

# **Pandemic impacts on corporate performance in various sectors in the United States of America**

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## **ABSTRACT**

In 2020, the spread of COVID-19 had huge impacts on society, working from home, studying at home, wearing masks, and social distancing had become common phenomenon. However, the development of different kinds of vaccines brings the chance of eliminating or reducing the effects of COVID-19. The United States of America has made great progress for vaccination. By the time of 20th of May 2021, data shows that in America, 279,4 million doses have been registered, about 83,54 doses are administered per 100 people (Mathieu et al., 2021). Hence, America is chosen to investigate the effect of pandemic on different industries. The research question is: How did pandemic affect corporate performance in various sectors in the United States of America? The impact of pandemic on four different sectors will be investigated, namely retail sector, wholesale sector, sector of travel, personal and leisure, as well as biotechnology and life sciences sector.

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## **Keywords**

Pandemic, COVID-19, impact, sectors, corporate performance

## 1. INTRODUCTION

2020 was a special and rough year for everyone. The breakout of Covid-19 changed the way that people used to live and had huge impacts on the economy. Countries all over the world made efforts to stop the spread of COVID-19 by posting various of restrictions on travel and in-person commercial activities (Guan et al., 2020). Large number of people start to work from home. There are also people who lose their job due to the breakout of Coronavirus. Shops, cinemas, and restaurants are closed. Some industries and companies suffered from losing customers and profit, whilst others performed well with increasing profit compared to previous years. For example, over 80% of participants of a survey which explores the impact of COVID-19 on manufacturing business in the United Kingdom anticipated that there will be a decline in turnover over two quarters (Nicola et al., 2020). Another prediction from the perspective of the chemical industry is that the global production will be reduced by 1.2% (Nicola et al., 2020). Other industries such as catering and tourism also show significant decreases in demand, for example, according to Guan et al. (2020), in a six-month scenario, tourism in Jamaica decreased by 56.3%, which leads to the reduction of the beverages and tobacco products from the United States of America. In addition, numbers of companies in the United States of America suffered from pandemic and filed bankruptcy in 2020, such as Gold's Gym, Borden Dairy, high-end retailer Brooks Brothers, CMX Cinemas, hospital operator NMC Healthcare, and oil driller Noble Corp (Tucker, 2020).

Similar events had happened before. For instance, in 2002, a new disease appeared, which was called the severe acute respiratory syndrome, or SARS (Cherry & Krogstad, 2004). The outbreak of SARS had huge impacts on Asian countries, at least 12 million USD SARS were lost since the influence of SARS on tourism and retail sales. In addition, the GDP in China decreased about 1% due to SARS according to estimation (Qiu et al., 2018). Qiu et al. (2018) also mentioned that the manufacturing sector, transport sector and business sector in China were seriously affected by the outbreak of SARS. In 2009, the outbreak of H1N1 and the effects of financial crisis impacted tourism, retail sales and industrial production in China as well (Barua, 2020).

According to the timeline of COVID-19 (AJMC Staff, 2021), on the third of February 2020, The United States of America declared a public health emergency for the outbreak of COVID-19, 11th of March, World health organization declared COVID-19 a pandemic, and two days later, Trump made an announcement for declaring COVID-19 a national emergency. On the 16th of September, the administration of Trump released

the distribution plan of COVID-19 vaccine ("A Timeline of COVID-19 Developments in 2020", 2021).

The theme of this research paper is related to corporate performance under pandemic. In order to investigate the influence that pandemic brings to different sectors in the United States of America, the research question is: How did pandemic affect various sectors in America?

COVID-19 can damage lungs and other organs such as heart and brain, which can increase the risk of long-term health problems ("COVID-19 (coronavirus): Long-term effects", 2021). Thus, the spread of COVID-19 and pandemic indicate the importance of developing vaccines and other medicine, which can be done by the companies and people who work in the sector of biotechnology. It is believed that vaccines can prevent people from being infected or who have COVID-19 from getting seriously ill ("Benefits of Getting a COVID-19 Vaccine", 2021).

The United States of America is one of the primary markets for business service, in which companies provide services to businesses such as hiring personnel and office administration ("Business Services Sector Industry Profile from First Research", n.d.). Companies in the business service sector are highly impacted by the uncertainties brought by the Coronavirus (Raaijmakers, 2020).

Industries of textiles, clothing, leather and footwear also suffer from the impact of COVID-19. Factors such as the reduction of salary, closure of retail stores and quarantine measures have negative effects on the demand of consumers ("COVID-19 and the textiles, clothing, leather and footwear industries", 2020). However, there is some evidence that shows that during the pandemic, more people shop online, which may also boost the transport and freight sectors to some extent.

