economy in the world, so this can make ASEAN a comparable sample to previous research. 2019 is the period used to determination before Covid-19 and 2021 for determination during the Covid-19 pandemic, the author did not take samples in 2020 due to avoiding the pseudo effect. In addition, the logistics sector in ASEAN contributed nearly 24% of the total GDP of the ASEAN service sector, this makes the logistics sector increasingly complex to become one of the main pawns of GDP in ASEAN, it is interesting to further examine how the effect of Covid-19 on the financial performance of logistics companies in ASEAN.

2 Literature Review

2.1 Signalling Theory

Signalling theory was first conceived by Spence, M. (1973), Spence stated that companies can reduce asymmetric information to increase firm value (Spence, 1973), and then developed by Ross, S.A. (1977), Ross stated that the dissemination of accurate and comprehensive information to potential investors is a crucial aspect of enhancing the value of a company's shares. (Ross, 1977), the information captured by investors is considered as a signal. Signalling theory is used to examine the relationship between environmental disclosure, financial performance, and firm value. The findings indicate that there is a negative correlation between financial performance and environmental disclosure, this gives a signal that environmental information has not become an important assessment for investors (Rinsman & Prasetyo, 2020).

2.2 Profitability Ratio

Financial ratios are the relationship between different accounts in the financial statements, financial statement analysis is a tool used to evaluate a company's financial performance (Savitri & Hidayati, 2022). A profitability ratio is one of the ratios utilized to assess the company's profitability. In the Intermediate Accounting IFRS Edition book, Profitability is a measure of a company's success or failure over a specified period of time (Kieso et al., 2014). In the book written by Brooks R. (2016), Pearson, profitability is employed as a metric to evaluate a company's efficacy in converting

assets into profits. It is thus inferred that profitability serves as an instrument to assess organizational performance.

Return on Asset (ROA)

Brigham & Joel (2019) states that ROA is used to measure how far the company makes a profit through the utilization of its assets (Brigham & Houston, 2019). ROA represents a ratio between net income tax and total assets, A higher ROA indicates that the company is effectively managing its assets to generate profits (Winarno, 2019).

Return on Equity (ROE)

ROE is utilized to see how much profit is generated from investments made by capital owners or shareholders (Brooks R., 2016). The investor can measure the return on capital through ROE (Listiarti et al., 2022). The higher the ROE, the better (Winarno, 2019).

Earnings per Share (EPS)

EPS is used as a ratio to determine how much net income is generated for each outstanding share (Almira & Wiagustini, 2020). This ratio is utilized by investors for the purpose of comparison, with the intention of identifying the most appropriate entity for investment in a company operating within the same sector.

Profit is one of the goals of creating a company, the company's performance describes how much output the company produces, therefore many companies are competing to achieve this goal. However, the pandemic has made it difficult for companies to generate profits. This aligns with the findings of Nguyen et al. (2022), which investigated how the Covid-19 outbreak impacted the financial performance of Vietnamese logistics companies. The study concluded that the pandemic had a detrimental effect on Return on Assets (Nguyen, et. al., 2022). In accordance with the research findings presented by Listiarti, A. A., et al. (2022), an examination of the financial performance of 15 logistics and transportation companies listed on the Indonesia Stock Exchange reveals that the air transportation sector is the most severely affected (Listiarti et al., 2022). The research conducted by Devi, S. et. al (2020) has demonstrated that the global pandemic had a negative effect on ROA in numerous sectors of the economy. These include the property, real estate, building construction, finance, trade, services, and investment sectors, as observed in companies listed on the Indonesia Stock Exchange. (Devi, S. et. al., 2020).

The construction sector has been significantly affected by the financial performance of construction companies in Indonesia (Daryanto et al., 2021). Furthermore, a positive impact on profitability has been observed in the poultry industry in Indonesia (Gaisani et al., 2021). Moreover, the impact of the pandemic on the profitability of agricultural companies has been found to be insignificant, with only a single company

exhibiting a notable decline (Darwaman et al., n.d., 2021). The global pandemic has had a detrimental impact on the profitability of public banks in Indonesia, as evidenced by a negative effect on the ROA (Fauzi et al., 2022). In a separate study, Emeka, O., et al. (2021) investigated the impact of the pandemic on the profitability of companies listed on the Nigerian stock exchange. Their findings indicated that the pandemic had a significant positive effect on the company's ROE (Emeka et al., 2021, 1341). The findings of Putra, F., et al (2023) indicate that the impact of the pandemic on profitability is negative for ROA and ROE, whereas prior to the pandemic, the opposite was observed (Putra et al., 2023, 173).

The global pandemic caused by the COVID-19 virus has had a significant impact on all sectors of the economy. In addition to affecting human lives, the pandemic has also had a considerable impact on the financial activities of companies. The effects of the COIVD-19 pandemic on various industries have been the subject of numerous research studies from a range of perspectives. However, there remains a need to explore the impact of the pandemic on the financial performance of logistics companies in the ASEAN region. It is crucial to investigate the financial performance of logistics companies during the pandemic. This investigation should take into account the fact that the financial stability of logistics companies is of great significance in order to meet market demand and to fulfill economic scope.

