

The Impact of Covid-19 Pandemic on Economy and Health in Bengkulu City

Diana Laila Ramatillah^{1*}, Stefanus Lukas^{1,2}, Mutiara Nanda¹

¹Pharmacy Faculty, Universitas 17 Agustus 1945 Jakarta, Indonesia, 10570

²Pharmacy Faculty, Andalas University, Padang, Indonesia

*Corresponding author. Email: diana.ramatillah@uta45jakarta.ac.id

ABSTRACT

Early 2020, a new type of virus emerged, namely the coronavirus (SARS-CoV-2), and the disease is called Coronavirus Disease 2019 (Covid-19). Covid-19 appeared in Wuhan City, and on March 2th, 2020, it was officially announced that Indonesia had 2 cases of this virus. The Covid-19 cases in Indonesia have continued to increase in various areas, including Bengkulu City although lockdown was starting to be applied. Covid-19 caused the life order of a value to experience a lot of decline from multiple sectors such as the health sector, the economic sector, the education sector, etc. This research aims to determine the impact of Covid-19 on the economic and health system in Bengkulu City. This research method is convenience sampling with a quantitative approach. The population of this research is the people of Bengkulu City using the total sampling method. The data analysis from questionnaire used is the Instrument Test, Classical Assumption Test, and Simple Linear Regression. The results of this study indicate that the t value for the Covid-19 (X) variable is 15,510 while the t table is 1.98472. Thus, the t value (15,510) is greater than the t table (1.98472), or the significant value (0.000) is smaller than the 5% significance level. Therefore, it can be concluded that Covid-19 had an impact on the economic and health system.

Keywords: Covid-19, Economic System, Health System

1. INTRODUCTION

At the beginning of 2020, the world was shocked by the new virus outbreak, namely the new type of coronavirus (SARS-CoV-2). The disease is called Coronavirus disease 2019 (the original COVID-19 virus originated in Wuhan, China. It was found at this time that it was confirmed that 65 cases had contracted this one virus (*WHO Coronavirus Disease (COVID-19) Dashboard*, 2020). From 31 December 2019 to 3 January 2020, this case increased rapidly, marked by the reporting of 44 issues. The disease has spread to various other provinces in China, Thailand, Japan, and South Korea in less than a month. The first COVID-19 was reported in Indonesia on March 2, 2020, totaling two cases. March 31, 2020, data shows that there are 1,528 confirmed cases and 136 deaths. The

mortality rate for COVID-19 in Indonesia is 8.9%. This figure is the highest in Southeast Asia.

Bengkulu is one of the provinces in Indonesia which was as a green zone from Covid-19 case until the *tabligh congregation* become a red zone of Covid-19 case [1].

At least two types of coronavirus are known to cause diseases that can cause severe symptoms, such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Coronavirus Disease 2019 (COVID-19) is a new type of disease that has never been previously identified in humans. The virus that causes COVID-19 is called Sars-CoV-2. Coronaviruses are zoonotic (transmitted between animals and humans). Research states that SARS is transmitted from civet cats to humans and MERS from camels to humans [2].

The Coronavirus (Covid-19) outbreak impacts the health and economic system around the world, including Indonesia due to of the high cases and the implementation of lockdown [3][4]. Based on Ramatillah et al., the impact of Covid-19 in the health system was infected and increased mortality [5]. The global economy has experienced a decline, following the determination of the WHO, which declared the Corona outbreak a pandemic affecting the business world. The coronavirus began to spread around the Wuhan area and has now infected more than 100 values. The increasing spread of the corona outbreak to various parts of the world is a severe threat to the global economy. "The wider spread will prolong the period of the economic downturn."

One of the indicators of a region's good and the bad economy is looking at the economic growth level. This research was conducted to determine the impact of Covid-19 on the economy and health in Bengkulu City. By looking at the socio-demographics of patients or communities affected by Covid-19 from an economic and health perspective.

2. METHOD

This research was conducted in Bengkulu City. This research was conducted for two months (July to August 2020).

Ethical approval was obtained before conducting this study from Health Faculty Esa Unggul ethics committee with the number: 0003-21.003/DPKE-KEP/FINAL_EA/UEA/I/2021.

This research method used the convenience sampling method using a questionnaire distributed to respondents via google forms such as Whatsapp, Facebook, Instagram in Bengkulu City.

The sample population in this study was the Bengkulu City area and all Bengkulu people who were affected by the economy and health due to covid-19.

