The Impact of Covid-19 Pandemic on Indonesian Consumer and Business Confidence Indicator

Salsabiila Naedi* and Muhamad Iksan [*,**]
*Paramadina University, Jakarta, Indonesia
**National Cheng Kung University, Tainan, ROC Taiwan
Email: salsabiila.naedi@students.paramadina.ac.id and muhamad.ikhsan@paramadina.ac.id

Abstract

Our study has two main aims, which are to utilize the pandemic of coronavirus as a subject of interest. First, this paper purposes of explaining the impact of the coronavirus rate, including the new cases and mortality rate, on consumer sentiment using a proxy of consumer confidence indicators. By the first aim, this paper captures the impact of the pandemic on the consumer side. Second, this paper also aims to explain the impact of coronavirus figures, including the new cases and mortality rate, on the business sentiment using a proxy of business confidence indicators. By the second aim, this paper seizes the impact of the pandemic on the producer side. There is an abundance of international studies that have similar research aims to our study, Most of these studies emphasize their attention to COVID-19 cases from international cases, i.e. the United States, the Eurozone and the People Republic of China. However, a study from Chong and colleagues assessed the impact of the coronavirus on ASEAN countries descriptively. Their studies separately analyzed several Southeast Asian countries economic figures for the first two quarters in 2020. Our result indicates that the impact of COVID-19 on both indicators, consumer and business, is different. This study only finds statistically total death confirmed cases affect business confidence. Our study corroborates with findings from Teresina et al., whose result argue that the spread of pandemic *did not* affect the consumer confidence index in the Eurozone. Although using different business sentiments, our study finds a similar pattern: business sentiment reacts to increasing total cases confirmed. We suggest our readers have to take our findings with a grain of salt because of the limitation of observations.

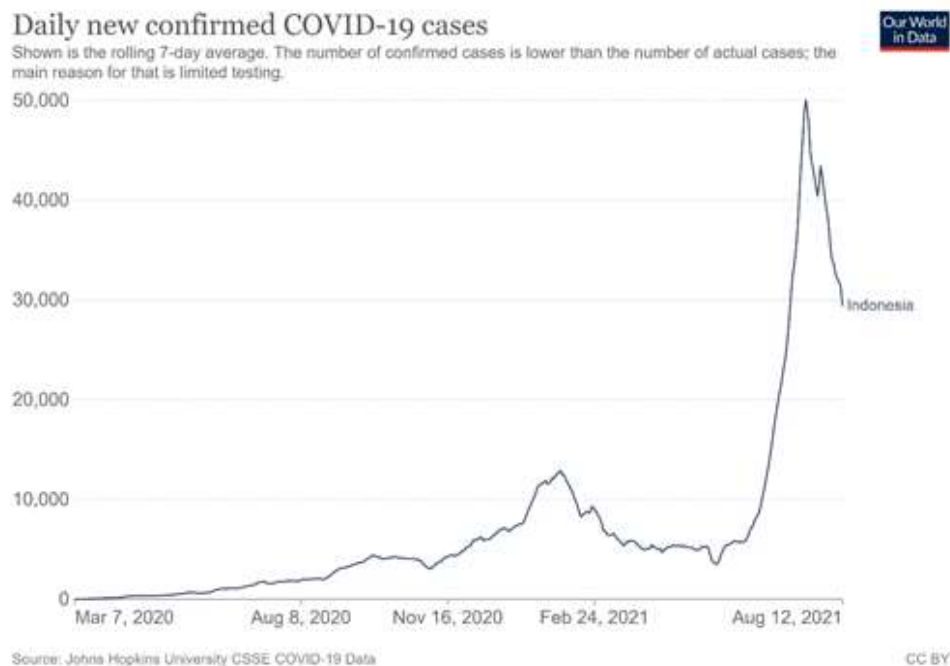Key words: *COVID-19 in Indonesia, consumer confidence and business confidence indicator*

Introduction

The coronavirus (COVID-19) was first discovered in Indonesia on March 2, 2020. Then, this virus continued to spread and infected many people until July 4, 2021, the total number of positive cases reached 2,345,018, and a total of 1,958,553 recovered. The number of deaths reached 61,868 (https://covid19.go.id/). Covid-19 pandemic is a rare case of external shocks impacting any economy, including the Indonesian economy. Every country faces great difficulties and challenges due to the highly changing global economic conditions. Previous studies already elaborated on the cost of Covid-19 on the Indonesian economy. For example, Pradesha et al. (2002) used the social accounting matrix multiplier approach to estimate the cost of this pandemic for various sectors and actors such as firms, governments, households, and small-medium enterprises within the economy. Besides Pradesha's study, Olivia et al. (2020) described Indonesia in the time of covid-19 as a survey of a recent development for Indonesian study journal, Bulletin Indonesian economic studies, their result seed light that at the time of their writing in August 2020, the virus spreading had not been tamed in Indonesia by any means.