In light of the above, this study aims to measure the financial performance of logistics companies during the pandemic. In this context, the hypothesis that will be proposed for investigation is as follows:
H1: The financial performance of logistics companies in the ASEAN region is negatively impacted by the global pandemic of the COVID-19.
The proposed research model is illustrated in the following figure.:

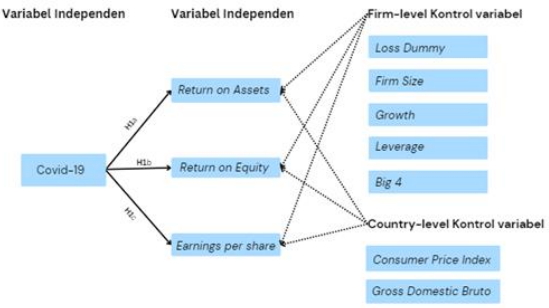

Fig. 1. Research model. (Source: data processed by researchers, 2024)

2.3 Research Methodology

This study employs a quantitative approach to ascertain the influence of the financial performance of logistics companies in the ASEAN region, proxied by ROA, ROE and

EPS, in the context of the impact of the COVID-19. The analysis incorporates the CPIand the GDP as country-specific control variables, in addition to the loss dummy, firm size, growth, leverage, and the 'Big 4' as company-specific control variables. The financial data was obtained from the financial statements of logistics companies recorded in the Osiris Database in 2019 and 2021. In order to test the hypotheses and achieve the research objectives, an examination is required of the impact of the Coronavirus pandemic on the financial performance of the company.

Table 1. Operational Variables and Measurement

Variables	Indicator
Dependent variable	
ROA	Net Profit After Tax / Total Assets (Atayah et al., 2021) (Putra et al., 2023)
ROE	Net Profit After Tax/Total Equity (Atayah et al., 2021) (Putra et al., 2023)
EPS	Net income / Average shares outstanding (Atayah et al., 2021) (Putra et al., 2023)
Independent variable	
Covid	"1" is the period during Covid, and "0" is the period before Covid (Atayah et al., 2021) (Najaf et al., 2021) (Gaisani et al., 2021)
Control Variable	
Company-level control variable	
Loss Dummy	(net profit < 0) where “1” for companies that experience losses, “0” for companies that do not experience losses. (Atayah et al., 2021)
Firm Size	Total assets (Atayah et al., 2021) (Gaisani et al., 2021) (Ali et al., 2020)
Growth	Total sales using US$ sales denominations (Atayah et al., 2021)
Leverage	Total debt/total equity (Atayah et al., 2021) (Ali et al., 2020)
Big 4	The variable takes on the value of "1" if the company is audited, and the value of "0" if the company is not audited by one of the Big 4 Auditors. (Atayah et al., 2021)

Country-level control variables	
Consumer Price Index (CPI)	The annual consumer price index is the inflation rate for each country reported by the World Economic Forum (Atayah et al., 2021).
Gross Domestic Bruto (GDP)	The Annual rate of gross domestic product reported by the World Bank (Atayah et al., 2021)

Source: data processed by researchers, 2024

Data processing in this research is using descriptive statistical analysis. Selection of regression using panel data regression, data hypothesis testing using partial tests. After testing, will be known how Covid-19 affects the company's financial performance.

2.4 Research Results and Discussion

In accordance with the predetermined sample specifications, the resulting data is presented below:

Table 2. Research sample

Company Indicator	Results
The Osiris database lists the logistics sector companies of ASEAN in the year 2019.	278
The Osiris database lists the logistics sector companies of ASEAN in the year 2021.	277
Companies that publish complete financial reports using the US$ currency for the period 2019 and 2021	135
The companies that are selected to be included in the annual sample	135

Source: Data processed by researchers, 2024

ASEAN member countries are described in the table below

Table 3. Distribution of data by country and year

Country	Pre-Covid 2019	During Covid-19 2021	Avg.
Indonesia	31	31	31
Kamboja	2	2	2
Malaysia	24	24	24
Philippines	8	8	8
Singapore	30	30	30
Thailand	23	23	23
Vietnam	17	17	17

Total	135	135	270

Source: Data processed by researchers, 2024

A database search in Osiris revealed that seven countries in the ASEAN group have public companies in the logistics sector with complete financial reports. However, there are also companies in the logistics sector from Myanmar, though they do not publish complete financial data. Furthermore, there are no public logistics sector companies from Brunei, Laos, or Timor Leste listed in the Osiris database.

Statistics Descriptive

The objective of descriptive statistics is to provide an accurate and concise representation of the data, which can be readily interpreted. The following section presents the values for each variable.

Table 4. Statistics Descriptive

Variable	Obs.	Mean	Min.	Max.	Std. Dev
ROA	270	1.846	-63.020	46.480	11.562
ROE	270	0.034	-8.626	9.136	0.961
EPS	270	0.042	-2.318	6.199	0.421
Covid-19	270	0.500	0.000	1.000	0.501
Loss Dummy	270	0.307	0.000	1.000	0.462
Firm Size	270	1367937	2572	35962022	3857347
Growth	270	420267	325	11213519	1121362
Leverage	270	0.225	0.000	3.734	0.274
Big4	270	0.444	0.000	1.000	0.498
GDP	270	0.042	0.013	0.089	0.024
CPI	270	0.023	0.008	0.052	0.013

Source: The data were processed using the EViews 12 software.