Inclusion Criteria for Respondents who had experienced the impact of Covid-19 (willing to fill the form) and Respondents who were domiciled in Bengkulu City. Exclusion Criteria Respondents who were not affected by covid-19 and are not willing to be the sample in this study. Primary data was collected by distributing questionnaires. The questionnaire contains questions or statements that the respondent must answer. The data obtained from the feedback will then be compiled and transferred to the data collection sheet, after which the data will be processed using the SPSS application. (Statistical Product and Service Solutions).

The data analysis technique used was a descriptive survey and multiple regression as analysis tools. Descriptive analysis is to analyze quantitative data that will be processed according to calculations for each research variable. This descriptive analysis seeks to provide an explanation or description of the various characteristics of the data.

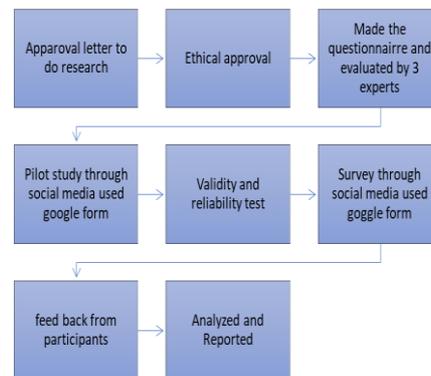


Figure 1 Flow chart of Research

3. RESULTS AND DISCUSSION

Before conducting the survey, a pilot study was done among 30 participants.

The results of the validity test that were processed using the help of SPSS version 25 software obtained information that the Covid-19 (X), the Economic System (Y1), Health (Y2) were valid. In terms of

reliability, X, Y1, and Y2 variables were reliable (Cronbach alpha .0.9) (Table 1).

Table 1. Cronbach alpha X, Y1, and Y2

| Variable | Cronbach Alpha | N of Items | Reliability |
|----------|----------------|------------|-------------|
| X | 0.963 | 7 | Reliable |
| Y1 | 0.971 | 10 | Reliable |
| Y2 | 0.956 | 10 | Reliable |
| Total | | 27 | Reliable |

From the survey conducted among Bengkulu residents, 100 participants had returned the form, and a simple regression test was performed to analyze the impact of Covid-19 on the Economic and Health system.

Table 2. Simple Regression Test of The Impact of Covid-19 on the Economic System

| Model | B | Std Error | Beta | t | P- value |
|----------|-------|-----------|-------|------|----------|
| Constant | 4.584 | 1.351 | | 3.39 | 0.001 |
| Covid-19 | 1.137 | 0.073 | 0.843 | 15.5 | 0.000 |

Based on table 2, the multiple regression test, the regression equation function is obtained as follows:

$$Y_1 = 4,584 + 1,137X$$

The equation shows that the regression coefficient is 4.584. This value means that if Covid-19 (X) is zero, the Economic System (Y1) is 4.584. The value of b is known to be 1.137, meaning that if the value of Covid-19 (X) has increased by 1%, the Economic System (Y1) will decrease by 1.137, provided that another independent variable is *ceteris paribus* or is ignored.

Table 3. Determination Coefficient Test

| Model | R | R square | Adjusted R Square | Std Error the estimate |
|-------|--------------------|----------|-------------------|------------------------|
| 1 | 0.843 ^a | 0.711 | 0.708 | 6.426 |

From table 3, the test of the coefficient of determination between the Covid-19 (X) and Economic System (Y1) variables was 0.711, and this shows that 71.1% of the Economic

System variable (Y1) can be explained by Covid-19 (X). Meanwhile, 28.9% can be explained by other factors or variables. Meanwhile, 28.9% can be explained by other factors or variables. Based on the results, the t value for the Covid-19 (X) variable is 15.510, while the t table is 1.98472. Thus the t value (15.510) is more significant than the t table (1.98472), or the significant value (0,000) is smaller than the 5% significance level. Therefore, it can be concluded that Ho is rejected and Ha is accepted, which means that there is an influence from the Covid-19 (X) variable on the Economic System (Y1). Another study explained that the speedy spread of the Covid-19 virus to other countries, including Indonesia, also exacerbated the economic situation [6].

Table 4. Simple Regression Test Impact of Covid-19 on Health

| Model | B | Std Error | Beta | t | P- value |
|----------|-------|-----------|-------|-------|----------|
| Constant | 6.930 | 1.040 | | 6.63 | 0.000 |
| Covid-19 | 1.116 | 0.056 | 0.894 | 19.76 | 0.000 |

From table 4, from the multiple regression test, it is found that the regression coefficient is 6.930. This value means that if Covid-19 (X) is zero, then Health (Y2) is 6,930. The value of b is known to be 1.116, meaning that if the value of Covid-19 (X) has increased by 1%, then Health (Y2) will decrease by 1.116 provided that another independent variable is *ceteris paribus* or is ignored.