Therefore, Covid-19 implications for economic growth, jobs, and welfare remain uncertain, including policy from the government of Indonesia renowned as the new normal. Our research emphasizes analysis of impact covid-19 on different sentiment indicators, both business and consumer, with our main attention of Indonesia. Our study closed to research conducted by Teresiene et al. (2021) that empirically tested the impact of the covid-19 pandemic on consumers and business confidence indicators. However, their study was not focused on one country, instead of three regions: The eurozone, the United States, and China. The pandemic also impacts the long-term economy and the higher unemployment rate, which means more people fall into poverty. There is also a decrease in demand which causes production activities to stop in several sectors.

Indonesia is one of the most heavily affected by this pandemic in trade, investment, and tourism. Due to this virus's fast and extensive spread, Bank Indonesia projects that this year's GDP will be at 4.8 - 5.8 percent. It is better than 2020, which is projected at -2.0 - -1.0 percent, but it may take extra effort for Indonesia to surpass the previous GDP in 2019 of 5.02 percent. The pandemic has a direct effect on market conditions that cause the economic downturn. One of the significant damages is to the tourism industry because the industry is heavily impacted by security, health, and global changes (Burkle, 2006). The investment figures also weakened because investors tend to postpone their investment activities due to lack of demand and their fear of the very uncertain effects of this pandemic. In order to illustrate daily new confirmed COVID-19 cases in Indonesia, this figure below depicts the period from March 7, 2020, up to August 13. 2021:

Figure 1 Indonesia daily new confirmed COVID-19 cases

Daily new confirmed COVID-19 cases

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

Source: Johns Hopkins University CSSE COVID-19 Data

Source: https://ourworldindata.org/coronavirus/country/indonesia (accessed August 14, 2021)

During the COVID-19 pandemic, how consumers behave has undergone many changes. There are many forms of this change, including consumer attitudes in buying a product which is currently mostly done online rather than buying physically at a store. Many consumers also tend to buy less during this pandemic. These things happen due to the weakening economy, high unemployment rates, and others. Changes in consumer behavior during the COVID-19 pandemic are natural and have been predicted by many experts if we look at the market and economic conditions, which are indeed very different. Consumer behavior is behavior that concerns the use, assessment, and purchase of a product or service whose ultimate goal is to satisfy consumers (Schiffman and Kanuk, 2000). In short, how consumers choose a product or service that is useful to meet or satisfy their needs is referred to as consumer behavior. The changing and different economic conditions like today, consumption and production patterns have also changed. When consumption patterns change, it means there is a change in consumer confidence.

Consumer confidence is measured through consumer optimism about their financial situation and the country's economic situation. What is needed now is how the aggregate demand curve shifts to the right, which means there is rising demand for goods and services. If there is an increase in consumer spending, then production also increases, banks can provide more credit, which can stimulate the economy. Business confidence is also one of the crucial factors in giving influence, information, and level of trust about the future financial situation and social developments. Business confidence can also show the company's expectations based on surveys of orders, production, and others. In addition, business confidence can also provide information about economic growth and anticipation of turning points in economic activity. The business confidence index (BCI), a number above 100 means an immediate improvement in business performance, and a number below 100 means pessimism about future performance.

The Indonesian government has implemented several rules and policies to stop the spread of the virus. The government imposed an emergency Community Activity Restrictions (PPKM) for the Java-Bali area from July 3-20. This rule may be extended or changed if conditions do not improve. Another effort from the government to restore Indonesia's economic condition, the government follows WHO's advice by trying to deal with the COVID-19 pandemic using Herd Immunity with a target of 70% of the population using vaccines to establish immunity to 70% of the population. Vaccines are beneficial for forming Herd Immunity so that the Indonesian people can survive and be immune to Covid-19, at least reduce the spread of Covid-19 cases and restore the Indonesian economy.

Considering previous factual problems and conceptual research, the purpose is to assess the impact of the coronavirus pandemic on consumer and business confidence. Our study emphasizes two main objectives: first, how is the impact of the covid-19 pandemic on consumer confidence indicators? Second, how is the impact of the covid-19 pandemic on the business confidence indicator? For these purposes, we chose the consumer confidence index as well as the business confidence index that Bank Indonesia regularly publishes on their website on a monthly basis. This paper proceeds as follows. Section II presents the literature review. Section III depicts the methodology part of our study. Section IV reports results and discussions with managerial implications of this study. Section V presents the conclusion of this paper.

Literature Review

We begin our second part of this paper by providing several past research on consumer confidence and business confidence which is closely related to the current spreading of Coronavirus creating a global pandemic. The first study from Chong et al. (2021), in their study, depicted the impact of COVID-19 on ASEAN countries. This observation explains the covid 19 pandemic impact on various ASEAN countries separately by analyzing the first two-quarters economic figure in 2020. This can give us a view of the prospects of the economies of countries in ASEAN affected by the COVID-19 pandemic. This study also stated that three factors pose a risk to the ASEAN economy: slow economic growth, cross-border unemployment transmission, and slow trade recovery.