This study is based on a sample size of 270 research samples taken from the years 2019 and 2021. The dependent variable is comprised of three financial indicators: ROA, ROE, and EPS. The highest value of ROA for Regional Container Lines Public Company Limited, a company listed in Thailand in 2021, is 46.48000. The highest value of ROE for Perak Corporation Berhad, a company listed in Malaysia in 2019, is 9.136114. Meanwhile, the highest value of EPS for Grindrod Shipping Holdings Ltd, a company listed in Singapore in 2021, is 6.198740. The lowest value of ROA by PT Garuda Indonesia (Persero), a company from Indonesia in 2021 is -63.02000. The lowest value of ROE by E.A Technique (M) Berhad, which is listed in Malaysia in 2021 is -8.62603. The lowest value of EPS by Grindrod Shipping Holdings Ltd, which is listed in Singapore in 2019 is -2.217552. The mean values of ROA, ROE, and EPS are 1.845556, 0.033947, and 0.042142, respectively. These positive values

indicate that the company's performance was within the average range during the research period.

Model Test Results

The objective of the model test is to ascertain the optimal model for hypothesis testing. In this study, the Chow Test, the Hausman Test, and the Lagrange Multiplier Test will be employed.

Chow Test

The objective of this test is to ascertain whether the fixed or common effect model represents the superior choice. The selection is based on the p-value from the statistical test, with a threshold set at 0.05. If the p-value is below 0.05, this indicates a preference for the fixed effect model. Conversely, if the p-value exceeds the threshold, the common effect model is deemed the superior option (Agus, 2013).

Table 5. Chow Test

Test Effects: *Cross-section Chi-Square*			
Variable	Statistic	d.f	Prob.
ROA	195.528329	134	0.0004
ROE	190.884189	134	0.0009
EPS	85.407247	134	0.9996

Source: The data were processed using the EViews 12 software.

The chi-square probability value for the dependent variables ROA and ROE is 0.0004 and 0.0009. It is appropriate to conclude that the Fixed Effect Model is the most suitable for analysis of these variables. In contrast, for the dependent variable EPS, the value of the chi-square probability is 0.9996. This indicates that the most appropriate model for EPS is the Common Effect Model.

Hausman Test

This test is employed to ascertain which model is superior, the fixed effect or random effect model. The selection of the model is contingent upon the probability significance value (p-value), with a threshold of 0.05. If the p-value is less than 0.05, the fixed effect model is the optimal choice; conversely, if the p-value is greater than 0.05, the random effect model is the preferred option.

Table 6. Hausman Test

Test Summary	*: Cross-section Random*		
Variable	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.

ROA	9.241577	8	0.3223
ROE	3.193041	8	0.9217
EPS	10.843782	8	0.2107

Source: The data were processed using the EViews 12 software.

From the cross-section, the random probability value of the dependent variable ROA, ROE, EPS is 0.3223, 0.9217, 0.2107. Therefore, the most appropriate model for the ROA, ROE, EPS variables is the Random Effect Model. Should the Random Effect Model be selected, the Lagrange Multiplier model test will not be conducted. The results of the testing of the selected model—the Random Effect Model—lead to the conclusion that this model is not subject to classical assumptions, as it assumes that the estimation method, in the form of Generalized Least Squares (GLS), is free from heteroscedasticity and autocorrelation (Agus, 2013).

Panel Data Regression Analysis

The data employed in the present study are of a time-series and cross-sectional data. In order to examine the relationships between the independent variable, namely Covid-19, and the dependent variables ROA, ROE, EPS, a panel data regression analysis will be carried out using the Random Effect Model.

Table 7. Panel Data Regression Analysis

	ROA	ROE	EPS
Variables	Coefficient	Coefficient	Coefficient
C	6.619746	0.266979	-0.016157
COVID	0.457243	0.008178	0.0069629
LOSS_DUMMY	-15.73385	-0.245950	-0.174719
FIRM SIZE	-4.88E-07	-1.14E-09	-1.14E-08
GROWTH	2.01E-06	-2.16E-09	5.03E-08
LEVERAGE	-6.26411	0.113862	0.014724
BIG 4	-0.307278	-0.159100	-0.046761
GDP	10.89331	5.758741	2.962502
CPI	31.88301	-15.13952	-1480881
R-Squared	0.463468	0.028087	0.063731
Adjusted R-Squared	0.447022	-0.001703	0.035033
Prob (F-Statistic)	0.000000	0.48163	0.026355
N	270	270	270
Model test result	*Cross-section random effect*		

Source: Source: The data were processed using the EViews 12 software

The formula for estimating the parameters of a panel data regression model is provided below:

Y = C(1) + C(2)*COVID + C(3)*LOSS_DUMMY + C(4)*FIRM_SIZE + C(5)*GROWTH + C(6)*LEVERAGE + C(7)*BIG_4 + C(8)*GDP + C(9)*CPI + [CX=R]

The regression analysis of the panel data has enabled the formulation of a regression equation.