Table 5. Determination Coefficient Test

| Model | R | R square | Adjusted R Square | Std Error the estimate |
|-------|--------------------|----------|-------------------|------------------------|
| 1 | 0.894 ^a | 0.799 | 0.797 | 4.949 |

From table 5, the test of the coefficient of determination between the Covid-19 (X) and Health (Y2) variables is 0.799

It shows that 79.9% of the health variable (Y2) can be explained by Covid-19

(X). Meanwhile, 20.1% can be explained by other factors or variables. The t value for the Covid-19 (X) variable was 19.761, while the t table is 1.98472. Thus, the importance of the t value (19.761) was more significant than the t table (1.98472). The significant value (0,000) is smaller than the 5% significance level. Therefore, it can be concluded that H_0 is rejected and H_a is accepted, which means that there is an influence from the Covid-19 (X) variable on Health (Y2). Seeing the relatively high number of Covid-19 cases in Bengkulu, infected with Covid-19, the government has declared Bengkulu a health emergency [8][9][10]. This policy is based on the Decree of the President of the Republic of Indonesia (Keppres) Number 11 of 2020 concerning the Determination of the Public Health Emergency of Corona Virus Disease 2019 (Covid-19), which has declared Covid-19 a public health emergency that must be taken into concerned [7] [8].

The study has some limitations since the duration is rather short, and the fact that the published care data to date came from a small observational data (no more than 250 participants).

4. CONCLUSION

Covid-19 affects the economic system in Bengkulu, such as the buying and selling power of goods in the MSME sector such as private businesses, farmers, traders, and street vendors, and transportation. And it can be seen from the results of a significant value (0.000) smaller than the 5% significance level, meaning the higher the positive number of Covid-19 in Bengkulu, the economy in Bengkulu will experience a decline.

Covid-19 impacts health in Bengkulu, such as declining public health, even among the medics at the forefront. And it can be seen from the results of a significant value (0.000) smaller than the 5% significance

level, meaning the higher the positive number of Covid-19 in Bengkulu, the health in Bengkulu has decreased.

REFERENCES

- [1]. Aditia, D., Nasution, D., & Budi, P. Aditia, 2020. *Jurnal Benefita*, 2020. 5(2), 212–224. <https://doi.org/http://doi.org/10.22216/jbe.v5i2.5313>
- Ghozali. (2013). *Aplikasi Analisis Multivariate dengan Program IBM. SPSS 25*. Badan Penerbit Universitas Diponego.kemkes.go.id. (2020). <https://covid19.kemkes.go.id/>
- [2] MacKenzie JS, Smith DW. COVID-19: A novel zoonotic disease caused by a coronavirus from China: What we know and what we don't. *Microbiol Aust*. 2020;41(1):45–50
- [3] Indonesia Covid-19 Handling Task Force. Distribution Map; 2021 [cited 2020 Aug 21]. [Internet]. Available from: <https://covid19.go.id/peta-sebaran>
- [4] World Health Organization. Coronavirus disease 2019 (COVID-19) Situation Report – 51. 2020.
- [5]. Ramatillah DL, Isnaini S. Treatment profiles and clinical outcomes of COVID-19 patients at private hospital in Jakarta. medRxiv. 2020;
- [6] Dey M, Loewenstein M. How many workers are employed in sectors directly affected by COVID-19 shutdowns, where do they work, and how much do they earn? *Monthly Labor Rev*. (2020). doi: 10.21916/mlr.2020.6
- [7] Keputusan Presiden (Keppres) Nomor 11 Tahun 2020 tentang Penetapan Kedaruratan Kesehatan Masyarakat Covid-19. 2020.
- [8]. Laporan Perekonomian Provinsi Bengkulu. (2020). <https://www.bi.go.id/id/publikasi/lapo>

- [ran/default.aspx](#)
- [9]. Peraturan Pemerintah Pengganti Undang-Undang Republik Indonesia Nomor 1 Tahun 2020 tentang Kebijakan Keuangan Negara dan Stabilitas Sistem Keuangan Untuk Penanganan Pandemi Covid-19. 2020.
- [10]. Provinsi Bengkulu Dalam Angka 2013. 2013.<https://bengkulu.bps.go.id/publication/2013/10/22/cbfe0f8cba136136fd202fd6/provinsi-bengkulu-dalam-angka-2013.html>