A study conducted by Barro et al. (2020) shows the comparison between deaths and economic contraction during the 1918-1920 influenza pandemic with the Covid-19 pandemic. They argued that there were plausible upper bounds for outcomes based on data for 48 countries that imply flu-related deaths in 1918-1920 of 40 million, 2.1 percent means there are 150 million deaths when calculated based on the current world population. Moreover, they added regressions with annual information on flu deaths 1918-1920 and war deaths during the First World War imply flu-generated economic declines for GDP and consumption in the typical country of 6 and 8 percent, respectively.

Policymakers have to confront and measure the economic impact of the covid-19 pandemic, but with the fast-developing crisis, this is quite challenging. (Baker et al., 2020). Baker and his associates use three indicators to measure uncertainty in real-time for the future based on three indicators, namely stock market volatility, newspaper-based economic uncertainty, and subjective uncertainty in the business expectations survey. In their findings, it is said that about half of the expected contraction in output is due to the negative effects of the uncertainties of the pandemic. The year-over-year illustrative exercise implies that US real GDP contracted by

almost 11 percent in Q4 2020. With confidence interval around 90 percent extending 20 percent contraction. Moreover, the exercise says that about half of the forecasted output contraction reflects a negative effect of COVID-induced uncertainty.

In order to put our and readers on the same page over the consumer and business confidence as well, we need to understand the first notion of sentiment. "Sentiment may be used to describe economic agents' views of future economic developments that may influence the economy because they influence agent's decisions today" (Nowzohour and Stracca, 2017). There are two dimensions of economic sentiment: confidence and uncertainty (van der Wielen and Barrios, 2020). COVID-19 pandemic has been the primary cause for higher tensions in the economy (Baker et al., 2020) and, simultaneously, affects households and businesses' confidence (Teresiene et al., 2021).

There are differences among various sectors of the economy, which COVID-19 brought affected to each sector. For instance the hotel, restaurant, and tourism sector in Indonesia, there are significant differences in the debt-equity to ratio and return on equity ratio before and after the Covid-19 pandemic. However, the Indonesian government and entrepreneurs in this sector have tried to make various innovations to survive during the pandemic. Business entrepreneurs and firms worldwide also struggled to make adjustments and innovation to survive (Esomar et al., 2021). We highlighted a report from the Indonesian Hotel and Restaurant Association (PHRI) reporting a loss of about USD 1.5 billion due to the corona outbreak. Moreover, the Indonesian Travel Agent Association (Astindo) reported that there was relatively no income for travel agents since February 2020 (Djalente et al., 2020). According to BPS (2020) data, foreign tourists dropped by 64% from March year on year. Tourist arrivals from China, an important source of tourism for Indonesia, experienced the sharpest decline falling 97 percent year on year, with the number of tourists from Hong Kong down by 96 percent.

The impact of the covid-19 pandemic on the national economy and taxation of the oil and gas sector is quite significant. There was a decline in demand for fuel oil by 25 percent from normal conditions before the covid-19 pandemic. Various policies imposed by the government last year 2020, such as large-scale social restrictions (PSBB) and other policies, are indeed a form of effort to reduce the spread of the virus and restore the economy from various sectors. However, these things are still lacking to restore the Indonesian economy fully. (Pradana et al. 2020).

We argue that understanding the current consumer perspective on COVID-19 should focus on consumer surveys. One of the regular surveys was conducted by the Indonesian Central Bank of Indonesia. The survey aims to determine consumer confidence regarding current economic conditions, which is reflected in the level of consumption of respondents and consumer expectations of future economic conditions. Besides consumers, the impact of the coronavirus pandemic on the business processes of Indonesian business sectors was assessed with the regular business survey conducted by Department Statistics – Bank of Indonesia (2020).

As reported from the department of bank Indonesia, there was a decline in the results of the business activity survey (SKDU) in the second quarter of 2020. with -35.75% net weighted balance (SBT) in quarter II-2020, this contraction was deeper by -5.56% in the first quarter of 2020. Almost all economic sectors experienced a decline in business activity, but the most profound decline occurred in the manufacturing, hotel, trade, restaurant, and service industries.

This was mainly due to reduced demand and supply disruptions due to the COVID-19 pandemic." On the other hand, Bank of Indonesia's consumer finding states that "consumer confidence in economic conditions had slightly improved from the previous month, although it was still in the pessimistic zone (below 100). Consumer optimism regarding the forecast for economic conditions in the next six months is still quite strong, although not as high as the previous month." A study from Juhro and Iyke (2019) explained consumer confidence and consumption expenditure in Indonesia. They conveyed that role played by consumer confidence in the real economy is less understood. Moreover, their research contributed to the literature by documenting new evidence on Indonesia's consumption confidence relationship by combining consumer and business confidence index data. These two indicators are similar indicators in which this study has an interest. Finally, there are two hypotheses that we propose to explain the causal effect of consumer confidence index, business confidence index, and covid-19 confirmed cases in Indonesia per month (new cases and new death)

H: The higher (lower) total covid-19 cases confirmed per month *will impact* to higher (lower) consumer confidence

H2: The higher (lower) total cases of COVID-19 confirmed per month *will impact* to higher (lower) business confidence.