ROA = 6.6197 + 0.4572*COVID - 15.7338*LOSS_DUMMY - 4.883*FIRM_SIZE + 2.0101*GROWTH - 6.2641*LEVERAGE - 0.3072*BIG_4 + 10.8933*GDP + 31.8830*CPI + [CX=R]

The panel data regression equation indicates that the constant value is 6.619746, which signifies that when the independent variable is held constant, the dependent variable ROA is 6.619746. The regression coefficient for the independent variable COVID-19 is 0.457243, suggesting that for each unit increase in the COVID-19 variable, the ROA increases by 0.457243. The coefficient is positive, indicating a unidirectional relationship between the variables.

ROE = 0.2669 + 0.0081*COVID - 0.24594*LOSS_DUMMY - 1.1442*FIRM_SIZE - 2.1582*GROWTH + 0.1138*LEVERAGE - 0.15909*BIG_4 + 5.7587*GDP - 15.1395*CPI + [CX=R]

The panel data regression equation indicates that the constant value is 0.266979, which signifies that when the independent variable remains constant, the dependent variable ROE is 0.266979. The regression coefficient for the independent variable COVID-19 is 0.008178, suggesting that for each unit increase in the COVID-19 variable, ROE increases by 0.008178. The coefficient is positive, indicating a unidirectional relationship between the variables.

EPS = -0.0161 + 0.06962*COVID - 0.17471*LOSS_DUMMY -1.1371*FIRM_SIZE + 5.03082*GROWTH + 0.01472*LEVERAGE - 0.04676*BIG_4 + 2.9625*GDP - 1.4808*CPI + [CX=R]

The panel data regression equation indicates that the constant value is 0.016157, which signifies that if the independent variable remains constant, the dependent variable EPS is -0.016157. The regression coefficient for the independent variable COVID-19 is 0.069629, suggesting that for each unit increase in the COVID-19 variable, EPS increases by 0.069629, assuming other variables remain constant. The coefficient is positive, indicating a unidirectional relationship between the variables.

Hypothesis Test Results.

T-test.

The objective of this test is to ascertain the effect of the independent variable on the dependent variable, with a specified alpha level of 0.05 and a partial or individual approach to the variables. The results of the partial tests for each dependent variable are presented below:

Table 8. T test

	ROA		ROE		EPS	
Variable	t-statistic	prob.	t-statistic	prob.	t-statistic	prob.
C	4.658	0.000	1.664	0.097	-0.193	0.847
COVID	0.394	0.694	0.063	0.950	1.019	0.309
LOSS_DUMMY	-13.34	0.000	-1.848	0.066	-2.513	0.013
FIRM SIZE	-1.870	0.063	-0.039	0.969	-0.739	0.460
GROWTH	2.246	0.026	-0.021	0.983	0.953	0.341
LEVERAGE	-3.198	0.002	0.515	0.607	0.127	0.899
BIG 4	-0.282	0.778	-1.294	0.197	-0.728	0.467
GDP	0.298	0.766	1.397	0.164	1.375	0.170
CPI	0.437	0.663	-1.838	0.067	-0.344	0.731
R-Squared	0.463		0.028		0.064	
Adjusted R-Squared	0.447		-0.002		0.035	
Prob (F-Statistic)	0.000		0.482		0.026	
N	270		270		270	
Model Test Results	*Cross-section random effect*					

Source: The data were processed using the EViews 12 software

The partial test results of the impact of the Covid-19 on ROA yield a t-statistic value of 0.3944 with a prob. value of 0.6936 (>0.05), indicating that there is no statistically significant effect of the pandemic on ROA. This finding supports the rejection of H1a and the acceptance of H0a. In the partial test results, the effect of COVID-19 on ROE is indicated by a t-statistic value of 0.0625 with a prob. (significance) value of 0.9502 (>0.05). It can thus be concluded that COVID-10 has no effect on ROE, where it is stated that H1b is not supported and H0b is accepted. The results of the partial test on EPS indicate no statistically significant effect of the pandemic on this

variable. The t-statistic value is 1.0186 with a prob. value of 0.3093 (>0.05), and thus the hypothesis H1c can be rejected and the null hypothesis H0c accepted.

Hypothesis Testing Data Analysis.

The following section presents a summary of the hypothesis testing results.

Covid-19 has a negative impact on ROA.

The preliminary results of the analysis indicate that the impact of the pandemic on the ROA is not statistically significant. This result is in opposition to H1a, which posits that the impact of the pandemic on ROA is negative. The probability value of 0.3944, which exceeds the 5% alpha level, and the coefficient value of 0.457243, which indicates a positive direction, suggest that there is a unidirectional relationship between COIVD and ROA. These findings align with those of Paulina Periokaitė (2021), who noted that an increase in the number of quarantine days is linked to higher ROA values in road transportation companies. This suggests that the company is effectively utilizing its assets to generate profits. An increase in ROA value may also be dependent on the availability of assets owned by the company, as well as other indicators such as the company's decision-making processes. In accordance with the findings of (Teodora Tica, 2023), which indicate that the pandemic has had a negative impact on ROA. The profitability of companies engaged in the logistics sector has increased during the pandemic due to the elevated demand for logistics services. The logistics sector plays a pivotal role in enabling the company to fulfill its operational objectives by facilitating the delivery of goods to customers. This conclusion is further supported by other studies, which suggest that the financial performance of industries such as poultry has not been adversely affected by COVID-19, indicating resilience in certain sectors (Sunitha et., al 2020).

Covid-19 has a negative impact on ROE.