Compared with 2019, consumers spent 44% more online with retailers in the U.S. in 2020, which is \$861,12 billion (Ali, 2021). Meanwhile, it is expected that there is a decline of the global wholesale market from \$48761,1 billion in 2019 to \$48477,8 billion in 2020 ("Global Wholesale Market Report 2020-30: COVID-19 Impact and Recovery - ResearchAndMarkets.com", 2020). It is also assumed that the regulations of staying at home and limiting outdoor activities boost the media and broadcasting sector.

The research will focus on the performance of companies across different sectors and the impact of pandemic on these sectors. Four sectors will be selected for the purpose of analyzing the effect of pandemic on them, namely retail sector, wholesale sector, travel, personal and leisure sector as well as sector of



There is a significant gap between the minimum and maximum value of total revenue in all sectors. Companies in the Biotechnology and Life Sciences sector have the largest standard deviation for the value of ROA, which is 26,99. In addition, the sector of Biotechnology and Life Sciences also has 6,01 as the value of the standard deviation of current ratio. The standard deviation of tangibility of all four sectors are relatively low, the largest value among them is 0,25, which is the standard deviation of tangibility of the Biotechnology and life sciences sector. A company in the Wholesale sector has the lowest value of ROA, which is -92,13, a company in this sector also has the largest value of size, which is 7,65.

**Table 3. Descriptive statistics**

	Biotechnology and Life Sciences				Retail				Travel, Personal & Leisure				Wholesale			
	Mean	Minimum	Maximum	Standard Deviation	Mean	Minimum	Maximum	Standard Deviation	Mean	Minimum	Maximum	Standard Deviation	Mean	Minimum	Maximum	Standard Deviation
ROA	25,99	-49,74	49,82	26,99	3,68	-36,76	6,99	12,87	2,26	-41,89	38,72	6,19	1,68	-92,13	37,21	19,10
Total Revenue (USD)	823048	12164	6092306	104811	1232336	1170	32119020	3612881	508200	308	1322900	787972	439116	169	4427920	6899,36
SIZE	5,44	4,03	6,91	0,3	6,40	4,07	9,51	75	6,13	3,59	7,72	85	6,24	3,29	7,65	69
Current Ratio	427386	272	8321204	107359	788552	2748	18846300	24452739	422164	2207	4639600	6889772	215163	1203	1538000	285872
Tangibility (USD)	6,77	36	43,36	6,01	1,62	36	13,64	1,12	1,38	06	6,82	97	2,24	27	7,71	1,20
Total Personnel (USD)	426420	43	5767000	103621	21449126	236	50619100	6253608	2919636	169	2059000	4657959	964279	29	16889326	2467028
REV	4,05	1,63	6,76	1,13	6,69	2,37	6,75	82	6,82	2,29	7,42	95	6,64	1,67	6,28	80
PANDEM	29	00	00	25	04	00	34	19	02	05	1,00	14	48	04	07	21

## 4.2 Regression results

Linear Regression analysis are conducted by using SPSS. The coefficient of predictor PANDEMIC is used for the purpose of investigating the impact of pandemic to various companies in four selected sectors in America, namely Biotechnology and Life Sciences sector, Retail sector, Wholesale sector and the sector of Travel, Personal and Leisure. Hence, this section will mainly discuss the results of the coefficient of the independent variable PANDEMIC and the significance level of it.

### 4.2.1 Result of Biotechnology and Life Sciences sector

There are 46 companies in the Biotechnology and Life Sciences sector, data of variables, excluding PANDEMIC, range from year 2016 to 2020. The coefficient of variable PANDEMIC is 0,148, with the significant value of 0,961.

**Table 4. Regression result of Biotechnology and Life Sciences sector from SPSS**

Model	Coefficients <sup>a,b</sup>					
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	-79.758	11.107		-7.181	.000
	TANG	25.420	6.287	.231	4.043	.000
	SIZE	-9.085	2.694	-.212	-3.372	.001
	CURRENT	1.342	.242	.299	5.553	.000
	REV	20.073	1.636	.839	12.273	.000
	PANDEMIC	.148	3.016	.002	.049	.961

a. Dependent Variable: ROA

b. Selecting only cases for which BvD sectors = Biotechnology and Life Sciences

### 4.2.2 Result of Retail sector

The number of companies that are selected in the Retail sector is 96, data of variables excluding PANDEMIC range from year 2016 to 2020. The coefficient of predictors PANDEMIC is -2,393, the significance value of it is 0,083.