Methodology

   With this, our goal is to assess economic sentiment in Indonesia, consumers and the business sector affected by the COVID-19 pandemic. Since we aim to analyze the reaction of both consumers and businesses to the COVID-19 pandemic, two different economic sentiment indicators—the consumer-confidence index (CCI) or *survei konsumen*, and the business confidence indices (BCI) or *survei kegiatan dunia usaha*. There are several sector industries that BCI covered. We choose to emphasize the manufacturing sector as suggested by a study from Negara and Ramayadi (2020) argued that the manufacturing sector was still the most important sector for the growth of the Indonesian economy, compared to the agriculture and service sector. This part of the methodology shall explain stages of analysis, statistical analysis and data source. We also describe dependent and independent variables, including the source of data.

   Our research consisted of two stages. In Stage 1, analysis of the impact of the COVID-19 pandemic on consumer confidence was analyzed (Section 4.1). Afterwards, in Stage 2, the impact of the COVID-19 pandemic on the sentiment of businesses was assessed (Section 4.2). In the final stage, we discuss managerial implications based on the previous two sections (Section 4.3). There are several statistical methods that can provide explanations, including correlation analysis (Pearson correlation coefficient) to determine possible similarities or differences between the dynamics of selected economic sentiment indicators in Indonesia. Subsequently, the impact of the spread of the COVID-19 pandemic on selected consumer and business confidence indicators was assessed.

   We perform two analyses using the correlation and regression methods to assess the impact of the spread of the COVID-19 pandemic on selected economic indicators. Sample of this study consist of consumer confidence survey result and business confidence survey result each

month, as the dependent variables and sample for positive and death of COVID-19 cases as independent variables. Two steps of quantitative analysis as follow: *first*, at the starting point of the evaluation, an attempt was made to determine the possible linear relationship between the selected consumer and business sentiment indicators and the COVID-19-related variables, and the correlation was evaluated (the Pearson correlation coefficient was calculated and explained). *Secondly*, a simple linear regression model of each pair of dependent and independent variables is constructed. Taking into account the statistical characteristics of these models (t-value, p-statistic, R-squared), conclusions were drawn about the impact of COVID-19 on the economic sentiment of consumers and businesses. The level of significance for our study is 0.10.

Table 1 COVID-19 Cases - Variables, Definition and Source of Data

Variable name	Concept and Description	Source
Dependent Variables (DV)		
CCI	Consumer confidence in Indonesia survey each months	Bank Indonesia
BCI	Business confidence index in Indonesia survey each months for manufacturing sector	Bank Indonesia
Independent variables (IV)		
Positive	Total cases of COVID-19 confirmed per month in Indonesia	Government of Indonesia
Death	Total deaths from COVID-19 confirmed per month in Indonesia	Government of Indonesia

Because this time period of CCI and BCI are monthly data which we retrieve from Bank Indonesia and the first case of COVID-19 occurred on March 2020. This study can cover limited monthly observations from March 2020 to June 2021. Otherwise, Bank Indonesia reported CCI and BCI regularly each month. The mathematical expression of two regression as follows:

$$CCI\ (BCI) = \alpha + \beta\ Positive\ (Death) + \varepsilon$$

Where: CCI and BCI = dependent variables; positive case and death cases = independent variables: ε = error term.

It is urgent to emphasize that our study does not seek to analyze a comprehensive set of economic sentiment factors. This study simply aims to identify the possible presence (or absence) of reaction to the COVID-19 by using the response from consumers as well as producers. Data were analyzed using Stata version 16 and present mainly in part 4.

Result and Discussion

Descriptive statistic and COVID-19 current situations in Indonesia

Indonesian political policies have changed a lot since the 2000s. Now the tools of coercion in Indonesia are more effective than the Suharto era. During the Covid-19 pandemic, the Jokowi government agreed not to apply the lockdown rules. In this study, the central government's response to the COVID-19 pandemic was not entirely in line with the same populist mindset as Jokowi's pandemic response. Multiple responses from micro at the local level by local governments or civil society groups are significant as a solution to gaps in the delivery of major economic assistance programs. This also helps maintain social order in these difficult times. As a result, the central government retains responsibility for the Covid-19 record in Indonesia, but its approach on the ground has been significantly improved. Here we can conclude how important cooperation between the government and civil society groups is to provide more relevant, transparent, and measurable solutions. (Marcus, 2020) Here we can conclude how important cooperation between the government and civil society groups is to provide more relevant, transparent, and measurable solutions.