The results of the test indicate that the impact of the pandemic on company profitability, as measured by the ROE is not statistically significant. This result is contradictory to the H1b, which posits a negative effect of the pandemic on ROE. As evidenced by the probability value of 0.9502, which exceeds the 5% alpha level, and the coefficient value of 0.008178, which indicates a positive direction, the null hypothesis can be rejected. The findings of this study are consistent with those of (Paulina Periokaitė, 2021), who observed that an increase in the number of quarantine days is associated with an increase in ROE value in road transportation companies. During the pandemic, the return on money invested by owners has exhibited an upward trend. The unidirectional relationship between the pandemic and ROE indicates that companies can effectively manage capital to generate profits even under conditions of economic pressure during the pandemic. This may also indicate that, during the ongoing pandemic, logistics companies in the ASEAN region are continuing to operate as usual.

Covid-19 has a negative impact on EPS.

The results indicate that the impact of the pandemic on company profitability, as measured by EPS, is not statistically significant. This finding is contrary to the hypothesis that the pandemic would have a negative effect on EPS. This conclusion is supported by the statistical probability value of 0.3093 exceeds the 5% alpha level, and the coefficient of 0.0069629. This indicates a unidirectional relationship between covid and EPS. This research is in accordance with the findings of (Dea Aprilia, 2023) and (Dwi Fitrianingsih, 2022), which indicate that the impact of the Covid-19 on EPS is inconsequential. An increase in EPS may signify that the company is capable of generating profits effectively, thereby enabling the distribution of profits to shareholders on a pro rata basis.

This result in not support the signalling theory of Spence (1973), which posits that information, such as financial statements, provided by a company will be interpreted as a positive or negative signal by potential investors. Covid-19 as a signal not effected to the logistics firm financial performances, the logistics industry has increasing demand for logistics services during the Covid-19. Logistics company still contributed to support supply chain during Covid-19.

Additional analysis

Loss dummy

The loss dummy exerts a significant influence on ROA, with a value of -15.733 and a significance level of 0.000. This implies that companies that generate profits can affect ROA. The test results on the company level control variable state that there is no influence between the loss dummy and ROE with a significance value of 0.066 with a coefficient of -0.2459, this means that companies that experience profits have no effect on ROE. The test results on the company level control variable state that there is an influence between the loss dummy and EPS with a significance value of 0.013 and a coefficient of -0.1747, this means that companies that experience profits can affect EPS.

Firm Size

There is no influence between firm size and ROA, ROE, EPS with a significance value of 0.063, 0.969, 0.460, where this value is above the alpha level of 0.05 with a coefficient of -4.88E, -1.14E, -1.14E. This indicates that there is no negative correlation between firm size and ROA, ROE, or EPS. This finding aligns with research by (Silvia, 2022) and (Jaya, 2020). Investors perceive that the quantity of assets owned by the company is insufficient to persuade them that the company can effectively utilize its assets to generate profits.

Growth

There is an influence between growth and ROA with a significance value of 0.026 with a coefficient of 2.01E, this means that with the increase in company sales, there is also an increase in company profits, this result is in line with (Niluh Nugrahaning Widhi, 2021) and (Afrianti, 2022) where growth has a positive effect on profitability. There is an influence between growth with ROE and EPS with a significance value of 0.983, 0.341 with a coefficient of -2.16E, 5.03E, this means that company size has no negative effect on ROE, EPS. An increase in sales cannot be ensured by an increase in profitability, because an increase in sales can also go hand in hand with an increase in company costs so that the increase in costs may not achieve an increase in profitability, the results of this study are in line with (Vidyasari, Yuria, & Wenny, 2021).

Leverage

The effect between leverage and ROA with a significance value of 0.026 coefficient value of -3.198 which means that leverage has a negative effect on ROA. The COVID-19 pandemic has exacerbated this situation by leading to an increase in corporate debt without a corresponding rise in profits. This implies that companies may be taking on more debt to navigate challenges posed by the pandemic, which in turn negatively impacts their asset efficiency and overall profitability. Furthermore, high levels of debt can result in additional costs, such as those associated with bank interest payments. Additionally, elevated debt burdens can impede a company's flexibility in utilizing its assets, ultimately limiting its potential for generating profits. Furthermore, the elevated level of debt has an adverse effect on investor confidence. The results of this study are in line with (Lamba, 2022) and (Niluh Nugrahaning Widhi, 2021). Leverage has no effect on ROE and EPS with a significance value of 0.607 and 0.899 with a coefficient value of 0.113 and 0.014, which means that the company's capital does not depend on loan funds or debt, but the company must use its capital efficiently so that the profit the company gets is optimal. In addition, companies must utilize debt wisely so that there is no decrease in profitability until bankruptcy. This research is in line with (Andayani, 2020) and (Nafia Laila, 2021).

Big 4

There is no influence between Big 4 and ROA, ROE, EPS with a significance value of 0.778, 0.197, 0.467 where this value is above the alpha level of 0.05 with coefficients -0.307, -0.159, -0.046. financial statements audited by KAP Big 4 or not audited by KAP Big 4 do not affect the company's profitability performance, this happens because auditor selection only affects the credibility of the opinion given by the auditor on the financial statements published by the company, the results of this study are in line with (Siti Nuridah, 2023) audit has no effect on profitability.