**Table 5. Regression result of Retail sector from SPSS**

Model	Coefficients <sup>a,b</sup>					
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	-37.579	5.548		-6.774	.000
	TANG	-2.046	3.543	-.030	-.577	.564
	SIZE	-2.809	2.529	-.163	-1.111	.267
	CURRENT	.599	.671	.052	.893	.372
	REV	8.997	2.390	.569	3.764	.000
	PANDEMIC	-2.393	1.376	-.074	-1.739	.083

a. Dependent Variable: ROA

b. Selecting only cases for which BvD sectors = Retail

### 4.2.3 Result of Travel, Personal and Leisure sector

The sector of Travel, Personal and Leisure consists of 104 companies. Data of variables excluding PANDEMIC range from year 2016 to 2020. The coefficient of predictors PANDEMIC is -6,804, the significance value of it is 0,000.

**Table 6. Regression result of Travel, Personal & Leisure sector from SPSS**

Model	Coefficients <sup>a,b</sup>					
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	-16.652	4.094		-4.068	.000
	TANG	1.367	3.230	.021	.423	.672
	SIZE	-5.105	1.118	-.479	-4.567	.000
	CURRENT	1.976	.452	.211	4.375	.000
	REV	8.105	1.142	.756	7.095	.000
	PANDEMIC	-6.804	.891	-.299	-7.637	.000

a. Dependent Variable: ROA

b. Selecting only cases for which BvD sectors = Travel, Personal & Leisure

### 4.2.4 Result of Wholesale sector

There are 80 companies in the Wholesale sector, data of variables excluding PANDEMIC range from year 2016 to 2020. The coefficient of independent variable PANDEMIC is -3,561 with 0,004 as its significance level.

**Table 7. Regression result of Wholesale sector from SPSS**

Model	Coefficients <sup>a,b</sup>					
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	-38.721	5.044		-7.676	.000
	TANG	1.113	3.136	.021	.355	.723
	SIZE	-2.618	2.028	-.162	-1.291	.197
	CURRENT	2.643	.467	.285	5.659	.000
	REV	7.921	1.746	.571	4.538	.000
	PANDEMIC	-3.561	1.229	-.128	-2.897	.004

a. Dependent Variable: ROA

b. Selecting only cases for which BvD sectors = Wholesale

## 5. CONCLUSION

To investigate the impacts of pandemic in selected four sectors, it is imperative to interpret the significance level of predictor PANDEMIC from table 4, 5, 6 and 7. Setting the confidence interval to 95%, according to the results generated by SPSS, the significance levels of PANDEMIC for the sector of Biotechnology and Life Sciences and Retail sector are 0,961 and 0,083 respectively, which are larger than 0,05. Hence, the null hypothesis 1 and the null hypothesis 2 should not be rejected, which indicates that:

1. In general, the pandemic has no positive impacts on the performance of companies in the biotechnology and life sciences sector in America.

- In general, the pandemic has no positive impacts on the performance of companies in the retail sector in America.

Based on the analysis results generated by SPSS, the significance levels of predictor PANDEMIC for Wholesale sector and the sector of Travel, Personal and Leisure are 0,004 and 0,000 respectively, suggesting that null hypothesis 3 and null hypothesis 4 should both be rejected. Therefore, the conclusions for the Wholesale sector and the Travel, Personal and Leisure sector are:

- In general, the pandemic has negative impacts on the performance of companies in the Wholesale sector in America.
- In general, the pandemic has negative impacts on the performance of companies in the Travel, Personal and Leisure sector in America.

In summary, pandemic has no positive effects on all selected four sectors.

However, table 5, 6, and 7 indicate that there is not significant change in ROA due to the tangibility of companies in Retail sector, Wholesale sector and the sector of Travel, Personal and Leisure. The regression result of Retail sector also manifests that current ratio and size, which is the logarithm of total assets do not have significant effects on ROA. It is assumed that the occurrence of high significant level is caused by the data gathered from Orbis for selected sectors are not comprehensive enough. Data without missing value from year 2016 to 2020 are restricted, which limits the choice of independent variables. The sample size of companies in each sector is also limited. Consequently, the results of analysis have their limitations.

Therefore, for the future study of the impacts of pandemic on corporate performance, it is suggested to use multiple approaches to have a more comprehensive analysis of firms' performance. There are several methods that can be used. For example, in the research from McGuire, Sundgren, and Schneeweis (1988), the financial performance of firms was measured in terms of accounting based, stock-market based and in terms of risk. Risk-adjusted return and total return were used for market performance, sales growth and operating income growth were used for assessing the accounting-based performance in addition to ROA. Accounting-based measures of risk such as operating leverage and the standard deviation of operating income were selected. Besides, beta, which is a measure of systematic risk and standard deviation of total return were used for the purpose of measuring market risk (McGuire et al., 1988).

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