To further see the effectiveness of policies made and implemented during the COVID-19 pandemic, it is better to look to the neighboring countries and use them as a reference to see what needs to be improved and which factors are the most significant. The following is a descriptive analysis with Malaysia as a comparison

Table 2 Summary of descriptive statistics of models variables

| Variable	Mean	Median	Standard deviation	Min	Max	Kurtosis	Skewness
New cases Indonesia	209675,28	141065	280420,07	1528	1231386	11,27	3,11
Total deaths Indonesia	30614	19541,5	32552,67	136	113664	1,51	1,38
New cases Malaysia	74566,11	39448,5	99854,26	337	361293	2,90	1,74
Total deaths Malaysia	1955,44	415,5	3343,78	43	11691	4,23	2,21

Source: Stata 16.0 result

Figure 2 New cases Indonesia
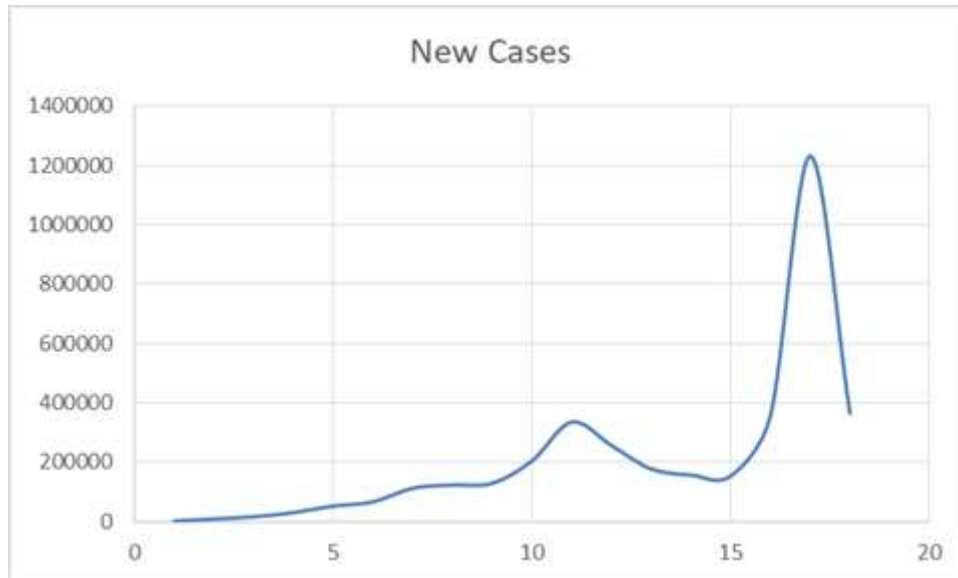
Source: Government of Indonesia (2021)

Figure 3 Total deaths Indonesia
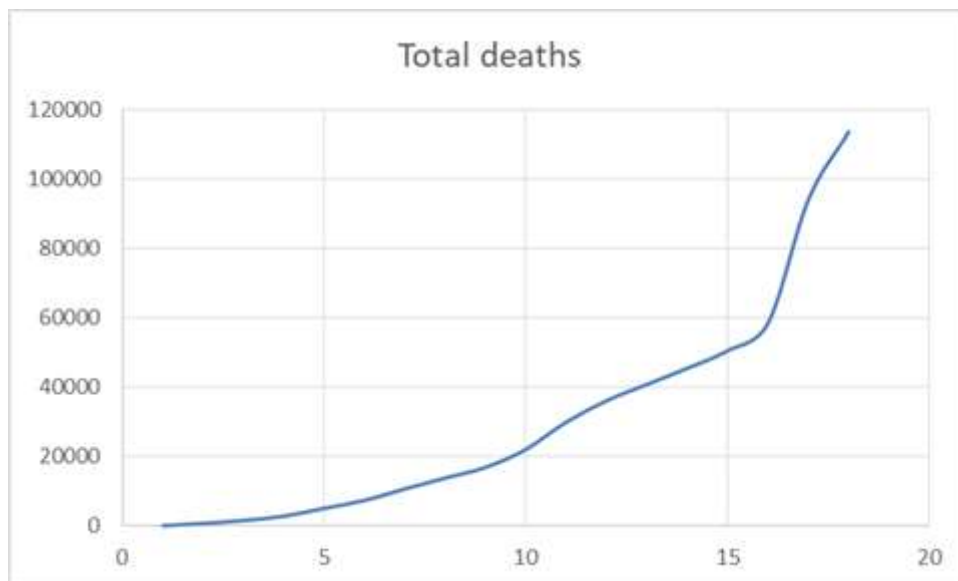
Source: Government of Indonesia (2021)

March 2020, Indonesia received 1,528 new cases with a total of 136 deaths. Indonesia continued to experience a surge in new cases until January 2021. After that, there was a decline in the following month from February to May 2021. However, in the following month, in June, there was a spike in new cases to reach the total number of cases in the following month. The new highest was in July 2021, namely 1231386. However, along with the vaccination process in Indonesia, in August 2021, it decreased. Meanwhile, the death toll continues to grow.

We illustrate Malaysia's COVID cases as comparison. In March 2020, there were 2,741 new cases in Malaysia, which is quite far from Indonesia, with a total of 1,528 new cases in

the same month. However, in this case, the number of new cases in Malaysia has increased and decreased significantly almost every month. Just like Indonesia, the highest number of new cases was experienced in July 2021, with a total of 361,293 new cases, far less than the highest total new cases experienced by Indonesia. In August 2021, Malaysia managed to suppress its new cases and experienced a decline. Meanwhile, the total death toll until August 2021 was 11691, which is relatively small when compared to Indonesia, with a total of 113664 deaths in the same month.