Gross Domestic Product (GDP)

The GDP variable is represented by the annual growth rate of GDP as reported by the World Bank. The test results on the country-level control variables state that there is no influence between GDP and ROA, ROE, EPS with a significance value of 0.766,

0.164 0.170 where this value is above the alpha level of 0.05 with coefficients 10.893, 5.758, 2.962. An increase in a country's economic growth, coupled with an expansion in purchasing power, does not impact the company's capacity to generate profits, this finding is in line with the results of (Latifah, 2021) and (Rahman & Martiningtiyas, 2021) that GDP has no positive effect on profitability.

Consumer Price Index (CPI)

There is no influence between CPI and ROA, ROE, EPS with a significance value of 0.663, 0.067 0.731 where this value is above the alpha level of 0.05 with a coefficient of 31.88, -15.13, -1480. An increase in a country's inflation rate has no effect on the increase in company profitability. However, inflation can make an increase in the company's operating expenses and an increase in bank loan interest rates, so companies must manage their financial stability to minimize risk. In addition, inflation can reduce investor interest in investment, this finding is in line with the results of (Anugrah, Simanjorang., et al 2020) where the inflation rate has no effect on company profitability.

2.5 Conclusions And Suggestions

Conclusions

The findings of the research indicate that Covid has no significant positive effect on ROA, ROE and EPS of logistics companies in ASEAN. This proves that Covid, which is considered an extraordinary event, does not always have a negative impact on the company's financial performance. The logistics sector which functions as a supporter of the company's operational activities in meeting the needs of delivering goods to customers is one of the sectors that is getting stronger during the pandemic.

In addition, to maintain financial performance, the company must continue to utilize all of its resources starting from current assets to non-current assets, equity, human resources more efficiently. This can be achieved by implementing logistics business model concept. Innovating and increasing productivity to create business advantages in the midst of strict logistics competition. In addition, the company must also have a flexibility mechanism, through this the company can easily transform to a dynamic supply chain environment. Company management needs to manage the financial aspects of the company wisely through cost reduction, productive debt management, and maximum capital utilization, which can improve company performance so that the profit earned by the company can be optimal.

Suggestions

The objective of this study is to assess the impact of the COVID-19 pandemic on company performance, as proxied by ROA, ROE, and (EPS so that further research is recommended to be able to add variables that are thought to affect the company's profitability performance. In this study, the research sample was limited to logistics companies in ASEAN recorded in the Osiris Database. Subsector analysis was not

added in this study, so further research is recommended to be able to discuss the severity of each logistics subsector. The period used is limited to 2019 and 2021 so that further research can add time periods before and after Covid to be able to see the effect of Covid on the company's financial performance more widely. Future research may also employ a variety of data analysis tools to facilitate comparison of test results.

References

1. Afrianti, D. &. (2022). Pengaruh Leverage, Likuiditasdan Pertumbuhan Aset Terhadap Profitabilitas. urnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA), 6(2), 1781-1796.
2. Ali, S., Yassin, M., & AbuRaya, R. (2020). The Impact of Firm Characteristics on Corpo rate Financial Performance in Emerging Markets: Evidence from Egyp. International Jour nal of Customer Relationship Marketing and Management, 11(4), 70-89. Retrieved February 21, 2020
3. Almira, N. A., & Wiagustini, N. P. (2020). Return On Asset, Return on Equity, Dan Earning Per Share Berpengaruh Terhadap Return Saham. E-Jurnal Manajemen, 9(3), 1069-1088. Retrieved Februari 14, 2024, from https://ojs.unud.ac.id/index.php/Manajemen/article/view/55619
4. Andayani, P. N. (2020). Pengaruh Leverage dan Pertumbuhan Perusahaan Terhadap Profitabilitas (ROE) Pada Perusahaan Property Real Estate yang Terdaftar di BEI (2014-2018). Respository Universitas Medan Area.
5. Anugrah, K., Simanjorang, R. C., Hutabarat, A. R., Pakpahan, R. J., & Sipahutar, T. T. (2020). Pengaruh Pertumbuhan Ekonomi dan Inflasi terhadap Profitabilitas pada Perusahaan Makanan dan Minuman di BEI. Owner: Riset dan Jurnal Akuntansi Volume 4 Nomor 2, 442-229.
6. ASEAN Secretariat and the World Bank. (2015). ASEAN Services Integration Report. The ASEAN Secretariat & The World Bank.
7. Atayah, O. F., Dhiaf, M. M., Najaf, K., & Frederico, G. F. (2021, Agustus 11). Impact of COVID-19 on financial performance of logistics firms: evidence from G-20 countries. Journal of Global Operations and Strategic Sourcing, 15(2), 172-196. Retrieved May 09, 2024, from https://www.emerald.com/insight/content/doi/10.1108/JGOSS-03-2021-0028/full/html
8. Brigham, E. F., & Houston, J. F. (2019). Fundamentals of Financial Management. Cengage Learning.
9. Brooks R. (2016). Financial Ratios and Firm Performance, Financial Management Core Concepts. Edinburgh: Pearson Education Limited.
10. Chapman, R. L., C. S., & J. K. (2003, September 1). Innovation in logistic services and the new business model: A conceptual framework. International Journal of Physical Distribution & Logistics Management, 33(7), 630-650. Retrieved from https://doi.org/10.1108/09600030310499295
11. Cresswell, J. W. (2014). Research Design: qualitative, quantitative, and ix methods approaches - 4th edition. California: Sage Publications, Inc.