Analysis of impact COVID-19 pandemic on consumer confidence

Before we report the correlation and regression result impact of the covid-19 pandemic on consumer confidence, we highlight two hypotheses to be tested as follows: first, the lower consumer confidence is more likely caused by higher total covid-19 cases confirmed per month. Second, the lower consumer confidence is more likely caused by higher total cases of COVID-19 confirmed per month. We detail the correlation between consumer sentiment and COVID-19 related indicators, total cases confirmed and total death confirmed (Table 3), and simple regression result (Table 4).

Table 3 Correlation of consumer sentiment total cases confirmed and total death confirmed

Variable	Correlation	Probabilities
	Consumer Confidence Index	
Total cases confirmed	-0,1466	0,5615
Total death confirmed	0,1783	0,4790

Source: Stata 16.0 result

From table 3, our result indicates that the consumer confidence index has a negative correlation with total cases confirmed as not statistically significant. The result confirms that lower consumer confidence is *more likely caused by* higher total covid-19 cases confirmed per month. However, the correlation between consumer confidence index and total death confirmed is positive with not statistically significant. Thus, the result fails to confirm the hypothesis the lower consumer confidence is *more likely caused by* higher total cases of COVID-19 confirmed per month.

Table 4 Simple regression model for COVID-19 effect on Indonesian consumer-sentiment

Variable	Model Const.	Coefficient	t-value	p-stat	R-square	Observation
Consumer confidence index						
Total cases confirmed	92,00005	$-5,40 \times 10^{-6}$	-0,59	0,562	0,0215	18
Total death confirmed	89,13805	$5,65 \times 10^{-5}$	0,72	0,479	0,0318	18

Source: Stata 16.0 result

As present in table 4, our result indicates that the total cases confirmed are not impacting the consumer confidence index. Thus, the result exhibits it is statistically not significant total cases confirm impact to consumer confidence index. This can be shown by t-value and p-stat. Besides it, total death confirmed is not impacting the consumer confidence index with result of statistically not significant of the total death confirmed. The result can be indicated by t-value and p-stat.

Our study corroborates its finding with Teresina et al. (2021:1) for consumer confidence in selected countries. Their study covered many countries or regions such as the Eurozone, China, and the United States. Their finding argued that CCI in the Eurozone was not affected by the pandemic. While CCI in China reacted only to the global and country-level fatality rates, CCI in the United States responded only to the country level and global increases in deaths from COVID-19. Since this study only obtains limited observation based on monthly observation, it is important to understand that pandemic COVID-19 impact on consumer sentiment, in the long run, is still open for further study.

Analysis of impact COVI-19 pandemic on business confidence
In this part, we describe the correlation and regression result impact of the covid-19 pandemic on business confidence. We highlight two hypotheses to be tested as follows: (1). Lower business confidence is *more likely* caused by higher total cases of COVID-19 confirmed per month. (2). Lower business confidence is *more likely caused* by higher total death cases of COVID-19 confirmed per month. We detail the correlation between consumer sentiment and COVID-19 related indicators: total cases confirmed and total death confirmed (Table 5) and simple regression result (Table 6).

Table 5 Correlation of business sentiment, total cases confirmed and total death confirmed

Variable	Correlation	Probabilities
Business Confidence Index		
Total cases confirmed	0,2749	0,2695
Total death confirmed	0,4373	0,0696

Source: Stata 16.0 result

As present in table 5, our result indicates that the business confidence index positively correlates with total cases confirmed as not statistically significant. However, the correlation between consumer confidence index and total death confirmed is positive with not statistically significant.

Table 6 Simple regression model for COVID-19 effect on the Indonesian business sentiment

Variable	Model Const.	Coef.	t-value	p-stat	R-sq	Observation
Business confidence index						
Total cases confirmed	-3,071757	4.58×10^{-6}	1,14	0,270	0,0756	18
Total death confirmed	-4,032504	$6,28 \times 10^{-5}$	1,94	0,070*	0,1912	18

Source: Stata 16.0 result   *level of significant 0.10

From table 6, our result indicates that the total cases confirmed *are not impacting* the business confidence index. Thus, the result exhibits it is statistically not significant total cases confirm impact to consumer confidence index. This can be shown by t-value and p-stat. Besides it, total death confirmed is impacting impacts the business confidence index with a statistically

significant result as indicated by t-value and p-stat. R-square for second regression is 0.1912 that 19.12 percent variation of business sentiment can be explained by total death confirmation. Discussion about the impact of the Covid-19 pandemic on business confidence starts with the previous study from Baker et al. (2020) that proposes the importance of a business survey. For them, "business expectation surveys are valuable for measuring what firms perceive in real-time." In addition, it will generate actionable data within 5 to 20 days after the investigation first enters the scene.

Therefore, the business expectations survey can also be modified to add other questions, such as business expectations about the likely duration of the COVID crisis (Baker et al., 2020). Arguments based on the COVID-19 pandemic have created uncertainty for companies. Conclusion This study confirmed that the total number of deaths was found to be a predictor, which is important for explaining the impact of the pandemic on businesses. Conclusion This study confirms finding total death confirmed as a predictor that is important for explaining pandemic impact for the business. Our study can provide statistical evidence that this unprecedented event creates higher uncertainty for business, reflected in table 6 above.

Managerial Implication
Implication for consumer
Following the Juhro and Iyke (2019) argument, consumption decisions are shaped by waves of pessimism and optimism. The Keynes famous concept of animal spirit summarized up-and-down sentiment Concept of animal spirit had been an important milestone of a Keynesian macroeconomic model. However, the literature of aggregate economic activity does not explained *only* by the animal spirit hypothesis. The permanent income hypothesis also tried explaining confidence-driven consumption. Permanent income hypothesis argues that consumers' current information plays no role in his future consumption decision (Hall 1978 in Juhro and Iyke 2019). Although this study *canno*t find statistical evidence that COVID-19 pandemic indicators, total death cases, and total cases confirmed affect consumer confidence. However, from a policy perspective, there are significant efforts to maintain the purchasing power of households as consumers with a stimulus package, such as social assistance for the poor, electricity subsidy, and village fund cash transfer (Olivia *et al.* 2020),

Implication for producer
Build upon COVID-19 induce economic uncertainty of Baker *et al.* (2020). A business expectation survey *is able to capture* subjective uncertainty that provides real-time forward-looking uncertainty measures. The finding reflecst presence of pandemic impact for produces, and they have to cope with uncertain future make best decision to continue serving the customer or terminate their business in the short-term. Besides the business expectation survey, Baker and friends used stock market volatility and newspaper-based economic uncertainty to explain COVID-19 induced variables. Hence, we argue that it justifies the effort of "locking-down" policy proposes, along with many variations of it, by the government will likely protest by producers and business association among the first complain about such policy because they will face higher uncertainty in the future, while the government is facing dilemma between healthy and economy.

Conclusion
Our study aims to understand the pandemic's impact, using indicators such as total cases and death confirmed in Indonesia, to consumer and business confidence. The first part of the result depicts correlation analysis between sentiment indicators and COVID-19 variables. Both correlations indicate that it is statistically not correlated, consumer sentiments and business

sentiments to the COVID-19 related variables. The second part of this article reports that our study showed no statistically significant impact of COVID-19 related variables on consumer-confidence indicators. However, our study also finds it is a statistically significant impact of COVID-10 related variables, total death confirmed, on business-confidence indicators. There is a limitation of the study that observation of COVID-19 related variables and consumer-business sentiment only small number observations; therefore, we are only able to estimate using simple regression. However, we already emphasize that this does not seek to analyze a comprehensive set of economic sentiment factors. This study simply aims to identify the possible presence (or absence) of reaction to the COVID-19 by using a response from consumers as well as producers. More observational data and improved statistical estimates are suggested for future studies and scholarly works on the impact of COVID-19.

References

Ayuningtyas, R., & Koesrindartoto, D. P. (2014). *The Relationship between Business Confidence, Consumer Confidence, and Indexes Return: Empirical Evidence in Indonesia Stock Exchange*. https://doi.org/10.15242/icehm.ed0814013

Barro, R. J., Ursúa, J. F., & Weng, J. (2020). the Coronavirus and the Great Influenza Pandemic : *NBER Working Paper Series*, *March*, 1–27. https://www.nber.org/system/files/working_papers/w26866/w26866.pdf

Bol, D., Giani, M., Blais, A., & Loewen, P. J. (2021). The effect of COVID-19 lockdowns on political support: Some good news for democracy? *European Journal of Political Research*, *60*(2), 497–505. https://doi.org/10.1111/1475-6765.12401

BPS. (2020). Statistik Perkembangan Pariwisata dan Transportasi Nasional November 2020. *Berita Resmi Statistik*, *110*, 1–13.

Chong, T. T. L., Li, X., & Yip, C. (2021). The impact of COVID-19 on ASEAN. *Economic and Political Studies*, *9*(2), 166–185. https://doi.org/10.1080/20954816.2020.1839166

Cray, D., Haines, G. H., & Mallory, G. R. (1994). Programmed Strategic Decision Making: The View From Mintzberg's Window. *British Journal of Management*, *5*(3), 191–204. https://doi.org/10.1111/j.1467-8551.1994.tb00170.x

Djalante, R., Lassa, J., Setiamarga, D., Sudjatma, A., Indrawan, M., Haryanto, B., Mahfud, C., Sinapoy, M. S., Djalante, S., Rafliana, I., Gunawan, L. A., Surtiari, G. A. K., & Warsilah, H. (2020). Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020. *Progress in Disaster Science*, *6*. https://doi.org/10.1016/j.pdisas.2020.100091