12. Darwaman, A., Jasuni, A. Y., Putra, B. R., & Lestari, F. (2021). Comparative Analysis of Company Profitability in The Pandemic Time With 2 Years of Pre-Pandemic. 1st ICEMAC 2020: International Conference on Economics, Management, and Accounting, 425-441.
13. Daryanto, W. M., Rizki, M. I., & Mahardhika. (2021). Financial Performance Analysis Of Construction Company Before And During Covid-19 Pandemic In Indonesia. International Journal of Business, Economics and Law, 24, 99-108. Retrieved Februari 11, 2024
14. Dea Aprilia Damayanti, V. P. (2023). Analisis Perbedaan Kinerja Perusahaan Pada Sektor Perbankan Sebelum Dan Semasa Covid-19. Prosiding SEMANIS: Seminar Nasional Manajemen Bisnis Volume 1.
15. Delta Publishing Company. (2006). Analysis and Uses of Financial Statement. Delta Publishing Company.
16. Devi, S., Warasniasih, N. S., Masdiantini, P. R., & Musmini, L. S. (2020, November 13). The Impact of COVID-19 Pandemic on the Financial Performance of Firms on the Indonesia Stock Exchange. Journal of Economics, Business, & Accountancy Ventura, 23(2), 226-242. Retrieved Februari 11, 2024
17. Dwi Fitrianingsih1, K. T. (2022). Analisis Pengaruh Earning Per Share, Economic Value Added terhadap Return Saham Selama Pandemik Covid 19. Jurnal Akuntansi, Keuangan, dan Manajemen (Jakman) Vol 3, No 3, 225-236.
18. Economic Research Institute for ASEAN and East Asia (ERIA). (2020, May 4). The COVID-19 Pandemic: Impact on ASEAN Connectivity and Recovery Strategies Policy Insights. 22. Retrieved from https://www.oecd.org/coronavirus/policy-responses/covid-19-crisis-response-in-asean-member-states-02f828a2/
19. Emeka, O., Prince, O., & Febian, O. (2021, March 4). Impact of Covid-19 Pandemic on Liquidity and Profitability of Firms in Nigeria. International Journal of Academic Research in Business & Social Science, 11(3), 1331-1344.
20. Fauzi, E., Saraswati, T. O., & Ugut, G. (2022). The Impact of Covid-19 On the Profitability of Public Banks Listed in Indonesia. International Journal of Economics, Business and Accounting Reaserch (IJEBAR), 6(3). Retrieved February 19, 2024
21. Gaisani, M. P., Fahmi, I., & Sasongko, H. (2021, November). The Effect of Covid-19 On the Financial Performance of Indonesia's Livestock Industry. 3, 229-239. Retrieved Februari 11, 2024
22. IMF. (n.d.). COVID-19. Retrieved January 17, 2024, from International Monetary Fund - IMF: https://www.imf.org/en/Topics/imf-and-covid19
23. Japan External Trade Organization. (2020). Impact of COVID-19 on Supply Chains in the ASEAN Plus Three Region, with Policy Recommendations. JETRO, 4. Retrieved from https://www.jetro.go.jp/ext_images/en/reports/survey/pdf/COVID-19_202011.pdf
24. Jaya, S. (2020). Pengaruh Ukuran Perusahaan (Firm Size) dan Profitabilitas (ROA) Terhadap Nilai Perusahaan (Firm Value) Pada Perusahaan Sub Sektor Property dan Real Estate di Bursa Efek Indonesia (BEI). Jurnal Manajemen Motivasi 16, 38-44.
25. Kieso, D. E., Weygandt, J. J., & Warfield, T. D. (2014). Intermediate Accounting: IFRS Edition. Wiley.
26. Lamba, A. B. (2022). Pengaruh Leverage Terhadap Nilai Perusahaan yang Dimediasi Profitabilitas. Reviu Akuntansi dan Bisnis Indonesia Vol 6 No 1, 16-31.