Emerald Publishing. (2020). *Coronavirus and the management of epidemics and the wider impact on society*. 14–23. https://www.emeraldgrouppublishing.com/topics/coronavirus

Esomar, M. J. F., & Christianty, R. (2021). Dampak Pandemi Covid-19 terhadap Kinerja Keuangan Perusahaan Sektor Jasa di BEI. *Jkbm (Jurnal Konsep Bisnis Dan Manajemen)*, *7*(2), 227–233. https://doi.org/10.31289/jkbm.v7i2.5266

Hampson, D. P., Gong, S., & Xie, Y. (2021). How consumer confidence affects price conscious behavior: The roles of financial vulnerability and locus of control. *Journal of Business Research*, *132*(March), 693–704. https://doi.org/10.1016/j.jbusres.2020.10.032

ILO. (2020). COVID-19 and employment in the tourism sector: Impact and response in Asia and the Pacific. *COVID-19 and Employment in the Tourism Sector: Impact and Response in Asia and the Pacific*, 1–19. https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/briefingnote/wcms_742664.pdf

Javed, A. (2020). *Impact of COVID- 19 on Pakistan ' s services sector*. *05*(03), 107–116.

Juhro, S. M., & Iyke, B. N. (2020). Consumer confidence and consumption expenditure in Indonesia. *Economic Modelling*, *89*(October), 367–377. https://doi.org/10.1016/j.econmod.2019.11.001

Kirchner, S. (2020). The Effect of Changes in Monetary Policy on Consumer and Business Confidence. *Australian Economic Review*, *53*(1), 118–125. https://doi.org/10.1111/1467-8462.12365

Li, S. wei, Zhu, C., Chen, Q. hui, & Liu, Y. mei. (2019). Consumer confidence and consumers' preferences for infant formulas in China. *Journal of Integrative Agriculture*, *18*(8), 1793–1803. https://doi.org/10.1016/S2095-3119(19)62589-X

Negara, S. D., & Ramayandi, A. (2020). Laying the Foundations for Future Growth Acceleration? *Bulletin of Indonesian Economic Studies*, *56*(1), 1–21. https://doi.org/10.1080/00074918.2020.1743014

Nowzohour, L., & Stracca, L. (2017). More than a feeling: Confidence, uncertainty and macroeconomic fluctuations. *ECB Working Paper*, *2100*. https://doi.org/10.2866/796782

Olivia, S., Gibson, J., & Nasrudin, R. (2020). Indonesia in the Time of Covid-19. *Bulletin of Indonesian Economic Studies*, *56*(2), 143–174. https://doi.org/10.1080/00074918.2020.1798581

Özker, A. N. (2019). The Structural Functions of Consumer and Business Confidence Indices in OECD and Alterations on Financial Policies. *Journal of Business and Economics*, *10*(1), 78–87. https://doi.org/10.15341/jbe(2155-7950)/01.10.2019/007

Pradesha, A., Amaliah, S., Noegroho, A., & Thurlow, J. (2020). The Cost of COVID-19 on the Indonesian economy. *International Food Policy Research Institute*, *June*, 1–11. https://ebrary.ifpri.org/digital/collection/p15738coll2/id/133745

Salsabillah, N. A. (2021). Dampak pandemi COVID-19 terhadap ekonomi dan sosial di India. *Urban Communication and Developement Journal*, 12–15.

Samudra, R. R., & Setyonaluri, D. (2020). Inequitable Impact of COVID-19 in Indonesia: Evidence and Policy Response. *Unesco*, 15. https://en.unesco.org/inclusivepolicylab/sites/default/files/analytics/document/2020/9/20 0825_Policy Report_Inequitable Impact of COVID 19 in Indonesia.pdf

Shimomura UNDP Indonesia Resident Representative. (2020). *Impact of Pandemic on MSMEs*

in *Indonesia*. 73. https://www.id.undp.org/content/indonesia/en/home/library/ImpactofCOVID19MSMEs.html.

Teresiene, D., Keliuotyte-Staniuleniene, G., Liao, Y., Kanapickiene, R., Pu, R., Hu, S., & Yue, X.-G. (2021). The Impact of the COVID-19 Pandemic on Consumer and Business Confidence Indicators. *Journal of Risk and Financial Management*, *14*(4), 159. https://doi.org/10.3390/jrfm14040159

Urazbaeva, A., Voytenkov, V., & Groznykh, R. (2020). The analysis of COVID-19 impact on the internet and telecommunications service sector through modelling the dependence of shares of Russian companies on the American stock market. *R-Economy*, *6*(3), 162–170. https://doi.org/10.15826/recon.2020.6.3.014

van der Wielen, W., & Barrios, S. (2021). Economic sentiment during the COVID pandemic: Evidence from search behaviour in the EU. *Journal of Economics and Business*, *115*(December 2020), 105970. https://doi.org/10.1016/j.jeconbus.2020.105970

https://covid19.go.id/peta-sebaran-covid19