27. Latifah, Z. N. (2021). engaruh Faktor Internal dan Faktor Eksternal Terhadap Profitabilitas Dengan Mediasi NPF Bank Umum Syariah. ndonesian Journal of Economics and Management, 2(1), 174-187.
28. Lindenberg, E., & Ross, S. (1981). Tobin's q Ration and Industrial Organization. The Journal of Business, 54(1), 1-32.
29. Listiarti, A. A., Pratiwi, C. W., & Trimulyani, S. (2022, September 14). Comparison of Financial Performance During Covid 19 Pandemic: A Case Study at Transportation and Logistics Sector Listed in IDX. Jurnal Nominal Barometer Riset Akuntansi dan Manajemen, 11(2), 248-260. Retrieved Februari 11, 2024
30. Mordor Intelligence. (n.d.). ASEAN Freight and Logistics Market Size & Share Analysis - Industry Research Report - Growth Trends. Retrieved February 8, 2024, from Mordor Intelligence: https://www.mordorintelligence.com/industry-reports/asean-freight-and-logistics-market
31. Nafia Laila, T. A. (2021). Financial Leverage and its Impact on Earning Per Share. IOSR Journal of Economics and Finance (IOSR-JEF) Volume 12, Issue 1 Ser. V, 01-07.
32. Najaf, K., Subramaniam, R. K., & Atayah, O. F. (2021, April 26). erstanding the implications of FinTech Peer-toPeer (P2P) lending during the COVID-19 pandemic, Journal of Sustainable Finance & Investment. Retrieved February 20, 2024
33. Nguyen, H. T. (2022). The Effect of COVID-19 Pandemic on Financial Performance of Firms: Empirical Evidence from Vietnamese Logistics Enterprises. Journal of Asian Finance, Economics and Business, 9(2), 0177-0183. Retrieved Februari 09, 2024
34. Niluh Nugrahaning Widhi, I. N. (2021). Pengaruh Leverage dan Pertumbuhan Penjualan terhadap Profitabilitas pada Perusahaan Subsektor Tekstil dan Garmen. Jurnal Ilmiah Akuntansi dan Humanika, Vol. 11 No. 2, 267-275.
35. Paulina Periokaitė, N. D. (2021). The impact of COVID-19 on the financial performance: a case study of the Lithuanian transport sector. Insights into Regional Development, 35-50.
36. Putra, F., Khoiriyah, M., Abdurrahman, R., & Fatriansyah, A. I. (2023, September 19). Company Financial Performance Before and During The COVID-19 Pandemic. Maksimum: Media Akuntansi Universitas Muhammadiyah Semarang, 13(2), 173-183. Retrieved February 12, 2024
37. Rahman, M., & Martiningtiyas, C. R. (2021). Pengaruh Non-Performing Loans Terhadap Profitability Bank Komersial Yang Terdaftar di Bursa Efek Indonesia. Media Riset Bisnis & Manajemen Vol. 21 No. 2, 87-98.
38. Rinsman, T. C., & Prasetyo, A. B. (2020). The Effects of Financial and Environmental Performances on Firm Value with Environmental Disclosure as an Intervening Variable. Jurnal Dinamika Akuntansi 12(2), 90-99.
39. Ross, S. A. (1977). The Determination of Financial Structure: The Incentive-Signalling Approach. The Bell Journal of Economics, 23-40.
40. Savitri, N., & Hidayati, S. (2022, February 17). Financial Performance analysis of companies in the primary consumer goods sector before and during Covid-19. INTERNATIONAL JOURNAL OF BUSINESS ECOSYSTEM & STRATEGY, 4(1), 49-56. Retrieved February 11, 2024, from https://bussecon.com/ojs/index.php/ijbes/article/view/307/151

41. Sheth, J. (2020, May 29). Impact of Covid-19 on Consumer Behavior: Will the Old Habits Return or Die? Journal of Business Research. Retrieved February 19, 2024
42. Silvia, S. P. (2022). Pengaruh Profitabilitas, Leverage, Ukuran Perusahaan, Dan Likuiditas Terhadap Nilai Perusahaan. Jurnal Multiparadigma Akuntansi, Volume IV No. 1/, 310-317.
43. Siti Nuridah, M. M. (2023). Pengaruh Good Corporate Governance Terhadap Profitabilitas. Jurnal Ekonomi, Bisnis Dan Manajemen, 2(2), 1-10.
44. Spence, M. (1973). Job Market Signalling. The Quarterly Journal of Economics, 355-374.
45. Teodora Tica, B. V. (2023). Specific impact of the Covid-19 pandemic on the profitability of logistics companies based in the Western Balkan countries. Ekonomika preduzeca 71(5-6), 313-324.
46. The ASEAN Secretariat. (2021). ASEAN Key Figures 2021. The ASEAN Secretariat.
47. The ASEAN Secretariat. (2023). ASEAN Key Figures 2023 (Vol. 6). The ASEAN Secretariat.
48. The ASEAN Secretariat. (2023, September). ASEAN Statistical Highlights 2023. Retrieved January 31, 2024, from ASEANstats: https://www.aseanstats.org/wp-content/uploads/2023/10/ASH-2023-v1.pdf
49. Tobin, J., & Brainard, W. C. (1968, May). Pitfalls in Financial Model Building. Papers and Proceedings of the Eightieth Annual Meeting of the American Economic Association, 58(2), 99-122. Retrieved from http://www.jstor.org/stable/1831802
50. Vidyasari, S. R., Yuria, N. P., & Wenny, P. (2021). Pengaruh Struktur Modal, Pertumbuhan Penjualan Ukuran Perusahaan, Likuiditas Dan Perputaran Modal Kerja Terhadap Profitabilitas. Jurnal Kharismavol. 3 No. 1, 94-105.
51. Winarno, S. H. (2019, December). Analisis NPM, ROA, dan ROE dalam Mengukur Kinerja Keuangan. Jurnal STEI Ekonomi, 28(2), 254-266. Retrieved February 13, 2024, from https://ejournal.stei.ac.id/index.php/JEMI/article/download/254/171/
52. Xiong, H., Wu, Z., Hou, F., & Zhang, J. (2020, Agustus 04). Which Firm-specific Characteristics Affect the Market Reaction of Chinese Listed Companies to the COVID-19 Pandemic? Emerging Markets Finance and Trade, 56(10), 2231-2242. Retrieved February 20, 2024